THE LEGAL INTERPRETATION OF TECHNOLOGY

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For my parents, Charles & Christiane,

&

the late Dr. Stewart Russell

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ABSTRACT

The Legal Interpretation of Technology draws from history and literary theory to study law and technology. The thesis postulates that technological meaning does not reside within technologies themselves, but stems from interpretation. It investigates how interpretations of technology come to be and what makes some interpretations more persuasive than others. The thesis argues that legal agents interpret technology in a manner that reflects and is compatible with prevalent conceptions of law. The 'newness' of a technology, for example, is not a strictly temporal characteristic, but a label affixed to a technology in order to signify its deviancy and justify special treatment. The alleged neutrality and determinacy of technologies constitute other important examples: they ensure that the metaphysics of technology do not interfere with human agency and, therefore, preserve the possibility of obedience to law. Law and technology literature's reliance on speculation and contingency to regulate technological change derive from the rotes of legal prescriptivism. Interpretation thus polices the boundary between law and technology in order to preserve the authority of the former over the latter.

Taking the legal interpretation of technology for granted, the thesis revisits episodes from the history of the book to reflect on law and lawmaking. Its first case study takes place in seventeenth-century England, when two factions of the book trade, divided along regulatory lines, fought in courts over the exclusive right to print common law books. Drawing from this judicial saga and from Thomas Hobbes' philosophy of language, the thesis portrays law as the arational commands of a sovereign linguistic authority. The thesis' second case study takes place in eighteenth-century France, when Diderot and his allies challenged royal censorship in order to publish the *Encyclopédie*. Reason is presented therein as law's foil: the sovereign's commands are always ambiguous; they require constant clarification and restatements to prevent semantic evasion. The last case study takes place in eighteenth- and nineteenth-century Great Britain, when the copyrighted work evolved from a determinate matter to an intangible substance. The thesis argues that ambiguity and plurality are essential features of law, not defects. In conclusion, its author proposes that apparent conflicts between law and technology result, in fact, from the inner contradictions of law and its relation to time.

Résumé

L'interprétation juridique de la technologie tire de l'histoire et de la théorie littéraire une approche interprétative à l'étude du droit et de la technologie. Elle postule que la signification de la technologie ne réside pas dans les technologies elle-même, mais résulte de son interprétation. La thèse ne cherche pas à favoriser une interprétation plutôt qu'une autre, mais à examiner comment les interprétations sont formulées et qu'est-ce qui détermine leur crédibilité. Plus spécifiquement, elle soutient que les agents juridiques interprètent la technologie en accord avec les conceptions dominantes du droit. La 'nouveauté' de la technologie illustre ce type particulier d'interprétation. La nouveauté n'est pas une caractéristique strictement temporelle des technologies. Elle est plutôt une étiquette que les agents juridiques apposent sur une technologie pour signifier qu'elle dévie suffisamment du droit pour justifier un traitement particulier. La neutralité et la forme déterminée de la technologie sont d'autres importants exemples. Elles garantissent que la métaphysique de la technologie n'interfère pas avec l'autonomie humaine. L'interprétation juridique de la technologie patrouille donc la frontière entre le droit et la technologie, préservant l'autorité du premier sur la seconde.

Prenant pour acquis l'interprétation juridique de la technologie, la thèse revisite l'histoire du livre pour réfléchir au droit et à sa formation. À l'Angleterre du dix-septième siècle, deux factions du marché du livre distinguées par des régimes règlementaires se disputent le privilège d'imprimer les livres de la *common law*. S'inspirant de cette saga judiciaire et de la philosophie de Thomas Hobbes, la thèse présente le droit comme les commandements a-rationnels d'une autorité linguistique souveraine. En France du dix-huitième siècle, Diderot et les encyclopédistes défient la censure royale pour publier l'*Encyclopédie*. La raison est présentée en contraste au droit : les commandements du souverain sont toujours ambigus et nécessitent des clarifications et réaffirmations constantes. Dans la Grande Bretagne du dix-huitième et dix-neuvième siècle, le « *copyrighted work* », une matière autrefois déterminée, se transforme en substance intangible. L'ambiguïté et la pluralité du droit sont des caractéristiques du droit et non des déficiences. Les conflits qui opposent le droit et la technologie résultent en fait des contradictions internes du premier, y compris sa conception du temps.

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PREFACE

I first encountered my topic at a workshop. The event had been organized by the *Regroupement droit et changement*, of which one of my thesis supervisors is a member and in the name of which he had conscripted me into participating. I had then little to offer in terms of doctoral work, so instead I presented research I had done during one of my master's degrees (the cheap one). I had done this work as a law student residing in *Université Laval*'s Department of Animal Sciences, under the rigorous supervision of Prof. Lyne Létourneau, whose keen investigative mind set me on a twelve-year long academic path. In Prof. Létourneau's laboratory, I joined a motley crew of graduate students hailing from biology and genetics, philosophy, political science, sociology and education. There began the interdisciplinary cross-fertilization that still afflicts me today.

My foray into the philosophy of science had fed an interest in science and technology studies during my law masters. I thus enrolled at the University of Edinburgh to pursue a second (and very expensive) master's degree in this field. I continued to mingle with students and professors from disciplines other than law, and extended my "technology as case studies" portfolio. One academic distinction and a co-dependent relationship later, I was back in Canada to integrate what I had learned from another warm and tireless supervisor, the late Dr. Stewart Russell, in future research.

Back in this barely-attended workshop for which I had dwindling interest, I was pondering how much time I had now spent not doing the thing I was supposed to do: learning about copyright law. In the summer of 2011, I had met one of my current supervisors for the first time, Prof. Pierre-Emmanuel Moyse. He thought me arrogant, I found him aloof — we

would get along smashingly. Prof. Moyse instructed me to adapt my interest to my supervisors' expertise so they could properly guide me through my studies. Putting together copyright law and technology seemed easy enough. Copyright law, after all, had been responding to technological developments since its inception. Saying something original about the two was the real challenge. And any progress I made on that front led me back to what I did not want to write: yet another tale of some new technology rendering a handful of legal rules obsolete.

For this was all you could hear about at this workshop. This was humbling, to be reminded that I was nothing special. It was also profoundly alarming, since as a new doctoral student my main concern was to make an "original contribution to knowledge," as per the requirements of the program. I had yet to think of originality as a process of renewal, one that involves facing the tension between belonging and freedom in activities that cultivate self-awareness and self-criticism, including (but not limited to) scholarship. I then thought of originality in narrow terms, as doing something nobody else has done, which is in fact quite incompatible with academic and scientific research as a whole.

By this point I wished I could have been anywhere else than in this interminable workshop. My doctoral studies had yet to bring to me to Paris, the vineyards of Villié-Morgon and the idyllic Heuilley-sur-Saône. I was privileged enough to have embarked on a joint-doctorate program piloted by my second supervisor, Dean Antoine Latreille. The arrangement came with a generous amount of funding and an affiliation with the *Centre d'études et de recherche en droit de l'immatériel* of Paris-Sud XI. It also meant bringing in elements of France, a promise I honoured by stuffing myself with falafels and pastries in the Marais, and with the collections of the *Bibliothèque Nationale de France* and the *Bibliothèque*

historique de la Ville de Paris. I walked the streets Denis Diderot and his fellow *philosophes* had walked two centuries before me and basked in the serene beauty of the French country. The time I spent there was the highlight of my doctorate as a writer and as a cyclist.

When it came, the workshop's revelation was a furtive one, a slow burner that greatly differed from a second, more violent realisation. The latter one had forcefully ejected from bed in the dark of night to frantically write down 'A legal history of the book'. This, I thought, would combine legal scholarship with science and technology studies while honouring my supervisors' expertise in copyright law. I had loved books long before I knew how to read, and remember fondly the numerous times my dad read my brother and I one of the *Tintin* albums before bed. He had a talent for choosing the right time to stop in the middle of the book before ushering us to sleep, always leaving us on a cliff-hanger that made me eager for the next evening.

The lack of suspense felt by us law and technology people may have troubled me the most at this workshop. Not that we did a sloppy job. While us three graduate students had presented on how three different legal regimes applied (or misapplied) to three different new technologies, I strongly felt that we had said essentially the same thing. Our talks, though they involved drastically dissimilar 'protagonists' nevertheless hit the same story beats. I realized soon after that it was also the case with almost all law and technology literature I had encountered in the past eight years. I left trying to figure out what I had in common with my two colleagues that made our work so commonplace — I kept going and, then, *eureka* and stuff.

Despite the constant support I was spoiled with throughout, I found my doctorate agonizing. A year ago, I was diagnosed with a severe episode of depression. I traded an empty soul and sombre plans for therapy and anti-depressants. A couple weeks later, my father took me to do one of his most favourite things: canoeing on the Saint-Lawrence River with Ulysses — an endearing dachshund with none of the cleverness of his namesake. We drove to the river in the morning, put the boat in the water and set the dog at the prow with a lifejacket of his own. The river was peaceful and clothed in the rising sun, our boat rocked only by an over-enthusiastic lookout. My father then reassured me that, given time, things would get better. I would recover, finish my thesis and move on. His tone reminded me of the time he taught me how to ride a bike as a child. "*Tu tomberas pas*," he had said. His calm confidence was all I needed to keep my balance.

On 6 April 2017, I was attending another event of the Regroupement. I happily presented some of my doctoral work, starting with the story of the workshop, now one of my most cherished moments of the doctorate. Later that day, my father called to tell me he had been diagnosed with lung cancer. Time, it turns out, had ruined his body as it restored my mind. His doctors gave him six months, but nine weeks later we would not be so lucky. He spent his last days with the same resolve and clear-headedness with which he had led his life. Still, as his health deteriorated, he mourned the things that brought him joy, like playing the violin and riding his bike. My father spent his last canoe outing reacquainting his son with peace and encouraging him to finish what he had started.

Long ago. My parents come spend a weekend in Montreal. We drink wine I brought back from France. My father confesses that he does not understand why his children love him despite his flaws. Sympathizing, I admit not understanding either why he loves me despite mine. Later, he tells me in all inebriated seriousness: “*Francis, j’vais toujours t’aimer.*” I laugh. “*Moi aussi, papa*.” We hug. I send him to bed, sit and finish Chapter I.

Charles Lord

(1953–2017)

“*Mon père, ce héros au sourire si doux*”

PESSOMANCER

The Legal Interpretation of Technology draws from history and literary theory to formulate an interpretive approach to the study of law and technology. This approach postulates that technology and technologies have no inherent properties or capabilities. Instead, legal agents attribute technological meaning — i.e. what technology is and what it can do — via a process akin to textual interpretation. The legal interpretation of technology does not entail providing an accurate representation of technology, but one that fits the requirements of legal practice. An interpretive approach focuses on the interpreter as the determinant of technological meaning, not technology or technologies. It does not aim to determine which interpretation should be adopted, but instead explores how interpretations are formulated and why some are more persuasive than others.

Throughout this thesis, I will often use the terms 'legal agent', 'practice' and 'technology'. The term 'legal agent' hints at the influence of Martha-Marie Kleinhans and Roderick Macdonald's critical legal pluralism on my understanding of law. Contemporary legal pluralism disputes the claim that the state acts as the sole source of legal normativity.[1] Kleinhans and Macdonald thought legal pluralism did not sufficiently take into account of subjectivity in lawmaking. Accordingly, they highlighted how legal subjects do not merely abide by law, but also invent it:

[1] See John Griffiths, "What is Legal Pluralism" (1986) 24 J Legal Pluralism & Unofficial L 1 ("'Legal pluralism', besides referring (in the 'strong' sense which is the subject of this article) to a sort of situation which is morally and even ontologically excluded by the ideology of legal centralism — a situation in which not all law is state law nor administered by a single set of state legal institutions, and in which law is therefore neither systematic nor uniform — can also refer, within the ideology of legal centralism, to a particular sub-type of the sort of phenomenon regarded as 'law'. In this ('weak') sense a legal system is 'pluralistic' when the sovereign (implicitly) commands (or the grundnorm validates, and so on) different bodies of law for different groups in the population," at 5). See also Brian Z Tamanaha, "Understanding Legal Pluralism: Past to Present, Local to Global" (2008) 30 Sydney L Rev 375.

> A *critical* legal pluralism … rests on the insight that it is knowledge that maintains and creates realities. Legal subjects are not wholly determined; *they possess a transformative capacity that enables them to produce legal knowledge and to fashion the very structures of law that contribute to constituting their legal subjectivity*. This transformative capacity is directly connected to their substantive particularity. It endows legal subjects with a responsibility to participate in the multiple normative communities by which they recognize and create their own legal subjectivity.[2]

Critical legal pluralism decentralizes law to make "the self … an irreducible site of internormativity."[3] It "is sceptical of authoritative interpretation," "presumes that subjects control law as much as law controls subjects within its normative sphere," calls "for a more intense scrutiny of the legal subject conceived as carrying multiple identities," and posits that "there is no *a priori* distinction between normative orders because these normative orders cannot exist outside the creative capacity of their subjects."[4] Critical legal pluralism rejects the state and officials as the main focus for the study of normativity and lawmaking, and insists on considering the role played by legal subjects.

Critical legal pluralism connects with many claims I will make in this thesis, but I find the phrase 'legal subject' too restrictive for my purposes. A legal subject evokes a regular citizen without professional legal training who does not hold public office. Kleinhans and Macdonald rightly emphasized that the lack of an official capacity did not make legal subjects any less active in lawmaking. However, the purview of my work does not only limit itself to legal subjects. It includes legislators, scholars, judges and civil servants as

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[2] Martha-Marie Kleinhans & Roderick A Macdonald, "What Is a *Critical* Legal Pluralism?" (1997) 12 Can JL & Soc 25 at 37 (emphasis added; "[s]ubjects construct and are constructed by State, society and community through their relations with each other. Structural-functional representations of almost wholly determined subjects, treated as "the other" to whom duties are to be owed, are impossible. State, society and community are hypotheticalinstitutions within which subjects are shaped by the knowledge they inherit, create and share with other subjects. At the same time, the institutionalized subject reciprocates by shaping and reformulating the hypotheses of state, society and community that are inhabited," at 43). See also Roderick A Macdonald & David Sandomierski, "Against Nomopolies" (2006) 57 N Ir Legal Q 610 at 611-15.

[3] See Kleinhans & Macdonald, *supra* note 2 at 39.

[4] *Ibid* at 40.

well as citizens, technologists, technology users, etc. All these individuals share a set of behaviours, attitudes and ideas stemming from legal normativity. I prefer the phrase 'legal agent' to that of 'legal subject' because it avoids the narrow meaning associated with the latter phrase without losing sight of the active role that Kleinhans and Macdonald attributed to subjectivity in lawmaking.

The phrase 'legal agent' also ties in with 'practice'. I understand law as a practice — something people do — rather than as a set of norms and institutions that exist independently from legal agents. By 'practice', I do not strictly refer to the professional activities of lawyers, notaries, judges and other jurists, but to how legal agents actively experience life through law, including (but not only) as legal professionals.[5] Law does not exist in legislation, but in legislating; not in precedents, but in adjudicating; not in doctrine, but in reasoning; not in signs, but in signifying; and so on. Conceiving law as practice leads me to focus on legal materials as evidence of lawmaking, rather than as the object of legal analysis. It leads me to focus more on the tactics and courses of action pursued by legal agents and their limitations, rather than on the results they produce, unless these results serve as a basis for further practice. Generally, I tend to use the word 'law' to refer to practice and the phrase 'the law' in reference to legal rules.

I also admit that I find it far more convenient and elegant to refer to 'legal agents' in lieu of "legal subjects, legal scholars, jurists, lawyers, judges, officials, legislators, etc.," and

[5] See Roderick A Macdonald, *Lessons of Everyday Law* (Montreal: McGill-Queen's University Press, 2002) at 3-8 ("law arises from, belongs to, and responds to everyone. It is understood here less as a set of constraining prohibitions imposed by those with social power, than as a framework of rules that facilitate human interaction by stabilizing our expectations of others, and theirs of us. … the key contribution of law is its capacity to reflect and to state the values around which we seek to organize debate about the kinds of societies in which we want to live," at 8).

‘legal practice’ instead of “lawmaking, scholarship, regulation, law enforcement, professional practice, adjudication, analysis, etc.” I find it difficult to discuss law and technology at a high level of abstraction without tolerating some imprecision. Whether or not this constitutes a fatal flaw of the thesis is not for me to decide — at least not on my own. In my defense, I would say that my work is more about examining a wide range of phenomena as rigorously as possible in order to suggest new hypotheses and avenues of research than it is about prescribing a course of action for a specific sphere of activity.

While the word ‘technology’ and its variations are probably the terms I use most often, I will not define them here. This may seem like a glaring omission, but how legal agents attribute meaning to technology — what technology is and what it can do — is what this thesis is about. Defining technology within its introduction is premature, if it is even for me to define. I would only say for now that I use the term ‘technology’ as a name, whereas I use ‘a technology’ and ‘technologies’ in reference to specific processes or devices. I trust a familiar understanding of technology will carry the reader through the thesis until he or she deems it necessary to think differently about its meaning.

Positivism and prescriptivism also figure prominently in the present work. Along with monism and centralism, positivism and prescriptivism constitute the “key definitional truths in conventional understandings of Western law,”[6] perhaps most elegantly summed up by Roderick Macdonald:

> (1) Monism: Law is formal and institutionalized such that a single order has a normative monopoly over a given geographic territory. *There is only one source of light in any given location.*
> (2) Centralism: Law is exclusively the product of the political state. *The exclusive source of light is the sun.*

[6] Roderick R Macdonald, “Unitary Law Re-Form, Pluralistic Law Re-Substance: Illuminating Legal Change” (2007) 67 Louisiana LR 1113 at 1117.

> (3) Positivism: There can be an *ex ante* hard criterion for distinguishing that which is law from that which is not law. *There is a sharp distinction between light and dark.*
> (4) Prescriptivism: Law is about externally-imposed rules and analogous normative statements. *All visible light has the same quality.*[7]

These key definitional 'truths' define law as an ensemble of rules and standards distinguished from other rules as the exclusive product of the political state, being the sole legal order in a given space.

All key definitional truths of law mean to distinguish it from other endeavours.[8] Positivism distinguishes legal rules and normative statements from other forms of rules and normative statements.[9] When I use the phrase 'legal positivism', I generally refer to the practice of formulating and using a hard, *ex ante* criteria between the legal and the non-legal, usually by highlighting specific artefacts such as legislation and judicial precedents. Prescriptivism distinguishes law from other normative endeavours by portraying legal rules and norms as "a priori restrictions on human interaction"[10] that can be either obeyed or disobeyed.[11] When I use the phrase 'legal prescriptivism', I generally refer to the practice of representing law as external behavioural restrictions imposed on subjects who have little choice on how legal rules and norms should affect them.

The thesis draws from main influences: science and technology studies (STS) and critical legal theory (CLT). The thesis draws inspiration from CLT's deconstructive "moves" to

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[7] *Ibid* at 1117-18. See also Macdonald & Sandomierski, *supra* note 2 ("monism (the belief in the unity of legal normativity), centralism (the belief that law and state are coterminus), positivism (the belief that a hard ex ante criterion may be propounded for distinguishing between that which is, and that which is not, law), and prescriptivism (the belief that law is a social fact existing outside and apart from those whose conduct it claims to regulate)," at 615).
[8] *Ibid* at 633; Macdonald, *supra* note 6 at 1145-56.
[9] *Ibid* at 1151-54 ("the structure of law is limited to the normative forms that the primary law-applying organ will recognize as exclusionary reasons for action," at 1151).
[10] Macdonald & Sandomierski, *supra* note 2 at 623.
[11] See Macdonald, *supra* note 6 at 1154-56.

challenge of prevalent and implicit assumptions in law and technology literature.[12] These assumptions, which I will collectively designate as the 'obsolescence stereotype', strongly influence the substance and direction of scholarship and lawmaking in this field. Listing the assumptions of obsolescence, I took inspiration from Robert Gordon's 'Critical Legal Histotries', in which the author critiques "fidelity to what … looks like a single set of notions about historical change and the relation of law to such change,"[13] both of which are meant to reinforce the ideology of liberal capitalism. CLT authors such as Gordon were essential to my critique obsolescence and to inform the style of my scholarship.

From STS, the thesis adapts the 'strong programme' of the sociology of scientific knowledge (SSK) to the study of law and technology. The emergence of the mostly Edinburgh-based 'strong programme' marks an important shift in the SSK from an essentialist to a relativist conception of knowledge. The strong programme responded from a prevalent tendancy among sociologists to take the truth of scientific knowledge for granted. Sociology was not to study the scientific knowledge *per se*, but only the social conditions would that foster or threaten scientific truth. Robert Merton's *Sociology of Science* provides a typical example of that approach. Merton, concerned with the threat of anti-intellectualism on scientific work, identified "institutionals imperatives … taken to

[12] See Rober Gordon, ""Critical Legal Histories Revisited": A Response" (2012) 37 Law & Social Inquiry 200 at 204; Robert Gordon, "Critical Legal Studies" (1986) 10 Legal Stud F 335 at 338.

[13] See Robert Gordon, "Critical Legal Histories" (1984) 36 Stan L Rev 57 at 59. See also Gordon, *supra* note 12 ("[w]hether 'law' is leading or 'lagging,' it is pictured in narratives of modernization as something related to, but separate from, the larger processes of social change: a secondary specialized subsystem of society, being worked on by social change and working back on it," at 202).

comprise the ethos of modern science,"[14] otherwise known as the 'Mertonian norms' of science: universalism, communalism, disinteredness and organized scepticism.[15]

The strong programme of SSK express the wish to conduct sociological research beyond the social norms surrounding scientific knowledge, into the very content of that knowledge. Sociologist David Bloor argued that refusing to do so amounted to no less than a betrayal of sociology as a discipline of scientific inquiry:

> All knowledge, whether it be in the empirical sciences or even in mathematics, should be treated, through and through, as material for investigation. Such limitations as do exist for the sociologist consist in handing over material to allied sciences like psychology or in depending on the researches of specialists in other disciplines. There are no limitations which lie in the absolute or transcendent character of scientific knowledge itself, or in the special nature of rationality, validity, truth or objectivity.[16]

To encourage the conduct of sociological research on the content of scientific knowledge and guide the endeavour, Bloor established the four tenets of the strong programme:

1. [SSK] would be *causal*, that is, concerned with the conditions which bring about the belief or states of knowledge. …
2. [SSK] would be *impartial* with respect to truth and falsity, rationality or irrationality, success or failure. Both sides of these dichotomies will require explanation.
3. [SSK] would be *symmetrical* in its style of explanation. The same types of cause would explain, say, true and false beliefs.
4. [SSK] would be *reflexive*. In principle its patterns of explanation would have to be applicable to sociology itself.[17]

In the 1980s, under the broad model of 'social shaping of technology', social scientists extended the strong programme to technology in order to provide social explanations of technological objects and facts.[18]

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[14] Robert K. Merton, *The Sociology of Science: Theoretical and Empirical Investigations* (Chicago: University of Chicago Press, 1973) at 270.
[15] *Ibid*, at 267-78.
[16] David Bloor, *Knowledge and Social Imagery* (Chicago: University of Chicago Press, 1991) at 3.
[17] *Ibid*, at 7 (my emphasis).
[18] See generally Steve Woolgar, "The Turn to Technology in Social Studies of Science" (1991) 16 *Science, Technology & Human Values* 20; Trevor J Pinch & Wiebe E Bijker, "The Social Construction of Facts and

The Legal Interpretation of Technology aspires to the four tenets of the strong programme, which I had the opportunity to study under Stewart Russell and Donald Mackenzie at the University of Edinburgh. The thesis seeks to understand how legal agents generate knowledge about technology (causality), whether knowledge claims are considered true or not, accurate or not, or stand the test of time (impartiality). The thesis focuses on interpretation in order to explain how knowledge claims come to be (symmetry), but also to connect with the creation of legal knowledge (reflexivity). Faithful to the Edinburgh School of SSK, *The Legal Interpretation of Technology* also favours a historical approach to its object of study.

Symmetry and reflexivity also informed the esthetics and writing style of the thesis. I have written much of this work in the first person rather than the conventional third. The present work draws on my ten-year experience working and researching in the field of law and technology. It purposefully deconstructs much of what I have learned during these years. Part I of the thesis, especially, is an exercise in self-mutilation; I am the first target of its critique. Having deconstructed my core beliefs about the field, Part II responds to the anxieties Part I generated by reconstructing the interface of law and technology on different grounds, being the ordering, subversion and adjudication of language.[19]

Artefacts: Or How the Sociology of Science and the Sociology of Technology Might Benefit Each Other" (1984) 14 *Social Studies of Science* 399.

[19] Writing in the first person also reinforced my conception of doctoral studies and of the thesis. A thesis is not a book, nor is it a reserve of articles. These things are happy consequences of doctoral studies, but not their purpose. Instead, a thesis — at least, in law and in the humanities — is an experiment performed in literary form. For that reason, I find that chapters specifically dedicated to literature review and methodology artificially constrain discussions. Specifically, the literature review maintains an illusion of thorough planning, obfuscating the twists and turns characteristic of many doctoral experiences. As for methodology, I see no reason why the research and writing process should not be (re-)contemplated throughout the work. More importantly, examiners should be given the opportunity to witness how the writer reflects on the work, reconsiders earlier decisions and overcome challenges. For the focus is the transformation of its writer: it is the author, and not the thesis, who journeys from *studium* to *docere*.

I have relied on symmetry to reinforce the substantial connections between the parts and the chapters of the thesis, and to discipline my wide research interests in to drafting order. Outlines for chapters II and III, for example, reflect each other, as they explore two sides of the same coin. The three-part outlines of chapters IV to VI set a rhythm designed to help the reader progress through the more descriptive style of Part II, but also to support the underlying theme of the thesis, namely time. One could also pair-up chapters in each part, for they perform similar functions: chapters I and IV introduce an idea, chapters II and V discuss its implications and explore its theoretical potential, and chapters III and VI round-up the discussion by considering peripherical issues. Again, Part II responds to Part I.

I would be remiss not to mention Sheila Jasanoff. A pioneer of the STS field, Jasanoff's scholarship eloquently highlights law's involvement in the production of scientific knowledge and technological artefacts.[20] She built upon the notion of "co-production" to explain how society, science and technology either constitute or interact with each other.[21] In the picture of STS drawn by Jasanoff, my concern with authority and ambiguity would place me on the interactional side of the co-production framework:

> In this view of co-production, human beings seeking to ascertain facts about the natural world are confronted, necessarily and perpetually, by problems of social authority and credibility. Whose testimony should be trusted, and on what basis, become central issues for people seeking reliable information about the state of the world in which all the relevant facts can never be at any single person's fingertips.[22]

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[20] See for example, Sheila Jasanoff, *Science at the Bar: Law, Science and Technology in America* (Cambridge: Harvard University Press, 1995); Sheila Jasanoff, *The Fifth Branch: Science Advisers as Policymakers* (Cambridge: Harvard University Press, 1990).

[21] See Sheila Jasanoff, "Ordering Knowledge, Ordering Society" in Sheila Jasanoff (ed), *States of Knowledge: The Co-Production of Science and Social Orde* (New York: Routledge, 2004) 13 at 18-19.

[22] *Ibid*, at 29 (compared to the constitutive approach, which "focuses in the main on the emergence of new facts, things and systems of thought"). See also generally Steven Shapin & Simon Schaffer, *Leviathan and the Air-Pump: Hobbes, Boyle, and the Experimental Life* (Princeton: Princeton University Press, 1989).

My work shares with that of interactional co-production scholars the premise that orderings of nature are, in many ways, tributaries of the social order. However, I have attempted to transcend the boundaries between law and technology by focusing on language and interpretation: how technological meaning stems from law.

The Legal Interpretation of Technology aims to renew law and technology scholarship with an interpretive approach. I argue that technologies do not speak for themselves; they have to be spoken for, as the meaning of technology, what it is and what it can do, derives from interpretation. Specifically, the legal interpretation of technology describes how legal agents interpret technology in conformity with prevalent conceptions of law. I present a legal history of technology, attempting to understand law from the perspective of such legal interpretation. I attempt to refocus law and technology scholarship toward attaining a more critical understanding of law through the theme of technology, as opposed to strictly determining how the law applies to new technologies.

Part I of the thesis directly tackles the topic at hand by tackling three clichés of law and technology literature: law lag, the antagonistic relationship of law and technology, and the essential distinction between them. This first Part draws from the humanities to critique of law and technology literature, as opposed to depending on natural sciences and engineering as it is often the case in such literature. Part II of the thesis presents three case studies on law and a technology; i.e. the book. These case studies take place in England and France, and span the seventeenth to the nineteenth centuries to study censorship and pre-modern copyright. By leaving the preoccupations of modern life and looking toward history, the thesis aims to enhance its critical perspective on contemporary law and technology debates.

Part I highlights the 'obsolescence stereotype' (or 'obsolescence'). Obsolescence is a collection of assumptions legal agents hold about law and technology, assumptions that derive from contemporary ideas regarding what law is and what law is about. These assumptions form the theoretical basis upon which legal agents rely to determine how one should experience technologies and how the law should apply to them. In other words, obsolescence is the product of the legal interpretation of *technology* and, in turn, it frames the legal interpretation of *technologies*. Part I begins by enumerating seven assumptions I associate with the obsolescence stereotype. While I discuss all of these assumptions in the first three chapters, I mainly do so through the most foundational assumption: 'law and technology are separate, but related'.

Chapter I performs a review of law and technology literature. I survey a handful of 'standard cases' in which legal scholars claim or have claimed that law lags or has lagged behind a new technology, stripping legal rules of their relevance and effectiveness. I trace the notion of 'law lag' back to the work of American sociologist William Ogburn, who proposed a model of time and social change. Highlighting some of the weaknesses of Ogburn's model and its application to law and technology, I propose a counter-model based on Émile Durkheim's work on deviancy. I argue that legal agents attribute the label of 'newness' to technologies when they 'deviate' from legal norms. I illustrate technological deviancy with three examples from case law, legal scholarship, and the regulation of genetically modified foods in the United States and the European Union.

Chapter II introduces the theoretical basis for the legal interpretation of technology. The theory combines literary theory with technology studies to explain how legal agents attribute meaning to technology: what technology is and what it can do. The Chapter next

argues that one of the main products of legal interpretation is the interpretation of technology as instruments and, incidentally, the reinforcement of the assumption that law and technology are separate, but related. I allow myself to be guided by the prescriptive jurisprudence of Rudolph Von Jhering and the principle of technological neutrality to show that, by depicting technology as a neutral and determinate instrument, legal agents take the ascendency of legal rules over technologies for granted. I end the Chapter with a thought experiment critiquing two strategies legal agent have adopted to face the indeterminacy of technological change: speculation and discretion.

Chapter III pursues the critique of obsolescence's foundational assumption. To do so, I draw inspiration from three theories of technology: technological determinism, Jacques Ellul's Technique and Martin Heidegger's Enframing. These 'substantive' theories argue that technologies impose ends of their own on human beings and, therefore, cannot be considered only as neutral instruments. In turn, I employ each theory to shed a critical light on topics of law and technology study: regulation by technological means, the instrumentalisation of law and the impact of information technology on the substance of legal research. These investigations show that the boundary between law and technology is itself a matter open to interpretation, and that modern jurisprudence could be solely responsible for the problem of law lag. I end the Chapter with a retrospective of Part I.

Part II draws on the history of the book to renew the interpretive approach to the study of law and technology. Having introduced the legal interpretation of technology and taking it as a crucial, inevitable and normal part of producing technological meaning, I examine what this phenomenon can teach us about law and lawmaking. I take after the work of Adrian Johns, a leading historian of the book. Johns challenges the prevalent, materialist

approach to the history of the book that attributes the profound, wide-ranging effects of the printing press on pre-modern European societies to the inherent capabilities of the new technology. Johns argues that the capabilities of print derive instead from cultural representations, practices and even conflicts about the meaning of print. How law contributed to this 'print culture' constitutes a central theme of Part II.

From the history of Crown copyright, Chapter IV formulates a theory of lawmaking as linguistic authority. One could not simply judge a book by its cover in pre-modern England. While censors and wardens struggled to suppress blasphemous, fraudulent, piratical and seditious publications that came with the printing press, the law contributed to how officials, readers, printers and booksellers attributed trust in the book trade. A judicial conflict that broke out between the Company of Stationers and the rightful holder of the printing patent on common law books in the second half of the seventeenth century highlights how the authenticity of books and the integrity of print depended on law-mediated trust. The Chapter examines the philosophy of Thomas Hobbes to argue that lawmaking is a political solution to epistemic conflicts about the meaning of words.

From the saga of Diderot's *Encyclopédie*, Chapter V enriches my Hobbesian theory of lawmaking with an anti-prescriptivist perspective. In principle, no one could print and sell a book in France without the express assent of the King. However, authors, printers, booksellers and even officials circumvented stringent censorship regulations to publish innovative and profitable content. Concurrent with the publication of the first, widely successful edition of the *Encyclopédie*, some of France's most powerful judicial courts began to systematically oppose the policies of Louis XV. The conflict between the King and his magistrates spilled into censorship matters, leading to the suppression of the

Encyclopédie. The Chapter investigates censorship to reflect on how legal agents respond to and frustrate the commands of their sovereign legislator.

From the history of non-literal copyright infringement, Chapter VI reconciles the propositions of the preceding chapters into a cycle of lawmaking. Between the early years of English copyright law to the end of the nineteenth century, tribunals and treatise writers interpreted the copyrighted 'work' out its material form first into a static composition and, finally, a pliable substance. The changing contours of the work steadily expanded the scope of copyright toward unauthorized altered reprints that once lay beyond the reach of copyright holders, such as 'fair abridgments'. The evolution of the copyrighted work provides the opportunity to observe the legal interpretation of technology in action, as legal agents expressly interpreted intangible goods out of books and other objects. Such intangible goods were adapted to the requirements of individual cases and to the modernization of intellectual property law. The thesis concludes with 'Chronomancer' a re-telling of its arguments under the theme of law and time.

PART I – STEREOTYPE

The Legal Interpretation of Technology questions whether technology enables legal agents to better understand law. Legal literature portrays technological change as the central focus of law and technology. Technological change constitutes both a challenge, by confronting legal agents placed in unpredictable circumstances with the limits and inadequacies of law, and an opportunity, by deepening our understanding of law and thus allowing us to devise ways to perfect it and maintain its timeliness and effectiveness. Lawrence Lessig probably offered one of the more famous defences of the potential of law and technology to capture the imagination of scholars, jurists and lawmakers.

Lessig made his case in response to Frank Easterbrook's critique of cyberlaw as a distinct field of scholarship. Drawing comparisons with a 'law of the horse', Easterbrook argues that studying general rules remains the best way to know how law applies in cyberspace:

> Lots of cases deal with sales of horses; others deal with people kicked by horses; still more deal with the licensing and racing 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. … *Only by putting the law of the horse in the context of broader rules about commercial endeavors could one really understand the law about horses*.[1]

While Easterbrook does not deny the difficulty of applying law to information technology, he considers developing a whole new field of study around a given technology — with the ultimate goal of producing an entirely new legal regime — unproductive, if not absurd. Rather than, for example, figuring out how intellectual property should apply in cyberspace, legal scholars should instead focus on resolving the numerous pressing

[1] Frank H Easterbrook, "Cyberspace and the Law of the Horse" [1996] U Chi Legal F 207 at 207-08 (emphasis added).

questions relevant to *any* space, a task yet to complete.[2] Technology does not present much interest beyond discussing minute matches and mismatches between rules and devices. As for cyberspace, Easterbrook thought his colleagues should focus on what lawyers and legal scholars are qualified to do — clarify rules, create tradable property rights, and establish bargaining institutions — and leave technology to technologists and lawmakers.[3]

In response, Lessig argues that cyberspace does warrant the attention of legal scholars, notably because cyberspace offers unparalleled malleability when compared to real space: coders can modify the architecture of cyberspace at will to fit a variety of purposes, including regulating behaviour. As a result, lawmakers can indirectly govern the denizens of cyberspace by regulating its coders.[4] However, to do so, lawmakers must compete with private entities that also use cyberspace's malleability to coerce users' actions in support of their own objectives.[5] Two forms of regulation thus compete and combine to govern users in cyberspace: technological regulation (architecture, or computer code) and legal regulation (rules applicable to users and coders).

Therefore, Lessig maintains, cyberspace provides at least three important lessons about law. First, it underlines the oxymoron of regulated freedom: property rights ordinarily curtail governmental power in physical space, but expand it in cyberspace.[6] Second, the regulation of cyberspace raises transparency issues, since its invisible architecture dissimulates regulatory ends and values that a democratic lawmaking process would

[2] *Ibid* at 208.
[3] *Ibid* at 210-16.
[4] Lawrence Lessig, "The Law of the Horse: What Cyberlaw Might Teach" (1999) 113 Harv L Rev 501 at 506, 509, 514-16.
[5] *Ibid* at 522ff, 538-41.
[6] *Ibid* at 535-38.

ordinarily reveal.[7] Lastly, coders designing the architecture of cyberspace can favour specific interests by displacing the ends and values law aims to preserve.[8] Lessig argues that cyberspace raises problems and questions that real space does not, and thus highlights "the limits on law as a regulator and … the techniques for escaping these limits. … By working through these examples of law interacting with cyberspace, we will throw into relief a set of general questions about law's regulation outside cyberspace."[9]

Lessig sees in technological change the opportunity to examine law critically. The interest of cyberspace would reside in the unique viewpoint it provides over legal rules, ideas and institutions, one that would offer valuable insights about law. Even if the literature sometimes acknowledges law's influence over technology, its critical perspective remains only moves from technology to law. In one form or another, technological change is attributed the capacity to subvert law and improve our understanding of law. At the heart of this assumption lies a contradiction to which I devote the present Part: the capacity of technological change to offer a critical perspective into law stems from law's very own orthodoxy.

Unlike Lessig or even Easterbrook, my contention is that legal agents learn from technology nothing that they do not already know about law. Rather, legal literature shows that the interest legal agents have for law and technology stems from how technological change reinforces legal orthodoxy. I do not accuse (all) legal agents of reactionary conservatism, stubborn ignorance or methodological ineptitude. Our incapacity to learn

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[7] *Ibid* at 541-43.
[8] *Ibid* at 543-48.
[9] *Ibid* at 502 (emphasis added).

anything new about law stems from how knowledge about technology derives from legal practice or, more precisely, from the legal interpretation of technology.

The Legal Interpretation of Technology answers the following question: how do legal agents justify intervening (or not) in the development or use of a technology? Drawing inspiration from literary theory and science and technology studies, I argue that legal agents belong to communities that condition how they interpret technology. These communities induce how their members can make sense of technology without facing criticism and rejection from fellow members. The reliance of legal agents on prevalent understandings of law to interpret technology makes their interpretations of technology distinctively 'legal': legal agents interpret technology in a manner compatible with and supportive of what their communities dictate law is and law is about.

This may seem counter-intuitive. Indeed, the law and technology literature often emphasizes how technological development renders law obsolete. How then can technology make law obsolete, and still be compatible and supportive of law? I came to the legal interpretation of technology as I was trying to articulate the common threads that would unite law and technology literature, which I numbered at seven. I collectively designate these seven assumptions as the 'obsolescence stereotype' or 'obsolescence':

1. *Law and technology are separate, but related*. They constitute distinct and autonomous spheres of human activity. Obsolescence leads legal agents to examine how and the conditions under which these two spheres interact. Obsolescence posits a tension between law and technology, and focuses attention on a single question: as technology changes, how should law follow suit? This seminal sequence — from

technological to legal change — reinforces separation. Indeed, if law and technology belonged to the same sphere of human activity, they would evolve at the same pace and in the same direction;[10]

2. *The creation and development of technology occurs outside the reach of law, and vice versa*. Technology and law only affect each other after they have been introduced to society. 'Society' forms the third autonomous sphere of human activity in which law and technology interact. No matter law's involvement in technological development, an irreducible part of technology is 'technical', while an irreducible part of law is 'legal'. Law can reach technology only through the actions of technology developers and users;
3. *Legal agents can understand law and technology through markers alone*. The more precise and reliable is the marker, the more accurate the observation will be. For law, the best markers are positive rules and doctrines. For technology, these markers are found in technologies: specific devices and procedures. Markers provide evidence that technology changes continuously and rapidly, while law changes much more slowly — if ever;
4. *Lawmakers should intervene before technological change materializes*. Technology necessarily brings unintended, negative consequences. Legal professionals and institutions should therefore anticipate technological change, and attempt to prevent or mitigate its negative consequences;

[10] See also Robert Gordon, "Critical Legal Histories" (1984) Stan L Rev 57 at 60-61; Sheila Jasanoff, "Making Order: Law and Science in Action" in Edward J Hackett, Olga Amsterdamska, Michael Lynch & Judy Wajcman (eds), *The Handbook of Science and Technology Studies*, 3rd edition (Cambridge: The MIT Press, 2008) 761.

5. *Law ought to assist society in coping with technological change*. Law must adapt to evolving societal needs.[11] Technology is just as separate from society as it is from law; technology will either facilitate or hinder the fulfilment of societal needs. Law must expedite the satisfaction of societal needs in the midst of technological change;
6. *Only new technology merits the attention of legal agents.* Only new technology substantially affects societal needs. The history of law and technology only shifts obsolescence back in time, leaving its sequence intact;[12]
7. Finally, *if and when law addresses technological change, it does so without invalidating obsolescence*. Addressing obsolescence always leads back to it. Technology is essentially dynamic and future-oriented, while law is static and past-oriented. All legal solutions to technological problems last only until foiled by further technological change.

Like any stereotype, the primary function of obsolescence is to meet the expectations of its audience. Legal agents favour this stereotype because it translates their anxieties into solvable problems: problems that do not challenge their conception of law. If a conception of law admits that law has flaws, then an interpretation of technology that emphasises these flaws will confirm law as conceived. When a conception of law admits law has flaws and

[11] See Gordon, *supra* note 10 at 61-65 ("[t]he notion that law always is, or at least ought to be, functionally adapting to evolving social needs … presumably persists because of its serviceability to the liberal idea of law as the neutral arbiter of social conflict: It tells the managers of the legal system that their basic instructions are specified by a social process outside of the legal system and that they have no responsibility for that process except to solve the technical problems of devising functional responses that will help rather than hinder it," at 68).

[12] See for example Gregory N Mandel, "History Lessons for a General Theory of Law and Technology" (2007) 8 Minn JL Sci & Tech 551 at 553ff; Lyria B Moses, "Why Have a Theory of Law and Technological Change?" (2007) 8 Minn JL Sci & Tech 589 at 591-94. Compare with Kieran Tranter, "'The History of the Haste-Wagons': The *Motor Car Act 1909* (VIC), Emergent Technology and the Call for Law" (2005) 29 Melb U L Rev 843.

instructs legal agents on how to alleviate these flaws, then the interpretation of technology acknowledging these flaws empowers legal agents within the roles allocated to them within this conception.

Obsolescence claims that, sooner or later, technological change cancels the timeliness of law. Challenging that claim led me to formulating an alternate theory of law and technology, namely the legal interpretation of technology. In the present Part, I question the aforementioned assumptions by examining the problem of law lag, instrumental theory of technology and legal prescriptivism, and boundary–making.

I. RULES AND IMPLEMENTS

Obsolescence maintains law lag at the forefront of law and technology literature. Law lag is a model of legal and technological change. Law lag posits that legal rules become increasingly ineffective and irrelevant as technology changes.[1] Technological change negates factual assumptions embodied in legal rules by enabling new and unregulated behaviours, modifying the cost of violating, respecting and enforcing existing rules, or generating uncertainty vis-à-vis their application. The rate of technological change itself outpaces the rate of legal change and tests the capacity of legal institutions to adapt to changing circumstances:

> Law adapts by continuous increments and at a pace second only to geology in its stateliness. Technology advances … in lunging jerks, like the punctuation of biological evolution grotesquely accelerated. Real world conditions will continue to change at a blinding pace, and the law will get further behind, more profoundly confused. This mismatch is permanent.[2]

Legal positivism — or, more accurately, a formalist tendency stemming from legal positivism[3] — encourages imposing strict distinctions between law and technology, which

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[1] See Lyria B Moses, "Agents of Change: How the Law 'Copes' with Technological Change" (2011) 20 Griffith L Rev 763 ("we can think of law as being 'behind' technology when law is designed around a socio-technical context of the relatively distant past. In that context, the real question becomes whether sufficient technologies are in place to ensure that legal issues resulting from technological change are identified and resolved soon after they arise," at 765); Gregory N Mandel, "Regulating Emerging Technologies" (2009) 1 LIT 75 at 81-82; Michael H Shapiro, "Is Bioethics Broke?: On the Idea of Ethics and Law 'Catching Up' with Technology" (1999) 33 Ind L Rev 17 at 21, 38.

[2] John P Barlow, "The Economy of Ideas: Selling Wine Without Bottles on the Global Net", available online: www.eff.org/barlow/EconomyOfIdeas.html, cited in Roger Brownsword, *Rights, Regulation, and the Technological Revolution* (Oxford: Oxford University Press, 2008) at 160. See also Sheila Jasanoff, "Making Order: Law and Science in Action" in Edward J. Hackett, Olga Amsterdamska, Michael Lynch & Judy Wajcman (eds), *The Handbook of Science and Technology Studies*, 3rd ed (Cambridge: The MIT Press, 2008) 761 at 768-69; Peter Drahos, "Law, Science, and Reproductive Technology" (1985) 9 Bull Austl Soc Leg Phil 270 at 271.

[3] See Victor M. Muñiz Fraticelli, *The Structure of Pluralism: On the Authority of Associations* (Oxford: Oxford University Press, 2014) ("[l]egal positivism, which is a thesis about the criteria of legal validity, is transformed, through antonym substitution, into a philosophy of statist centralism and epistemological formalism incompatible with the observable social complexity of normative phenomena," at 125).

manifests on juxtaposing rules to technologies. Legal agents must exert themselves to adapt rules to technologies through law reform.[4] Law reform can take the form of affirmation, re-interpretation or codification: legal agents may consider that legal rules already extend to a new technology, re-interpret them for that purpose, or modify or enact legal rules.

Law lag constitutes the operational problem of obsolescence. By 'operational', I mean 'ready-to-use': an uncontroversial problem that comes with a tacit yet established method of resolution. Indeed, obsolescence inevitably delivers on the promise of resolving a recurrent crisis through periodic law reform. Once legal agents accept obsolescence, they internalize its failures. If I take for granted that law lags behind technology and that whatever measure I took to correct law lag yields unsatisfying results, I will assume that I made a mistake either in identifying certain circumstances as a law lag, or in adopting or implementing the right solution. This is why attempts to solve a law lag problem, successful or not, always reinforce the obsolescence stereotype.

Law lag is almost omnipresent in law and technology practice. The literature explores a wide array of regimes and technologies, but its core narrative remains the same: technology changes in some unanticipated way; legal rules do not apply properly to new technologies; timely law reform is required. To show the ubiquity of obsolescence law lag, I introduce a number of cases in which law arguably lags, lagged or will lag behind technology. While I delve into the example of cybernetics more deeply, the other cases will illustrate future arguments. The standard cases show that law and technology practice focuses on the low level of generality of discrete rules and technologies. Rules and technologies serve as

[4] See also Kieran Tranter, "The Law and Technology Enterprise: Uncovering the Template to Legal Scholarship on Technology" (2011) 1 LIT 31 at 70.

commensurable, time-bound variables that reproduce preconceived ideas about law. Because law lag focuses on the juxtaposition of discrete positive rules and empirically observable technologies, it provides limited support to develop a general theory of law and technology.

All the standard cases focus not so much on law and technology generally, but on specific maladjustments between some rules and some technologies. The literature juxtaposes cybernetic enhancements to the legal definition of liability; satellite deployment to a lack of rules governing space-faring endeavours; automated cars to liability rules; digital technologies and 3D-printing to intellectual property rights; planes to real property rights; electronic documents to contract formation. They highlight how legal agents focus on a micro-level of analysis when considering matters relevant to law and technology.

Moreover, all of the standard cases revolve around 'new' technologies; old technologies do not attract the attention of legal scholars in and of themselves, unless they were once new.[5] In law and technology scholarship, perhaps in legal reasoning writ large, the material world fades into the background after it becomes familiar. Analysts lose interest in the material world to focus instead on the conduct of its denizens. Until a technology passes on to the realm of the old and familiar, it has a quality that warrants the attention of legal agents: newness.

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[5] See for example Mandel, *supra* note 23; Lyria B Moses, "Why Have a Theory of Law and Technological Change" (2007) 8 Minn JL Sci & Tech 589 at 591-94.

A. Standard cases

Collin Bockman, among others, is concerned with the legal implications of transhumanism, which seeks "to merge human bodies with machine parts."[6] More specifically, Bockman foresees a growing discrepancy between American legal definitions of disability and the increased capabilities of cybernetic prostheses. Bockman adopts an empirical, ever-accelerating, accumulative and successive model of technological development: he writes the history of cybernetics one technology at a time.[7] The author enlists Ray Kurzweil's 'Law of Accelerated Returns' to support his argument about the increasing pace of technological development: as more and more technologies emerge, they open up new avenues for further developments. This would explain why technology changes at such an

[6] Ian Kerr, "The Internet of People? Reflections on the Future Regulation of Human-Implantable Radio Frequency identification" in Ian Kerr, Valerie Steeves & Carole Lucock (eds), *Privacy, Identity, and Anonymity: Lessons from the Identity Trail* (Oxford: Oxford University Press, 2009) 335 at 354 (analysing how current models of privacy and autonomy offer inadequate protection in light of human-implementable radio frequency identification). See for example Susan W Brenner, "Humans and Humans+: Technological Enhancement and Criminal Responsibility" (2013) 19 BU J Sci & Tech 215 (exploring "how the postulated disconnect between two classes of humans — the Enhanced and the Standard — could impact the assessment and application of criminal Responsibility," at 221); Emilee S Preble, "Preemptive Legislation in the European Union and the United States on the Topic of Nanomedicine: Examining the Questions Raised by Smart Medical Technology" (2010) 7 Ind Health L Rev 397; Ian Kerr & James Wishart "'A Tsunami Wave of Science': How the Technologies of Transhumanist Medicine Are Shifting Canada's Health Research Agenda" (2008) 13 Health LJ 13 at 16-22. Consider also legal scholarship on the topic of wearable technologies, for example Adam D Thierer "The Internet of Things and Wearable Technology: Addressing Privacy and Security Concerns without Derailing Innovation" (2015) 21 Rich JL & Tech 6 (on privacy and security concerns associated with wearable technologies); Kristin Bergman, "Cyborgs in the Courtroom: The Use of Google Glass Recordings in Litigation" (2014) 20 Rich JL & Tech 11 (discussing the utility of Google Glasses in litigation); Yana Welinder, "Facing Real-Time Identification in Mobile Apps & Wearable Computers" (2013-14) 30 Santa Clara High Tech LJ 89 (arguing "that any regulation with respect to real-time identification should be technology neutral and narrowly address harmful uses of computer vision without hampering the development of useful applications," at 92).

[7] Collin R Bockman, "Cybernetic-Enhancement Technology and the Future of Disability Law" (2010) 95 Iowa LR 1315 at 1323-29 (covering current advances in joints and internal organs replacements, brain implants and brain, computer interfaces, advanced prosthetic limbs, and nanotechnology).

accelerated rate.[8] Bockman argues that because cybernetic-enhancement technology changes at a higher rate than law, legislators should engage in pre-emptive law reform.[9]

Bockman anticipates that the inevitable lag between law and technology will lead to the unfair treatment of disabled, non-disabled, and cybernetically-enhanced humans. He defends his position by exposing the purpose and operation of the United States' *Americans with Disabilities Act*, which prohibits discrimination against the disabled.[10] To benefit from the protection of the *Act*, the alleged victim of discrimination must have a disability. The legislation defines 'disability' as "a physical or mental impairment that substantially limits one or more of the major life activities of [an] individual."[11] The US Congress amended the *Act* in 2008 to instruct American courts not to take into account mitigating measures when determining whether someone is disabled, including prosthetics.[12] Bockman argues that the *Act* reflects "Congress's current view of disability and of the body: the baseline 'able' person is the average, functioning human with all original parts intact, and no additions or modifications are relevant in the eyes of the law to the determination of whether someone is disabled."[13]

Bockman predicts that as technology develops, both disabled and non-disabled people will use cybernetic enhancements to upgrade their bodies. For example, a woman could replace her otherwise healthy biological legs for cybernetic ones that increase her capabilities

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[8] *Ibid* at 1329-31. See Ray Kurzweil, *The Age of Spiritual Machines: When Computers Exceed Human Intelligence* (New York: Viking Press, 1999).
[9] Bockman, *supra* note 7 at 1330-31.
[10] 42 USC § 12101 [*Americans with Disabilities Act*]. See Bockman, *supra* note 7 at 1320-21.
[11] *Americans with Disabilities Act*, *supra* note 10 § 12102(2) (the Act's definition also includes "a record of such impairment; or being regarded as having such an impairment," *ibid*).
[12] *American with Disabilities Act Amendments Act of 2008*, Pub L No 110-325, 122 Stat 3553 § 3(4)(E)(i)(I).
[13] *Supra* note 7 at 1322.

beyond those of an average human. But because the *Americans with Disability Act* prevents courts to take into account "the ameliorative effects of mitigating measures such as"[14] cybernetic limbs, a (legally) legless yet bionic woman would unfairly benefit from the protection of the *Act*.[15] Moreover, the *Act* as it stands today would not prevent comparative discrimination against someone choosing not to have cybernetic upgrades. Consequently, non-upgraded individuals would not be considered disabled under the *Act*, but cybernetically-enhanced humans would. To avoid these problems, Bockman prompts Congress to allow courts to consider mitigating factors when identifying a 'disability' under the *Act*.[16]

Cybernetics count as one of many technologies that have attracted the attention of legal scholars and been framed as raising a law lag problem. The first generation of space law scholarship probably offered some of the most illustrative examples of obsolescence, with legal scholars insisting that space technology created a "legal vacuum" jurists and lawmakers needed to fill with rules.[17] The launch of Sputnik in 1957 heralded a time when humanity could transport people and objects in outer space. 'Space lawyers' complained that satellites existed outside the reach of positive law, leading them to survey gaps revealed by technology. These gaps could result from existing technologies and speculative devices or events, such as encounters of the third kind.[18] Framing the inquiry in terms of

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[14] *American with Disabilities Act Amendments Act of 2008*, *supra* note 12 § 3(4)(E)(i)
[15] See Bockman, *supra* note 7 at 1336-37.
[16] *Ibid* at 1337-40.
[17] See Barton Beebe, "Law's Empire and the Final Frontier: Legalizing the Future in the Early *Corpus Juris Spatialis*" (1999) 108 Yale LJ 1737 at 1741.
[18] See Tranter, *supra* note 4 at 38-39; Beebe, *supra* note 17 at 1749, 1767-70.

gaps and lags emphasized how space technology created new and pressing dilemmas the law needed to address and resolve.[19]

Nanomaterials challenge a key assumption of the regulation regime for toxic substances established by the *Canadian Environmental Protection Act, 1999* ('CEPA').[20] CEPA's 'novel substance' regime requires that promoters of an unregistered substance submit it to a homologation process before introducing it in Canada. The process aims to assess the health and environmental risks raised by the substance, and how to mitigate them. Promoters introducing a toxic substance without the assent of Environment Canada risk criminal sanctions and other penalties. Like many other regulatory regimes of the sort, CEPA assesses the risks posed by a substance by correlating the volume of exposure to a substance with its toxicity: a long-held assumption derived from experience dealing with chemical substances.[21] Accordingly, CEPA exempts from its application the manufacture and circulation of unregistered substances in negligible quantities: up to 100 kilograms annually, and up to 1,000 kilograms annually for research or exportation.[22] But given their minute dimensions, even only 1,000 kilograms of nanomaterials woild constitute a substantial amount. Until regimes like the one instituted by the CEPA can integrate novel assumptions — such as correlating the toxicity of nanomaterials to the surface of exposure — many authors argue they will prove ineffective against nanomaterials.[23]

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[19] See Moses, *supra* note 1 at 768.
[20] SC 1999, c 33, s 65ff (CEPA).
[21] Lynn L Bergeson, *Nanotechnology: Environmental Law, Policy, and Business Considerations* (Chicago: American Bar Association, 2010) at 150.
[22] See CEPA, *supra* note 20 s 81(6)e); *New Substances Notification Regulations (Chemicals and Polymers)*, (2005) 139 Can Gaz II, 1864, s 4, 5(1) and 8(1).
[23] See Moses, *supra* note 1 at 767; Diana M Bowman & Graeme A Hodge, "A Small Matter of Regulation: An International Review of Nanotechnology Regulation" (2007) 8 Colum Sci & Tech L Rev 1 at 21; Gregory N Mandel, "History Lessons for a General Theory of Law and Technology" (2007) 8 Minn JL Sci & Tech 551 at 568-69; Geert Van Calster, "Regulating Nanotechnology in the European Union" (2006) 3

Civil liability laws in many American states assume that humans drive cars.[24] This assumption is starkly at odds with automated cars.[25] A court might refuse to impose liability when an automated car causes an accident, provided it has no known defect,[26] or would do so only by resorting to a distinct, potentially ill-adapted doctrine or regime, such as the liability rules applicable to computer systems.[27] The lack of legal regimes that specifically account for driverless cars raises uncertainty, notably because legislators do not provide courts with any guidance on which basis they ought to adjudicate liability cases involving automated cars. In the absence of guidance, some authors doubt that current regimes will provide sufficient compensation to victims of accidents involving automated cars, and to worry that discrepancies between the limited laws specifically regulating automated cars will expose them to conflicting and varying levels of liability and protection when they drive from one state to another.[28]

Developments in information and communication technology have posed constant challenges to copyright law, so much so that it seems customary to recount the history of copyright law as a series of legal responses to technological change, from the printing press to digital technologies.[29] Digital technology makes it significantly easier to reproduce and

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Nanotechnology Law and Business 359 at 361-62; Aida M Ponce Del Castillo, "La réglementation européenne en matière de nanotechnologies" (2010) 2065 *Courrier hebdomadaire du CRISP* 5 at 19.

[24] Sophia H Duffy & Jamie P Hopkins, "Sit, Stay, Drive: The Future of Autonomous Car Liability" (2013) 16 SMU Sci & Tech L Rev 453 at 454-55; Julie Goodrich, "*Driving Miss Daisy:* An Autonomous Chauffeur System" (2013) 51 Hous L Rev 265 at 280.

[25] Duffy & Hopkins, *supra* note 24 at 454-55 ("[l]iability based on drivers and runaway cars focus on the actions of the person responsible for driving or operating the car. An autonomous car would not have a human driver or operator, rendering these liability models inapplicable, at 461).

[26] *Ibid* at 461-62.

[27] *Ibid* (notably, "[c]computer law supports the notion that the user of an autonomous car should be liable for the acts of the car, but does not provide direction for assessing this liability," at 467).

[28] See Goodrich, *supra* note 36; Jeffrey K. Gurney, "Sue my Car not Me: Products Liability and Accidents Involving Autonomous Vehicles" (2013) U Ill JL Tech & Pol'y 247 at 271ff

[29] See for example Paul Goldstein, *Copyright's Highway: From Gutenberg to the Celestial Jukebox*, rev ed (Stanford: Stanford University Press, 2003) ("[c]opyright was technology's child from the start," at 21-22).

disseminate copyrighted works of art, film, literature, etc. Doing so, the technology drastically reduces the costs of copyright infringement.[30] Technological change led copyright-dependant industries to petition legislatures and courts to expand the scope of copyright and reinforce its enforcement online, and to support the use of infringement countermeasures, such as digital rights management technologies.[31] Indeed, the Canadian *Copyright Modernization Act* sought to "update the rights and protections of copyright owners to better address the challenges and opportunities of the Internet."[32] The protection of copyright is an industry of its own as watchdogs-for-hire offer their services to monitor the unauthorized use of copyrighted material and protect the rights of their owners.[33] Improvements in copying technology encouraged many to extend protection beyond the interests of copyright holders.[34] In the coming years, 3D printing may further increase opportunities for low-cost infringement of intellectual property.[35]

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[30] See Lyria B Moses, "Adapting the Law to Technological Change: A Comparison of Common Law and Legislation" (2003) 26 UNSWLJ 394 at 399.

[31] See Vincent Gautrais, *Neutralité technologique : rédaction et interprétation des lois face aux changements technologiques* (Montréal: Éditions Thémis, 2012) at 36-37; David Friedman, "Does Technology Require New Law?" (2001) 25 Harv JL & Pub Pol'y 71 at 71-75.

[32] SC 2012, c 20.

[33] See generally Adrian Johns, *Piracy: The Intellectual Property Wars from Gutenberg to Gates* (Chicago: The University of Chicago Press, 2007) at 498ff. See for example Pinkerton, "Brand and Intellectual Property Protection: Cyber Surveillance" online: http://www.pinkerton.com/cyber-surveillance (9 July 2015).

[34] See for example Carys J Craig, "Technological Neutrality: (Pre)Serving the Purposes of Copyright Law" in Michael Geist (ed.), *The Copyright Pentalogy: How the Supreme Court of Canada Shook the Foundations of Canadian Copyright Law* (Ottawa: University of Ottawa Press, 2013) ("what matters is how decision makers understand the law as written, the technology as used, the core copyright concepts at play, and, most importantly, the larger legal framework, the rights and values at stake in the copyright balance," at 280); Robert Merges, "The Concept of Property in the Digital Era" (2008) 45 Hous L Rev 1239 at 1242ff (criticizing anti-intellectual property stances in the online context).

[35] See for example Ben Depoorter, "Intellectual Property Infringement & 3D Printing: Decentralized Piracy" (2014) 65 Hastings LJ 1483 ("3D printing fundamentally alters the production function of piracy because it enables consumers to obtain counterfeit goods cheaply, without assistance from commercial counterfeiters," at 1494); Deven R Desai & Gerard N. Magliocca, "Patents, Meet Napster: 3D Printing and the Digitization of Things" (2014) 102 Geo LJ 1691; Anne Lewis, "The Legality of 3D Printing: How Technology Is Moving Faster than the Law" (2014) 17 Tul J Tech & Intell Prop 303.

The previous examples portray new technologies as fraught with unintended consequences and raise arguments in favour of law catching up with technological change to prevent harm. An alternate version of the law lag problem portrays new technologies as beneficial and supports law catching up with technological change not to hinder these benefits. *United States v. Causby* exemplifies this concern.[36] Even though common law property rules clearly stated that land ownership extended upward to the heavens, the US Supreme Court in *Causby* refused to accept that a plane passing over property would make a trespass action available, since such liability would constitute an unreasonable obstacle to the development of aviation.[37]

The principle of technology neutrality provides a second example. The principle emerged in recent years to guide the regulation of technology.[38] Technology neutrality involves a plurality of meanings,[39] but for now consider it only as non-discrimination. Simply, non-discrimination requires lawmakers to consider alike technologies alike: if two or more technologies can satisfy the requirements of a legal rule, the law should not treat them differently.[40] For example, Quebec's *Act to Establish a Legal Framework for Information Technology* states that "[t]he legal value of a document, particularly in its capacity to

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[36] *United States v Causby*, (1946) 328 US 256.
[37] *Ibid* at 260-61 (Justice Douglas). See also *Lacroix v R*, [1954] Ex CR 69, [1954] 4 DLR 470 (the Canadian counterpart to *Causby*, in which the Exchequer Court ruled that airspace is owned in commons, while land ownership does not extend higher than what its owner can possess or occupy); Yehuda Abramovitch, "The Maxim '*Cujus Est Solum Ejus Usque ad Coelum'* as Applied in Aviation" (1962) 8 McGill LJ 247 at 264; Hugh R Smart, "Lacroix v The Queen" (1956) 2 McGill LJ 154.
[38] See generally Gautrais, *supra* note 31 at 11ff; Gregory R Hagen, "Technological Neutrality in Canadian Copyright Law" in Michael Geist (ed.), *The Copyright Pentalogy: How the Supreme Court of Canada Shook the Foundations of Canadian Copyright Law* (Ottawa: University of Ottawa Press, 2013) 307 at 310.
[39] See Bert-Jaap Koops, "Should ICT Regulation Be Technology-Neutral?" in Bert-Jaap Koops, Miriam Lips, Corien Prins & Maurice Schellekens (eds), *Starting Points for ICT Regulation: Deconstructing Prevalent Policy One-Liners* (The Hague: TMC Asser Press, 2006) 77 at 83-90 (identifying no less than seven meanings for 'technological neutrality').
[40] See Gautrais, *supra* note 31 at 77-82.

produce legal effects and its admissibility as evidence, is neither increased nor diminished solely because of the medium or technology chosen."[41] Instead of requiring the use of a specific support for documents used for legal purposes, the Act establishes a standard of integrity that all supports should meet.[42] By adopting a technologically neutral approach, the law does not discriminate against electronic documents in favour of paper documents, and thus does not hinder the development of electronic commerce.[43]

B. Metrics

Obsolescence maintains the law lag problem at the forefront of law and technology literature. The field finds much of its intellectual origins in the work of American sociologist William Ogburn. Ogburn came to prominence in the first half of the twentieth century when he attempted to explain the causes and difficulties of *Social Change*, of which he considered technology the primary initiator. [44] He developed the 'cultural lag' theory by examining how time factors into social change. Looking at transformations of the labour market, he observed: "the economic factor [of social change] removed production activities … from the household and put them in factories, thus taking away many household duties of the wife. Yet the ideology of the housewife persisted."[45]

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[41] RSQ, c C-1.1, s 5 para 1 (the Act establishes a standard of integrity to assess the reliability of documents regardless of their technological support, s 5-7).
[42] *Ibid* s 5-7.
[43] See Roger Brownsword & Han Somsen, "Law, Innovation and Technology: Before We Fast Forward — A Forum for Debate" (2009) 1 LIT 1 at 49-50. See also Lyria B Moses, "Recurring Dilemmas: The Law's Race to Keep Up with Technological Change" [2007] U Ill JL Tech & Pol'y 239 at 254 (with regard to the use of digital technologies in legal procedure).
[44] Hendrick M Ruitenbeek, "Introduction" in William F. Ogburn, *Social Change with Respect to Cultural and Original Nature* (New York: Dell Pub, 1966 [1922]) (Ogburn "belonged to the first generation of American sociologists … who revolutionized the American social sciences," at ix); William F. Ogburn, *Social Change with Respect to Cultural and Original Nature* (New York: Dell Pub, 1966 [1922]) at 276.
[45] See William F Ogburn, "Cultural Lag as Theory" [1957] *Sociology and Social Research* 167 at 169.

Ogburn's cultural lag theory provides a blueprint, of sorts, for law lag. Ogburn hypothesized that not all parts of culture change at the same rate. Instead, when a discovery or invention induces change in one part of culture, other parts of culture can take time to follow suit. Such delay, which can extend for years, may result in 'maladjustments': ineffective or harmful discrepancies caused by desynchronization.[46] Ogburn's theory found many adherents among policymakers, who could use it to understand and facilitate social change, and mitigate its harmful effects.

There is an important link between Ogburn's model of technological development and positivism. The sociologist counted among the staunchest scientific positivists of his time.[47] He believed knowledge could only derive from empirical observation, and that statistics constituted the best method to collect, measure, and analyze objective social facts.[48] For example, Ogburn took an escalating number of patents as evidence that technology changed at an increasing pace. He attributed the cause of such increase to the fact that the capital of accumulated knowledge had grown beyond a critical point.[49] Cultural lag was also to be established via empirical observation and statistics:

> [Determining cultural lag] calls for the following steps: (1) the identification of at least two variables; (2) the demonstration that these two variables were in adjustment; (3) the determination by dates that one variable has changed while the other has not changed or one has changed in greater degree than the other; and (4) that when one

[46] *Ibid* at 167; Ogburn, *supra* note 44 at 201.
[47] See KS Shrader-Frechette, *Science Policy, Ethics, and Economic Methodology: Some Problems of Technology Assessment and Environmental-Impact Analysis* (Dordrecht: Reidel Publishing Company, 1985) at 67-68 (on the topic of scientific positivism). See also Douglas J Amy, "Why Policy Analysis and Ethics Are Incompatible", (1984) 3 *Journal of Policy Analysis and Management* 573 at 575.
[48] See William A Tobin, "Studying Society: The Making of 'Recent Social Trends in the United States, 1929-1933'" (1995) 24 *Theory and Society* 537 at 545-46. See also generally W Tim Murphy, "The Oldest Social Science? The Epistemic Properties of the Common Law Tradition" (1991) 54 Mod L Rev 182 at 185ff ("[l]et us first measure; only then can we usefully think about the way in which the world is going," at 187).
[49] See Research Committee on Social Trends, "Introduction" in Research Committee on Social Trends, *Recent Social Trends in the United States: Report of the President's Research Committee on Social Trends* (New York: McGraw-Hill Book Company Ltd, 1933) xi at xxvii; Ogburn, *supra* note 44 at 112-14.

> variable has changed earlier or in greater degree than the other, there is a less satisfactory adjustment than existed before.[50]

Like cultural lag, law lag's methodology reduces complex social processes to discrete markers. Positivism, as described earlier,[51] contributes to assigning law the capacity to lag behind any form of change, social or technological. When legal agents argue that technology has outpaced law, they usually mean that one or more specific rules fail to apply to a specific technology to their satisfaction.[52] The positivistic tendency explains why they would focus on rules as markers of law lag.[53]

Legal rules and technologies constitute effective markers for two interrelated reasons. First, they satisfy epistemological commitments about the nature of the phenomena they each represent: positivism favours formally identifiable legal rules and empirically observable technologies. Second, legal rules and technologies differ enough from each other to serve as effective standards of comparison. An analyst can portray them as separate yet related parts of culture, and use them as metrics to interpret undesirable events as maladjustments resulting from discrepancies. Designating one marker as dependent on an independent one establishes a sequence of events favouring a 'natural' account of social change, which implies that some parts of culture should follow the lead of others: technological change becomes progress. Law lag does not derive from technological change, but from epistemological and normative commitments about the nature of law and technology, and about the properties of social change.

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[50] Ogburn, *supra* note 45 at 169.
[51] *Supra*, p. 4.
[52] See Drahos, *supra* note 2 at 276.
[53] See Lyria B Moses, "Understanding Legal Responses to Technological Change: The Example of *In Vitro* Fertilization" (2005) 6 Minn JL Sci & Tech 505 at 513.

To contrast the basic narrative of law lag, I propose below a model of legal and technological change based upon Émile Durkheim work on deviancy and labelling theory. When Durkheim published his *Division of Labour in Society* in 1893, he focused on the causes of deviancy and the measures authorities could take to suppress deviant behaviours, such as crime. In this context Durkheim made a then revolutionary claim: deviancy does not derive from the inherent properties of an act, but from rejection of that act by members of society. He noted that not every deviant behaviour effectively harmed society, and not all societies consider the same acts as deviant, but that all deviant acts provoke strong disapproval from those who witness it. Durkheim attributed the disapprobation of deviancy to similarities between members of a society, and observed that such disapprobation reinforces their similarities.[54] Through its connection with social cohesion, deviancy can even be a healthy societal feature.[55]

1. Model

Ogburn first applied his theory to the law governing industrial accidents. Until around 1870, the American common law seemed to acceptably deal with work-related accidents, which for the most part involved simple farming tools. When factory machinery was introduced in the last quarter of the nineteenth century, workers severely injured by new technology found common law rules unhelpful: most failed to obtain compensation or did so only after protracted litigation. The cultural lag persisted until new legal rules adopted

[54] Émile Durkheim, *De la division du travail social*, 7th ed (Paris: Presses universitaires de France, 1960) at 36-39, 75-76 ("an act is socially bad because it is rejected by society," at 48).
[55] Émile Durkheim, *Les règles de la méthode sociologique*, 15th ed (Paris: Presses universitaires de France: 1963) at 66-72 (Durkheim recalls the example of Socrates to argue that crime can directly lead to beneficial change).

at the turn of the twentieth century established the employer's liability and provided for workmen's compensation, restoring the equilibrium between law and technology.[56] Determinants of cultural lag would include material obstacles to the diffusion of an invention, the complexity and diversity of society, distance between parts of material and non-material culture, and different opinions and feelings regarding a new invention.[57]

Ogburn had the opportunity to transpose his work into public policy as the director of research of President Edgar Hoover's Research Committee on Social Trends. His two-volume *Recent Social Trends in the United States* report presents analyses of American society conducted by eminent scholars as an effort "to define, analyze, and rationally order society."[58] The report bears the mark of Ogburn's cultural lag theory, indicating that lag-derived maladjustments are pressing problems for policymakers.[59] In presence or in anticipation of a lag, policymakers might attempt to slow down change on one side, or accelerate change on the other. However, the Committee specifically warned against slowing down changes in technology. Instead, changes in non-technological parts of culture had "to be stimulated to keep pace with mechanical invention."[60]

Cultural lag theory rests on three important assumptions, which all figure prominently in law lag arguments. First, Ogburn adopted a functionalist conception of 'culture', which he defined as an accumulation of interrelated material and non-material parts,[61] not unlike a

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[56] Ogburn, *supra* note 45 at 170; Ogburn, *supra* note 44 at 213-36.
[57] *Ibid* at 256-65.
[58] Tobin, *supra* note 48 at 546.
[59] Research Committee on Social Trends, *supra* note 49 at xiii, xv, xxvviii.
[60] *Ibid* at xv.
[61] Ogburn, *supra* note 44 ("[c]ulture may be thought of as the accumulated products of human society, and includes the use of material objects as well as social institutions and social ways of doing things. Hence cultural change is the change in these products," at 58).

machine.[62] Thus, change in one part of culture can have rippling effects on other parts; first with those most closely associated with it, then beyond. Technologies are distinctive parts of what Ogburn designates as the 'material' culture, while law makes up other parts of a 'non-material' culture.[63] As a result of this dichotomy Ogburn treated law and technology as separate, yet related parts of society.

Second, Ogburn portrayed technological development as predetermined and semi-autonomous. He avoided endorsing technological determinism, but underemphasized the role of human action in producing culture.[64] Like other parts of culture, technology changes "because of purely cultural factors, despite the fact that this growth [occurred] through the medium of human beings."[65] Third, technological development occurs through knowledge accumulation and material succession. An exponential number of new inventions spring from an ever-growing epistemic base, like interest flowing from capital, to replace their outperformed predecessors:[66]

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[62] William F Ogburn, "The Influence of Invention and Discovery" in Research Committee on Social Trends, *supra* note 49, 122 ("[m]aterial culture and social institutions are not independent of each other, for civilization is highly articulated like a piece of machinery, so that change in one part tends to effect changes in other parts," at 166); Ogburn, *supra* note 44 ("[t]o the extent that culture is like a machine with parts that fit, cultural lag is widespread," at 171).

[63] Compare with James W Woodard, "A New Classification of Culture and a Restatement of the Culture Lag Theory" (1936) 1 *American Sociological Review* 89 (re-framing the visions of contemporary functionalists as three superposed levels of culture that can each have bearing on a single object: inductive, aesthetics, and authoritarian).

[64] See for example Ogburn, *supra* note 44 ("[t]hat some inventions are inevitable seem probable. For instance, given the boat and given the steam engine, it certainly seems highly probable that the two could be connected in the steamboat," at 86). See also Floyd H. Allport, "Social Change: An Analysis of Professor's Ogburn Culture Theory" (1924) 2 *Social Forces* 671 at 671-72 (by excluding human action, cultural lag can only describe social change, and not explain it); Ogburn, *supra* note 35 at 124 (for example, he argued that the invention of tin cans reduced the time of preparing meals, and therefore provided more time for women to get involved in the woman's rights movement). But see Richard J. Brinkmann & June E. Brinkmann, "Cultural Lag: Conception and Theory" (1997) 24 *International Journal of Social Economics* 609 at 612-13.

[65] Ogburn, *supra* note 44 at 342.

[66] *Ibid* at 73-79, 105ff ("material culture accumulates. The use of bone is added to the use of stone. The use of bronze is added to the use of copper and the use of iron is added to the use of bronze. So that the stream of material culture grows bigger," at 73); Ogburn, *supra* note 62 at 122-23. See also Jasanoff, *supra* note 2 at 768; Woodard, *supra* note 63 at 96, 101.

> This cumulative aspect is due to two features of the cultural process, one is the persistence of cultural forms and the other is the addition of new forms. The persistence of cultural forms has been called cultural inertia… in general a cultural object tends to persist because it has utility. The cultural object itself may wear out, be lost or destroyed, but the knowledge of how to create it continues and additional ones are made, because they possess utility. New forms may be created by means of inventions. The rate of accumulation of culture depends in part on the frequency of inventions.[67]

Social scientists have largely abandoned a cumulative conception of technological development since the publication of Thomas Kuhn's *Structure of Scientific Revolutions* in 1962,[68] but this model still has a hold on today's law and technology literature, scholarship and lawmaking. Consider for example Bockman's work on cybernetics and disability law, in which he argues for accelerating change in the non-material parts of culture (disability law) to avoid a lag with its material parts (cybernetics), which would lead to undesirable maladjustments (unfair treatment and comparative discrimination).

Law and technology scholarship focuses almost exclusively on new technologies. As a justification for legal analysis and reform, newness reflects expectations that law remains still while the rest of the world changes. Indeed, as Jean-Marie-Étienne Portalis wrote in his famous *Preliminary Discourse to the First Project of the Civil Code*, rules routinely fail to predict factual developments:

> A code, however complete it may seem, is no sooner as it is completed, that a thousand of unexpected questions present themselves to the magistrate. *For these laws, once drafted, remain as written. Men, on the other hand, never rest*. They are always moving; and in this movement, which never ceases and whose effects are variously modified by circumstances, continually produces some new fact, some new outcome.[69]

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[67] Ogburn, *supra* note 44 at 74-75 (emphasis added).

[68] See Thomas S Kuhn, *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press, 1970). See also Jasanoff *supra* note 2 at 768.

[69] Jean-Marie-Étienne Portalis, *Discours préliminaire du premier projet de Code civil* (1801), translation by Department of Justice of Canada, "The International Legal Programs", 2015, available online: http://www.justice.gc.ca/eng/abt-apd/icg-gci/code/index.html#Endnote1 (consulted on 29 July 2015) (emphasis added).

A premise supporting the law lag problem is that "[w]ell-known, 'more-of-the-same' technology applications will usually fall within the scope of existing legislation or other regulatory instruments, in contrast to radically new technologies."[70] As technology changes, legal rules founded on outdated assumptions lose relevance and effectiveness, and even sometimes become detrimental by hindering technological development or worsening its impact. Such maladjustments, to use Ogburn's terminology, include uncertainty as to the application of legal rules (e.g. automated cars); drastic variation in the costs of violating or enforcing legal rules (e.g. digital technologies); distortion in their range of application (e.g. nanomaterials); challenge in the founding factual premises of legal rules (e.g. aviation), or new behaviours, things or relationships uncovered by current legal rules (e.g. space technologies).[71] Not all new technologies would lead to one or more of these maladjustments, but "technological change is often the occasion for legal problems."[72] Therefore, legal agents should pay attention to technological change to identify and resolve maladjustments.

Measuring a quantified value within a period of time is one thing. Deducing that one part of culture 'lags' behind another is another thing entirely. A given sequence of events does not suffice to establish that one part of culture lags behind another. Attributing the quality

[70] Bert-Jaap Koops, "Ten Dimensions of Technology Regulation: Finding your Bearings in the Research Space of an Emerging Discipline" in Morag Goodwin, Bert-Jaap Koops & Ronald Leenes (eds), *Dimensions of Technology Regulation: Conference Proceedings of TILTing Perspectives on Regulating Technology* (Nijmegen: Wolf Legal Publishers, 2010) 309 at 313.
[71] See Moses, *supra* note 43 at 248-69. See also Nathan Cortez, "Regulating Disruptive Innovation" (2014) 29 Berkeley Tech LJ 175 at 182; Moses, "How to Think" *supra* note 1 at 513; Moses, *supra* note 1 ("[a]s technologies make new things, activities and relationships possible, and people engage in new forms of conduct, laws already in existence may not operate as effectively as they did in the past to achieve a particular purpose," at 767); Moses, *supra* note 5 at 594-95, 599, 602; Moses, Lyria B Moses, "The Legal Landscape Following Technological Change" (2007) 27 *Bulletin of Science, Technology & Society* 408 at 409-11; Moses, *supra* note 53 at 507, 517-18, 528-31; Moses, *supra* note 30 at 395, 396-401; Friedman, *supra* note 31 at 71.
[72] Moses, *supra* note 5 at 594.

of ‘lagging’ necessarily involves a normative assessment of which parts of culture are at fault for not changing fast enough: considering the number of employed women and the fact that they represented between one-third and one-half of college students, industry might have lagged behind family ethics as the former failed to integrate female labour.[73] Moreover, new industrial machinery may have lagged behind law until the nineteenth century: machinery failed to provide employees a safe working environment, forcing legislation to step in and compensate accident victims for its deficiencies.[74] Concluding that one or more parts of culture lag behind another betrays normative assumptions about which parts should initiate social change, what kind of change is beyond reproach, and what parts of society should follow suit. Establishing a sequence of events can rely on empirical and statistical markers, but establishing their meaning does not.

2. Markers

Legal agents focus their analysis on legal rules for at least two reasons. First, doing so fits legal positivism. Indeed, leading positivists such as John Austin,[75] Hans Kelsen[76] and H.L.A. Hart[77] equate law to an exhaustive “set of rules used by the community directly or indirectly for the purpose of determining which behaviour will be punished or coerced by

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[73] See John H Mueller, “Present Status of the Cultural Lag Hypothesis” (1938) 3 *American Sociological Review* 320 at 321.

[74] *Ibid* at 321. See also Hornell Hart, “Has Social Science Solved Any Cultural-Lag Problems?: A Rejoinder to H. Otto Dahlke” 16 *American Sociological Review* 840 at 841 (Hart measures cultural lag in two dimensions: the quantified value of ‘disutility’ and time).

[75] John Austin, *The Province of Jurisprudence Determined* (London: J. Murray, 1832) at 5-7 (law consists of commands backed by threat).

[76] Hans Kelsen, *Pure Theory of Law*, 2nd ed, translated by Max Knight (Berkeley: University of California Press, 1967) at 3-5, 30-31 (law consists of a system of norms underpinned by a basic norm).

[77] HLA Hart, *The Concept of Law*, 3rd ed (Oxford: Oxford University Press, 1997) at 79ff (law consists of primary rules that direct behaviour, and secondary rules that direct the formation, recognition, modification, and extinction of primary rules).

public power."[78] Focusing on positive law meets the requirements of obsolescence: as Ogburn's methodology demands it, the analyst measures the gap between law and technology empirically and positively by reducing them to time-bound, commensurable variables, or markers. And as David Lyons rightly observes, "we can jump from the verbal limits of authoritative texts (such as statutes and records of judicial decisions) to the gappiness of law *only if we assume that law is fundamentally a linguistic entity*, that law is exhausted by the formulations of such texts and their literal implications."[79]

Consider, for example, 3D-printing technology. 3D printing drastically reduces the costs and difficulties of producing goods, enabling the owners of a 3D printer to set up their own private factory, or to contract the services of 3D-printed goods manufacturers. 3D printing attracts attention from legal scholars anticipating its diverse legal implications for the manufacture dangerous goods,[80] product liability[81] and intellectual property infringement.[82] Davis Doherty focuses on the latter. He argues that isolated individuals replicating patented designs once had little reason to fear prosecution by patentees. But the use of 3D printers at the consumer level coupled with the capacity of users to share designs

[78] Ronald M Dworkin, "The Model of Rules" (1967) 35 U Chi L Rev 14 at 17.
[79] David Lyons, "Legal Formalism and Instrumentalism: A Pathological Study" (1981) 66 Cornell L Rev 949 at 961.
[80] See for example Katie Curtis, "A Wiki Weapon Solution: Firearm Regulation for the Management of 3D Printing in the American Household" (2015) 41 Rutgers Computer & Tech LJ 74; Rory K Little, "Guns Don't Kill People, 3D Printing Does? Why the Technology Is a Distraction from Effective Gun Controls" (2014) 65 Hastings LJ 1505.
[81] See for example Nora F Engstrom, "3-D Printing and Product Liability: Identifying the Obstacles" (2013-14) 35 Pa L Rev Online 35.
[82] See for example Timothy R Holbrook & Lucas S Osborn, "Digital Patent Infringement in an Era of 3D Printing" (2015) 48 UCDL Rev 1319; Michael Rimock, "An Introduction to the Intellectual Property Law Implications of 3D Printing" (2015) 13 Can J L & Tech 1; Depoorter, *supra* note 35; Desai & Magliocca, *supra* note 35; Caroline Le Goffic & Aude Vivès-Albetini, "L'impression 3D et les droits de propriété intellectuelle" (2014) 50 *Propriétés Intellectuelles* 24; Georgie Courtois, "L'impression 3D : Chronique d'une revolution juridique annoncée" (2013) 99 *Revue Lamy droit de l'immatériel* 71; Daniel H Bean, "Asserting Patents to Combat Infringement via 3D Printing: It's No Use" (2012) 23 Fordham Intell Prop Media & Ent LJ 771.

online could lead to widespread patent infringement in "the same manner that the advent of digital music enabled widespread copyright infringement."[83]

Like many other authors that have examined legal issues related to 3D printing,[84] Doherty devotes a section to describing the technology followed by one describing the relevant and corresponding legal rules.[85] By demonstrating that rules of patent infringement lag behind 3D printing technology, he supports his claim that its users "have the capability to generate wide-scale patent infringement over the Internet."[86] The aforementioned two sections lay the groundwork for proposed legal reforms that aim to allow "legitimate, good faith patentees to assert their rights while preserving the benefits that accrue from freely shared designs,"[87] notably on the basis of analogies with copyright infringement. Doherty hopes new legal rules can reduce uncertainty and the economic harms brought by 3D printing technology, and secure its benefits.

Doherty adopts in his note an approach widely used in law and technology literature: juxtaposing detailed descriptions of the capabilities of technology to the prescriptions of positive law, often with the support of analogical reasoning.[88] When the approach demonstrates that law lags behind technology, it supports proposals for the formal reform of legal rules; when it does not, it undermines such proposals. In both cases, examining whether law lags behind new technology requires the analyst to focus on rules and technologies as commensurable, time-bound variables.

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[83] Davis Doherty, "Downloading Infringement: Patent Law as a Roadblock to the 3D Printing Revolution" (2012) 26 Harv J L & Tech 353 at 354.
[84] See for example Depoorter, *supra* note 35 at 1487-89; Desai & Magliocca, *supra* note 35 at 1695-1713.
[85] Doherty, *supra* note 83 at 356-61.
[86] *Ibid* at 349.
[87] *Ibid* at 362.
[88] See Tranter, *supra* note 4 at 69.

Rules and technologies are commensurable, time-bound variables only because their respective prescriptions and capabilities operate at a low level of generality. At least in theory, rules have well-defined prescriptions while technologies have well-defined capabilities. Both legal prescriptions and technological capabilities, when expressed through specific rules and technologies, intervene in well-defined situations.[89] Such situations make up the actual or speculative circumstances in which legal scholars can observe law lag. For example, 3D printers manufacture three-dimensional objects at low cost; patent infringement rules prohibit the unauthorized reproduction of a patented invention.[90] Prescription and capability are engaged when the user of a 3D printer reproduces a patented invention without the authorization of the patentee.

Rules and technologies are situation- and time-specific. As such, they provide literature with commensurable, time-bound variables — markers — of law and technology that make possible the observation of an approximated lag. Centring analysis on legal rules and technologies provides the temporal dimension that supports the narrative confronting 'old law' to 'new technology law'.[91] Legal rules enacted by public institutions — legislation and case law — have dates of enactment and publication to pinpoint a moment in time where a given rule came into force. Similarly, legal scholars often pay attention to the time

[89] See Dworkin, *supra* note 78 at 14. See also Drahos, *supra* note 2 at 278.
[90] See 35 US Code § 271(a) ("[e]xcept as otherwise provided in this title, whoever without authority makes … any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefor, infringes the patent").
[91] See Gautrais, *supra* note 31 ("[*l*]*e droit fixe dans le temps, par des règles, principalement législatives ou jurisprudentielles, une « réalité vivante » qui, elle, ne cesse d'évoluer,*" at 2 quoting Jacques Ghestin, "L'utile et le juste dans les contrats" (1981) 26 *Archives de philosophie du droit* 35 at 57).

where technologies were introduced into society, sometimes by singling out a 'crisis' event.[92]

Time-bound variables allow a comparison in time and the construction of a privileged sequence of events that supports the narrative of law lag. Doherty resorts to this strategy when he underlines the urgency of updating patent infringement rules to the 'digital era' by disclosing the number of units of MarketBot 3D printers sold since 2009, the total of products created through 3D printing service Shapeways by the end of June 2012, and the number of monthly visitors to 3D printing design-sharing website Thingverse in the first half of 2012.[93]

The conventional response to the juxtaposition of specific rules to discrete technologies typically displays a greater sensitivity to the higher-generality principles and policies embodied in legal rules. Focusing on the mismatch between rules and technological change presupposes a conception of law that makes little room for principles and policies, which have much more weight than mere rules even though they differ functionally.[94]

The example of nanotechnology illustrates this point: the introduction of less than 100 kilograms annually of nanomaterials, no matter how dangerous (or safe), does not trigger the application of CEPA. However, nanotechnology does not undermine the underlying policy of ensuring that new substances do not pose unreasonable risks for human health

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[92] See for example Tranter, *supra* note 4 at 36 (the launch of Sputnik in 1957 for the first-generation of space law, the birth of Louise Brown in 1978 for *in vitro* fertilisation law and speculation on virtual property on *Second Life* for virtual worlds law).
[93] Doherty, *supra* note 83 at 355.
[94] See Dworkin, *supra* note 78 at 22-31 (on the distinctions between rules, principles, and policies, and their place in law).

and for the environment.[95] Applicants still bear the burden to demonstrate the safety of new substances when they produce or import in Canada.[96] When CEPA fails to apply to substantial quantities of nanomaterials because of its volume-based conception of risk, it constitutes a low-generality problem: the regime does not cover an activity that, by many accounts, should fall under its scope. Adjusting the rules on the basis of standing principles and policies may prove challenging, but there is no reason to assume the task impossible. On the contrary, technological change may provide an opportunity for the Act to extend its horizon and fix sub-efficient rules.[97]

Appealing to higher principles of law and policy will not suffice to reduce the emphasis on rules and technologies, nor to overcome obsolescence. Fixing 'sub-efficient' rules in light of timeless principles and broader standards is merely a variation upon the law lag problem. Indeed, principles and standards are still singled out and appreciated at a strictly functional level. The renowned Hart–Fuller debate supports this point.

Hart's theory of legal interpretation distinguishes between the 'core' meaning of a word, and its 'penumbra'. He posits that all words have standard instances in which they clearly apply or not to a situation. These standard instances make up the core of a word, its settled meaning; for example, few would doubt that the word 'vehicle' applies to cars. In contrast, "debatable cases in which words are neither obviously applicable nor obviously ruled out"[98] reside in the 'penumbra': the unsettled meaning of words. A judge applying a rule that prohibits the use of vehicles in a park will likely have an easier time doing so to a car

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[95] See CEPA, *supra* note 20 s 64.
[96] *Ibid* s 81(1). See also *New Substances Notification Regulations (Chemicals and Polymers*), *supra* note 22.
[97] See Mandel, *supra* note 1 at 85.
[98] HLA Hart, "Positivism and the Separation of Law and Morals" (1958) 71 Harv L Rev 593 at 607.

than to roller skates.[99] In penumbra cases, she must decide whether a word does cover or not a given situation. Hart argues that the penumbra that surrounds all words makes the rules that employ them inevitably incomplete. Therefore, to solve penumbra cases, "judges must legislate and so exercise a creative choice between alternatives, … the social policies which guide the judges' choice are in a sense there for them to discover; the judges are only 'drawing out' of the rule what, if it is properly understood, is latent within it."[100]

Hart's theory of legal interpretation has a number of implications for law lag's reliance on rules and technologies. First, a new technology will either fall within or beyond the core meaning of a rule's words, or within its penumbra. Knowing where the technology falls requires from the interpreter that she juxtaposes the prescription of the rule — as determined by its words (or lack thereof in the case of an absolute legal vacuum) — to the capabilities of the technology — as determined by its properties — hence the importance of accurate descriptions and sound analogies.

Of course, all three outcomes can be problematic for the analyst. A technology may fall within the core meaning of words when it should not; beyond it when it should not; or within the penumbra, causing uncertainty. In all three cases, the analyst relies on rules to provide the latent "aims, purposes, and policies"[101] that make such determinations possible, at least within the approach warranted by teleological interpretation. For example, the fact that nanomaterials fall within the volume-based exclusion rule of the *Canadian*

[99] *Ibid* at 607-08.
[100] *Ibid* at 612.
[101] *Ibid* at 614.

Environment Protection Act, 1999 raises concerns because they resemble the kinds of risky substances that CEPA seeks to guard us against, but fails to do so in this particular case.

In response, Lon Fuller raises a number of points that also have implications for the metrics of law lag. He rejects Hart's theory of legal interpretation on account of its inaccurate representation of legal interpretation, its lack of usefulness, and its ignorance of a rule's purpose and structure.[102] Instead of supporting a theory of interpretation that solely focuses on the words employed in rules, Fuller advocates bringing at the forefront of legal interpretation the 'structural integrity' of a rule within which one finds its purpose, either explicitly, or implicitly, through its relations with other rules.

Safeguarding the structural integrity of rules requires that judges play a creative role through interpretation, providing they do not stretch the meaning of the rule beyond its bounds.[103] Fuller proposes a wider conception of legal interpretation that puts law's wider sensitivities at its centre. Like Hart's distinction between core and penumbra, Fuller's structural integrity depends on a projected consensus over the purpose of a rule. Unlike Hart, whose insistence on recognition translates as a concern for clarity, Fuller's insistence on interaction shows concern for open-endedness.[104]

Open-endedness, however, is exactly what obsolescence hopes to do away with, hence a functional, descriptive emphasis on rules and technologies. The methodology of law lag

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[102] Lon L Fuller, "Positivism and Fidelity to Law: A Reply to Professor Hart" (1958) 71 Harv L Rev 630 at 663, 667.
[103] *Ibid* at 670.
[104] See Desmond Manderson, "HLA Hart, Lon Fuller and the Ghosts of Legal Interpretation" (2010) 28 Windsor YB Access Just 81 ("[l]aw's besetting sin … for Hart is uncertainty, and its salvation lies in clarity. Law's besetting sin for Fuller is arrogance, and its salvation lies in humility," at 87); Benjamin C Zipursky, "Practical Positivism versus Practical Perfectionism: The Hart-Fuller Debate at Fifty" (2008) 83 NYUL Rev 1170 at 1177-78. See also Lon L Fuller, "Law as an Instrument of Social Control and Law as a Facilitation of Human Interaction" [1975] BYU L Rev 89; HLA Hart, *supra* note 77.

requires legal agents to juxtapose markers that represent separate entities — rules and technologies, prescriptions and capabilities, law and technology; they cannot measure lag otherwise. By focusing on the capabilities of specific technologies, which operate at a low level of generality, they can juxtapose them against variables that operate at the same low level of generality, namely rules. Within law and technology practice, positive conceptions of law and technology work in tandem. Fuller's conception of legal interpretation encourages legal agents to leave behind the kind of "cataloguing procedure"[105] he associates with Hart's theory, but they will struggle to distance themselves from positive rules as long as obsolescence keeps them focused on technological capabilities. Because legal agents portray technology functionally, technology correspondingly engages law at functional level.[106] Law lag encourages legal agents to contemplate and address law and technology in situation-specific terms.

I suspect legal scholarship might find other facets of law and technology worth investigating once it ceases to instrumentalise rules and technologies as markers of law lag. But if a rule does not lag behind a technology at any point in time, why bother? Indeed, what do legal agents have to learn from the electric can opener?[107] A critic of Ogburn's cultural lag theory would respond that what one learns depends on one's perspective,[108] but obsolescence eschews learning in favour of a turnkey answer: either old law lags behind new technology or nothing interesting happens.

[105] Fuller, *supra* note 102 at 666.
[106] See Dworkin, *supra* note 78 at 27.
[107] See Moses, *supra* note 5 ("[n]ot every technology will raise issues in each of the four categories; some technologies, such as electric can openers, raise few, if any legal issues," at 595).
[108] See Mueller, *supra* note 73 ("[i]f unrest is the evidence of lag, inquiry on 'whose unrest' discloses the subjectivity of the lag," at 321).

I have argued above that obsolescence prompts legal agents to rely on rules and technologies as markers of law and technology through the problem of law lag. These markers serve as standards of comparison allowing the analyst to measure punctual discrepancies between law and technology. However, relying on these markers encourages legal agents to keep their analysis centred on well-defined positive legal rules and specific technologies rather than engaging law and technology at a wider, more fundamental level — assuming, of course, that a 'wider' level of study not only exists, but also provides a worthwhile perspective. The preceding sections present legal agents in a rather poor light: they chain themselves to a methodology that disempowers law in the face of technological change. But within this apparent weakness lies, in fact, rhetorical power, especially if we revisit law lag as a matter of 'technological deviancy'.

3. Ruler

I share with Fuller the frustration "to be confronted by a theory which purports merely to describe, when it not only plainly prescribes, but owes its special prescribing powers precisely to the fact that it disclaims prescriptive intentions."[109] Law lag does not provide a full account of the problems new technologies raises. It tells us what problems new technologies cause and how they cause them, but not why they cause them. Instead, obsolescence subsumes the final cause of the law lag problem (the deviation of technology from legal rules) within its efficient cause: newness. By hiding the final cause of law lag in newness, obsolescence begs the question of the necessity of legal reform.

[109] Fuller, *supra* note 102 at 632.

The final cause of the law lag problem is not the newness of technologies, nor is it maintaining the topicality and effectiveness of legal rules. The final cause of the law lag is deviancy: technology attracts the attention of legal agents when it deviates from acceptable standards. On its own, newness provides no reason why legal scholars and lawmakers should pay attention to certain technologies rather than others, as evidenced by the vast amount of legal rules and analysis governing old, familiar technologies. Nor do legal rules denounce their outdated-ness. What distinguishes law and technology scholars and lawyers from other legal agents is how they employ newness to demonstrate the deviancy of technologies, and how they depend on newness to explore and formulate deviancy. Representing newness solely as a technical or historical fact fits the law lag account, but it conceals deviancy under a deceptive veneer of objective description.

The newness of a technology does not derive from a straightforward observation of its inherent characteristics in historical context, but from interpretative efforts blending factual and normative claims. I do not condemn such an exercise; neither do I doubt the epistemic validity of interpreting a technology as new. Rather, I take issue with how the interpretive dimension of obsolescence masquerades as a descriptive exercise, and therefore removes from critical analysis the normative elements and rhetorical strategies that constitute it. Acknowledging this interpretive dimension can provide new insights into controversies about technologies in the regulatory context.

a. Deviancy

Newness reinforces an evolutionary functionalist conception of law and society. Evolutionary functionalism posits that society has needs that must be fulfilled if it is to

advance along its proper path — say 'progress' — which in our time usually articulates itself through technological improvements, economic efficiency and opportunities for social mobility. Within evolutionary functionalism, law must meet the needs of society in order to keep it moving towards progress.[110] To perform this function, law must adapt to the needs of society.[111] Newness signals evolutionary functionalists that societal needs have changed, and that law must change to keep society on its proper course. Newness poses a functional judgment on law and a substantive judgment on technology. As such, newness is an indication of deviancy.

Newness establishes the deviancy of a technology by contrasting it with the presumed normalcy of its predecessors. Conversely, it establishes the normalcy of a technology by opposing it to the unsuspected deviancy of preceding technologies. For example, chemicals serve as the normal counterpart to nanomaterials; conversely, paper-based documents serve as the deviant counterpart to electronic-based documents. Having assigned deviancy to a technology, the analyst can then normalise it through legal change. Reforming CEPA's low-volume exemptions will extend its regulatory oversight to nanomaterials, while enacting functional equivalent rules will facilitate the use of electronic documents for legal purposes.

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[110] Gordon, *supra* note 74 at 62 (societal needs also include, for example, "survival, stability, maintenance of social order, conflict management, organization of production, security against foreign enemies, allocation of scarce resources," at 61). Compare with Roger Brownsword & Morag Goodwin, *Law and the Technologies of the Twenty-First Century: Text and Materials* (Cambridge: Cambridge University Press, 2012) ("[f]irst, the law needs to maintain continuity and stability notwithstanding a rapidly changing technological scene. Second, the law must do what it can to minimise the risks presented by the technologies as well as taking steps to maximise the benefits. Third, it falls to the law to safeguard the fundamental values of communities — values such as respect for human rights and human dignity — and to ensure that there is no technological transgression of the outer limits drawn by society. Fourth, national legal systems must try to meet these challenges in a context of transnational technological activity as well as international, regional and local regimes of governance. Finally, where there is a temptation to resort to a rule of technology, the law must ensure that the values of the rule of law are preserved," at 23); Mandel, *supra* note 1 at 82.

[111] Gordon, *supra* note 74 at 59-65.

Émile Durkheim's work on the topic of deviancy inspired many of his followers to focus on how members of a social group label specific behaviours as deviant, and how the individual bearing that stigma adjusts to being treated as deviant. One leading labelling theorist defined deviancy as a

> conduct which is generally thought to require the attention of social control agencies — that is, conduct about which "something should be done." Deviance is not a property *inherent in* certain forms of behaviour; it is a property *conferred upon* these forms by the audiences which directly or indirectly witness them. Sociologically, then, the critical variable in the study of deviance is the social *audience* rather than the individual *person*, since it is the audience which eventually decides whether or not any given action or actions will become a visible case of deviation.[112]

In contrast to deterrence theories of deviancy — which put the decision of engaging in deviant behaviour in the hands of the individual — labelling theory claims that an individual further engages in deviant behaviour because of how the social group reacts to the label associated with deviancy — for example, a criminal may engage in further criminal activities when others treat her as a criminal.[113]

The labelling theory of deviancy can clarify the process through which a given technology comes to the attention of legal agents. I will assume that the deviancy of technology is not inherent to certain technologies, but a property conferred upon them by legal agents. Instead of human behaviour, I will associate deviancy with technical capacities. Much of the research in labelling theory focuses on the 'criminal' label, the same brand of deviant

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[112] Kai T Erikson, "Notes on the Sociology of Deviance" (1962) 9 Soc Probs 307 at 308. See also John I Kitsuse, "Societal Reaction to Deviant Behaviour: Problems of Theory and Method" (1961) 9 Soc Probs 247 at 248.

[113] See Jón G Bernburg, "Labeling Theory" in Marvin D Krohn (ed.), *Handbook on Crime and Deviance* (Dordrecht: Springer, 2009) 187 at 187-90 (labeling theory suffered from heavy criticism in the 1970s, but resurged when social scientists used of more rigorous methods to support it, at 193ff); Charles W Thomas & Donna M Bishop, "The Effect of Formal and Informal Sanctions on Delinquency: A Longitudinal Comparison of Labeling and Deterrence Theories" (1984) 75 J Crim L & Criminology 1222 at 1225-29.

behaviour that Durkheim devoted his attention to.[114] But the theory extends its repertoire towards other labels such as delinquency,[115] mental illness,[116] bullying,[117] homosexuality,[118] and addiction.[119] For my purposes, 'newness' constitutes the most appropriate label.

b. Labelling newness

A labelling theory of deviancy focuses analysis away from the properties of technologies, and onto legal analysts themselves. It focuses on how legal agents label technologies as deviant and how newness supports such interpretation. The law does not only regulate behaviour, but also "draws boundaries between … the normal, and the deviant."[120] This faculty does not derive from enforcement, but from the significance of legal ideas within a social group.[121] Obsolescence relegates deviancy to an implicit and purported consensus over the merits and demerits of technologies. As a result, it neglects the normative assumptions playing a part in how technologies are labelled or not as deviant.

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[114] See for example Howard S Becker, *Outsiders: Studies in the Sociology of Deviance* (New York: Free Press, 1963).
[115] See for example Thomas & Bishop, *supra* note 113.
[116] See for example Susan B Long, "Labeling the Mentaly Ill" in H Laurence Ross (ed.), *Law and Deviance* (Beverly Hills: Sage Publications, 1981) 159.
[117] See for example Alex J Kramer, "One Strike and You're Out: The Application of Labeling Theory to the New Jersey Anti-Bullying Bill of Rights Act" (2015) 45 Seton Hall L Rev 261.
[118] See for example Kitsuse, *supra* note 112.
[119] See for example Gusfield, *supra* note 120.
[120] Robert Gordon, "'Critical Legal Histories' Revisited: A Response" (2012) 37 Law & Soc Inquiry 200 at 209; Joseph R Gusfield, "On Legislating Morals: The Symbolic Process of Designating Deviance" (1968) 56 Cal L Rev 54 at 56-59 at 57-59.
[121] See *ibid* at 56-59 ("[a]ffirmation through law and governmental acts expresses the public worth of one subculture's norms relative to those of others, demonstrating which cultures have legitimacy and public domination. Accordingly it enhances the social status of groups carrying the affirmed culture and degrades groups carrying that which is condemned as deviant," at 58).

In *R v Fearon*[122] ('*Fearon*'), the Supreme Court of Canada addressed for the first time whether policemen could search the content of a cell phone or another digital device found on a suspect during his arrest, and whether the prosecution could use the evidence resulting from this search in criminal proceedings.[123] Writing for the majority of the Court, Justice Cromwell treated the case strictly within the framework of the police's common law power to search incident to a lawful arrest in light of the *Canadian Charter of Rights and Freedom*.[124] While he acknowledged that the "search of a cell phone has the potential to be much more significant invasion of privacy than the typical search incident to arrest,"[125] Justice Cromwell maintained that the common law framework sufficiently protected expectations of privacy providing a restrictive treatment of the existing conditions for searches of cell phones incident to arrest, and the addition of two new conditions specific to these searches.[126]

Writing for the minority, Justice Karakatsanis used a different strategy, one that relied on labelling cell phones as new:

> We live in a time of profound technological change and innovation. Developments in mobile communications and computing technology have revolutionized our daily lives. Individuals can, while walking down the street, converse with family on the other side of the world, browse vast stores of human knowledge and information over the Internet, or share a video, photograph or comment about their experiences with a legion of friends and followers.
>
> The devices which give us this freedom also generate immense stores of data about our movements and our lives. Ever-improving GPS technology even allows these devices to track the locations of their owners. Private digital devices not only record our core biographical information but our conversations, photos, browsing interests, purchase records, and leisure pursuits. Our digital footprint is often enough to reconstruct the events of our lives, our relationships with others, our likes and dislikes, our fears, hopes, opinions, beliefs and ideas. Our digital devices are windows to our inner private lives.

[122] 2014 SCC 77, [2014] 3 SCR 621 [*Fearon*].
[123] *Ibid* at 632-33.
[124] *Constitution Act, 1982*, being Schedule B to the *Canada Act 1982* (UK), 1982, c 11 s 8, 24(2).
[125] *R v Fearon*, *supra* note 122 at 651.
[126] *Ibid* at 657-62.

> Therefore, as technology changes, our law must also evolve so that modern mobile devices do not become the telescreens of George Orwell's 1984. In this appeal, we are asked to decide when police officers are entitled to search a mobile phone found in the possession or vicinity of an accused person upon arrest. Because this new technology poses unique threats to peoples' privacy, we must turn to first principles to determine the appropriate response.[127]

Justice Karakatsanis adds a rich passage to law and technology literature. Notice how the phrase "new technology" does not appear until the last sentence of the third paragraph: she does not begin with labelling a technology that has been introduced two decades ago as new. She follows a more methodical path.

She begins by picturing an ambiguous technological present, almost worthy of a work of science fiction.[128] She follows with stating that mobile digital devices "have revolutionized our daily lives." Her account highlights the ambiguity of the cell phone: it extends access to information, but delivers that information through the "windows to our inner private lives." The ambiguity leaves the cell phone open to interpretation.[129] As ambiguity haunts the reader, obsolescence swoops in to provide a familiar and therefore reassuring course of action: "as technology changes, our law must also evolve."

Then comes the reference to an actual work of science fiction: George Orwell's *1984*. More than ornament, the reference serves a precise rhetorical purpose as the main issue of the case immediately follows it. Indeed, law and technology practice lays claim to a projected reality based on present circumstances, futurology and science fiction imagery. By evoking the Orwell's familiar dystopia, Justice Karakatsanis builds a picture that starkly differs

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[127] *Ibid* at 666-67.

[128] Compare with Jean-François Dugas (dir.), *Deus Ex: Human Revolution*, Eidos Montreal, 2011 ("The year is 2027. It is a time of great innovation and technological advancement. It is also a time of chaos and conspiracy." The quote comes from the cinematic trailer of the game, available online: <https://www.youtube.com/watch?v=Kq5KWLqUewc>).

[129] See Kieran Tranter, "Nomology, Ontology, and Phenomenology of Law and Technology" (2007) 8 Minn JL Sci & Tech 449 at 452.

from normalcy.[130] It is only past these rhetorical efforts that she finally labels mobile digital devices as a 'new' technology that threatens society enough to justify special legal treatment.

To say that law lags behind technology would not be fair to Justice Karakatsanis' writing. 'Law lag' implies that law loses momentum in relation to technology, that new technologies are determining the agenda of lawmakers, legal professionals and scholars. But law lag fails to acknowledge how the label of newness serves the purposes of these legal agents. In the *Fearon* case labelling the cell phone as 'new' allows Justice Karakatsanis to establish its deviancy. This justification in turn supports diverging from the traditional common law framework to treat cell phones differently, here with reference to searches incident to lawful arrests. Emphasizing the importance of protecting privacy, she attributes to cell phones and other mobiles devices an extremely high interest of privacy, and would in consequence attribute to the police a more onerous and less discretionary legal standard for the search of cell phones incident to an arrest.[131] Unlike Justice Cromwell, Justice Karakatsanis represents cell phones as 'new' to justify the need for a special standard applicable to warrantless searches of mobile devices.[132]

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[130] See Bernburg, *supra* note 113 ([d]eviant labels are associated with stigma, which means that the mainstream culture has attached specific, negative iages or streotypes to deviant labels," at 188). See generally Kieran Tranter, "The Speculative Jurisdiction: The Science Fictionality of Law and Technology" (2011) 20 Griffith L Rev 817 (on the use of science-fiction references in law and technology literature).

[131] *R v Fearon*, *supra* note 122 at 672, 676-78, 686, 693-95 ("[i]t is not just the device itself and the information it has generated, but the gamut of (often intensely) personal data accessible via the device that gives rise to the significant and unique privacy interests in digitial devices. The fact that a suspect may be carrying their house key at the time they are arrested does not justify the police using that key to enter the suspect's home. In the same way, seizing the key to the user's digital life should not justify a wholesale intrusion into that realm," at 679).

[132] See Bernburg, *supra* note 113 ("[i]ndividuals labeled as criminals or delinquents tend to be set aside as fundamentally different from others, and they tend to be associated with stereotypes of undesirable traits or characteristics," at 188).

Justice Karakatsanis mentions at the end of the passage quoted above a turn to first principles. The phrase deserves special attention. She insists that this turn derives from the "unique threats" posed by new technology. Her prose gives the impression that cell phones cause her turning, as befits law lag, but I would suggest the exact contrary: Justice Karakatsanis' commitment to 'first principles' explains why she considers cell phones deviant in the first place. Portalis made a similar comment two centuries before.

When Portalis contrasted the immobility of law with the mobility of men and women, he did not recommend that lawmakers should continuously or even periodically reform legal rules to closely reflect a constantly evolving context. Instead, the problem of time led him to articulate the different responsibilities legislators, judges, and jurists had with regard to the law. Legislation should not attempt to address every question in detail, but instead lay down the general principles that would guide judges and jurists in resolving them.[133] When confronted with novel facts, they should depend on foundational principles enshrined in a legal culture of maxims, decisions, and doctrines embodied in compilations, commentaries, and treatises. Portalis left this task in the hands of jurists "*pénétrés de l'esprit général des lois*."[134]

The jurists of whom Portalis spoke are not merely aware of the "general spirit of laws," but permeated with them.[135] A legal agent does not switch on and off her legal perspective whenever she needs to. Instead it constantly informs how she perceives the world: 'seeing like a lawyer' — and not merely thinking like one — assigns meaning to technology by

[133] See Portalis, *supra* note 69.
[134] *Ibid*.
[135] See Nicholas Kasirer, "Bijuralism in Law's Empire and in Law's Cosmos" (2002) 52 J Legal Educ 29 at 39 (attributing the idea to Roderick Macdonald).

using law as a point of reference. This specific form of legal interpretation perceives father and son through parental authority and the interest of the child; looks upon a human body and divides it in patrimonial and extra-patrimonial rights; inspects business ventures through reciprocal obligations; reads politics constitutionally, etc.[136]

It is one thing to witness the rhetorical performance of Justice Karakatsanis in *Fearon*, it is another to presume of what went through her mind as she performed it. The exercise would require reviewing past judgments, facta, judicial records and hearing recordings, not to mention biographical research. It should resemble administrative review to the point that commentators claim they would have done better. Reserving this exercise for another time, it seems clear that Justice Karakatsanis associated "[t]he intensely personal and uniquely pervasive sphere of privacy in our personal computers" to "[a]n individual's right to a private sphere [as] a hallmark of [a] free and democratic society."[137] The strength of this connection contradicts a simplistic sequence in which characterizing technology would occur independently from law, especially when characterizing technology leads to justifying legal treatment.

Obsolescence conceals this dimension of law and technology practice. Most accounts of the law lag problem fail to acknowledge the interpretive power legal scholars and lawmakers bear upon technology, the benefits and problems associated with this power, and its weight in relation to other labelling efforts. More importantly, it fails to acknowledge the resulting contingency of such interpretations, as "deviance designations

[136] These latter categories and their content are contingent: they specifically come to my mind thanks to my North American civil law training.
[137] *Fearon*, *supra* note 122 at 668.

have histories; they are changeable and subject to political reversals, the vagaries of public opinion, and the development of new social movements and moral crusades."[138] When legal agents lose track of the contingency of deviancy, they take the newness of technologies as a given — as an objective, essential reality rather than as an interpretive construct — and they reduce their critical power towards both law and technology.

An ambitious contribution to law and technology scholarship can illustrate this last point.[139] Andrew Cockfield offers a general theory of law and technology founded on two regulatory approaches.[140] While the 'liberal approach' holds a more complex and interactive view of law and technology, the 'conservative approach' preserves the integrity of law despite technological changes: it downplays or even ignores technological change.[141] As a result, Cockfield considers the liberal approach "more sensitive to the ways that technological change affects interests, while often seeing legal solutions that are less deferential to legal precedents and traditional doctrine, [whereas] … a 'conservative' approach … relies more on traditional doctrine analysis and precedents."[142] The liberal approach promises to deliver "superior policy outcomes in comparison to the conservative approach"[143] by virtue of a more open and sophisticated outlook on technological change.

Cockfield sacrifices critical analysis in favour of taking law and technology for granted, a choice that arguably facilitates operationalizing his theory for lawmaking and analytical

[138] Gusfield, *supra* note 120 at 72.
[139] See section II.A.3.
[140] Arthur J Cockfield, "Towards a Law and Technology Theory" (2004) 30 Man LJ 383 at 399-400.
[141] *Ibid* at 385, 399-02, 407-09. See also Mandel, *supra* note 23 at 553ff.
[142] Cockfield, *supra* note 140 at 383.
[143] *Ibid* at 399.

purposes.[144] His centralist, positivistic and prescriptivist conception of law strictly focuses attention on "government institutions that strive to regulate individual conduct."[145] His instrumentalist conception of technology, understood "as the human modification of the environment for a useful purpose,"[146] presupposes a strictly technical understanding. As such, he portrays law and technology as separate spheres of human activity with limited interactions: whether and how technologies undermine interests the law should preserve, whether and how they assist in the protection of those interests, and the appropriate treatments that should follow from these interactions.[147]

Cockfield presents a variation on evolutionary functionalism: rather than fulfilling societal needs, law balances conflicting interests.[148] In reference to the liberal approach,

> [t]he interests at stake throughout this process are traditional in the sense that the liberal judges attempted to identify the most critical interests that the law currently protects, then sought legal analysis and solutions that could support the protection of these interests. Preserving traditional interests is particularly important, since technologies themselves affect, change and mask interests. As such, the liberal approach, in a seeming paradox, better protects traditional interests. When technological changes undermine interests, the liberal approach to scrutinizing the

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[144] See Cockfield, *supra* note 140 (Cockfield emphasizes how his theory "could help us to understand the ways that technological developments can subvert policy goals," and "act as one more tool within a scholar's methodological toolbox to promote more fully informed legal analysis," at 386-387). See also Arthur Cockfield & Jason Pridmore, "A Synthetic Theory of Law and Technology"(2007) 8 Minn JL Sci & Tech 475 at 503-05 (where Cockfield fully instrumentalises his theory).
[145] Cockfield, *supra* note 140 at 384.
[146] *Ibid*.
[147] Cockfield, *supra* note 140 at 399-407. See also Mandel, *supra* note 23 at 556-57, 569. Assuming Cockfield would agree that Justice Karakatsanis adopted in *Fearon* a liberal approach, he might consider that it increased her ability to determine whether technological change undermines interests the law should preserve, in this case privacy, and even whether technological change can assist in the protection of those interests. See *Fearon*, *supra* note 122 at 690-91 (on whether a manual search would be preferable to a full technical examination of the cell phone, Justice Karakatsanis argues that "the privacy interest of the individual may be *better* protected by a targeted high tech search, as opposed to a manual one," at 691). Sophia Duffy and Jamie Hopkins, another example of what Cockfield might consider a liberal approach, formulate on the basis of analogical reasoning between automated cars and canines — to the dismay of cat people everywhere — a strict liability regime applicable to autonomous cars modelled after liability rules applicable to dog biting injuries (Duffy & Hopkins, *supra* note 24 at 467ff).
[148] See Gordon, *supra* note 74 at 71-74 (the interests at stake, however, are just as socially constructed and situated as societal needs).

relationship between law and technology will produce superior policy outcomes in comparison to the conservative approach.[149]

Assuming objective 'interests' can be found within the law, Cockfield's conservative and liberal approaches, while methodologically distinct, are substantively the same: he offers a choice between a less effective approach (conservative) and a more effective one (liberal). Assuming interests depend on how lawmakers and legal scholars construct, reify and rank them, Cockfield offers no insight into the strategies they deploy to do so beyond requiring some correspondence in positive law. In both cases, he holds a consensus conception of law that, he admits, rests on poor grounds.[150]

Portraying *Fearon* within the narrative of law lag and as a confrontation between more or less effective approaches to tackle it would diminish its significance.[151] The case shows an

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[149] Cockfield, *supra* note 140 at 399 (emphasis added).

[150] Cockfield & Pridmore, *supra* note 144 ("[a]dmittedly, there is much room for debate concerning what constitutes a critical interest, determining an ultimate policy prescription," at 502). Interestingly, Durkheim held a similar conception of law as a positive expression of moral consensus (see Robert Reiner, "Crime, Law and Deviance: The Durkheim Legacy" in Steve Fenton, Robert Reiner & Ian Hamnett, *Durkheim and Modern Sociology* (Cambridge: Cambridge University Press, 1984) 175 at 177). Durkheim sought to verify the hypothesis that the division of labour is a condition for social cohesion. To do so, he needed to learn about social cohesion to distinguish its relation to the division of labour from those it entertained with other phenomena. He found no variable that would allow him to directly observe, nor measure social cohesion, and chose instead to resort to a proxy of it: law. He posited that social cohesion was proportional to the legal rules that bind a society together. Durkheim believed strongly in a link between social cohesion and the law, even as customs factor in social relationships and possibly conflict with law, while remaining secondary to it. See Durkheim, *supra* note 54 at 29-30 ("*la vie sociale, partout où elle existe d'une manière durable, tend inévitablement à prendre une forme définie et à s'organiser, et le droit n'est autre chose que cette organisation a de plus stable et de plus précis,*" at 29).

[151] *Fearon* not only illustrates Cockfield's general theory of law and technology, it also reveals significant flaws. For starter, the distinction between conservative and liberal seems too strict to faithfully render the variety of ways in which lawmakers regulate and settle disputes about technology. Indeed, the 'conservatism' of Justice Cromwell only becomes apparent in comparison with the 'liberalism' of Justice Karakatsanis. If he certainly does not highlight as strongly as his colleague the significance of technology in the case, I find myself hard-pressed to conclude that he "employs analysis that is overly rigid and case specific, often failing to contemplate how technology developments can undermine interests." (Cockfield, *supra* note 140 at 388. See *Fearon*, *supra* note 122 at 649-51, where Justice Cromwell takes into account the particularities of the cell phone, and rejects precedents adopting a more conservative approach than his own). A fair application of the principle of charity leads me to interpret the conservative and liberal approaches as ends of a spectrum rather than as uncompromisingly strict categories, but doing so reduces the explaining power of Cockfield's general theory in favour of another question: when is liberal, liberal enough?

important confrontation within law: both justices Karakatsanis and Cromwell formulate interests the law currently protects in *Fearon*. The interest of the case lies in how Justice Karakatsanis channels newness and deviancy of cell phones to elevate one interest (privacy) above another (law enforcement). The diverging opinions of the Court highlight the value of controversies for research: they reveal how the characterization of technologies for legal purposes is a problematic exercise soliciting significant rhetorical efforts from legal agents, including to portray this exercise as a self-evident one relying on allegedly objective factors such as newness and technological capabilities.

c. Is biotechnology new?

The regulation of genetically modified food offers another good example. The newness of technologies is rarely contested, and as such gains an aura of self-evidence and objectivity. Sometimes, however, newness is itself the object of controversy, as in the case of modern biotechnology. The Organisation of Economic Cooperation and Development defines biotechnology as "the application of science and technology to living organisms, as well as parts, products and models thereof, to alter living or nonliving materials for the production of knowledge, goods and services."[152] As this definition shows, the larger meaning of 'biotechnology' includes both traditional and modern techniques of manipulating the genetic material of an organism. On the one hand, new recombinant deoxyribonucleic acid (rDNA) techniques such as transgenesis enable precise and direct manipulations of genome with unprecedented efficiency and potentiality.[153] On the other

[152] See Brigitte Van Beuzokom & Anthony Arundel, *Biotechnology Statistics: 2009* (Paris: Organisation of Economic Cooperation and Development, 2009) at 9.
[153] Royal Society of Canada, *Elements of Precaution: Recommendations for the Regulation of Food Biotechnology in Canada* (Ottawa: Royal Society of Canada, 2001) ("[t]he current generation of GM crops

hand, rDNA techniques put new means at the disposal of familiar ends: long before the advent of modern biotechnology, we hardly ever consumed crops or livestock that were not the product of traditional techniques of genetic manipulation, such as selective breeding and hybridization.[154]

Because of the alleged continuity between traditional purpose and modern practice, biotechnology oscillates between familiarity and newness. The resulting ambiguity raises a crucial question for the regulation of the genetically modified (GM) food industry: can standards and assessment procedures applicable to non-GM food guarantee the safety of GM food? Should we respond affirmatively, GM food would not require regulatory measures for the purposes of ensuring safety beyond those already in place for non-GM food.[155] The United States of America adopted this position, while the European Union took the opposite stance. Not all differences between their regulatory frameworks derive from whether or not lawmakers consider rDNA techniques to be essentially new. However, commentators still tend to emphasize the opposite positions reflected in the USA's and the EU's regulatory frameworks despite their significant similarities.[156]

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differs in its genetic origins from crop varieties created through conventional breeding. Unlike the mixture of parental genes represented in a conventionally derived variety, a first-generation GM crop is distinguished from its parental variety by the incorporation into that original parental genome of a novel single gene trait. In the GM crops presently in production, these traits are controlled by gene sequences derived almost exclusively from non-plant sources (i.e. bacterial, viral or insect DNA). It has been pointed out that the resulting phenotypes may be functionally similar to naturally occurring examples of analogous genetic traits, such as herbicide, insect or virus disease tolerance. Nevertheless, there is little serious debate about the fact that the presence of any of these transgene DNA sequences in a GM crop variety represents an example of incorporation of a "novel trait"," at 183).

[154] See Yong Gao, "Biosafety Issues, Assessment, and Regulation of Genetically Modified Food Plants" in Sarad R Parekh (ed), *The GMO Handbook: Genetically Modified Animals, Microbes, and Plants in Biotechnology* (Totowa: Humana Press, 2004) 297 at 297-98; Gregory N Mandel, "Gaps, Inexperience, Inconsistencies, and Overlaps: Crisis in the Regulation of Genetically Modified Plants and Animals" (2004) 45 Wm & Mary L Rev 2167 at 2174-76; Royal Society of Canada, *supra* note 153 at 15-16.

[155] *Ibid* at 11.

[156] See Francis Lord & Lyne Létourneau, "Éthique et risques dans la règlementation des biotechnologies : la prise en compte des questions normatives dans les processus d'homologation contemporains" (2013) 28 Can JL & Soc 247 at 250-51; François Leroux, "Rétrospective de la Stratégie canadienne en matière de

The White House Office of Science and Technology Policy (OSTP) doubted that rDNA techniques raised inherent risks and argued that existing legislation applicable to products developed through traditional biotechnology techniques could, for the most part, adequately regulate products resulting from modern techniques.[157] The OSTP justified its position by highlighting the continuity between traditional and modern biotechnology techniques in its *Coordinated Framework for Regulation of Biotechnology*. Referring to traditional methods and applications of genetic modifications in food and other products, the *Framework* states that

> [b]iotechnology also includes recently developed and newly emerging genetic manipulation technologies, such as recombinant DNA (rDNA), recombinant RNA (rRNA) and cell fusion, that are sometimes referred to as genetic engineering. While the *recently developed methods are an extension of traditional manipulations that can produce similar or identical products*, they enable more precise genetic modifications, and therefore hold the promise for exciting innovation and new areas of commercial opportunity.[158]

In the same vein, in reference to food derived from GM plants, the Food and Drug Administration (FDA) stated that "[i]n most cases, the substances expected to become components of food as a result of genetic modification of a plant will be the same as or substantially the same to substances commonly found in food, such as proteins, fats and oils, and carbohydrates."[159] Both the FDA and the OSTP deny newness to avoid the stigma of deviancy that would justify a special and likely adverse treatment for GM food.

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biotechnologie" (2009) 14 *Lex Electronica* 1 at 10; Thomas Moran, Nola M Ries & David Castle, "A Cause of Action for Regulatory Negligence" (2009) 6 U Ottawa L & Tech J 1 at 6-7; Celina Ramjoué, "The Transatlantic Rift in Genetically Modified Food Policy" (2007) 20 *Journal of Agricultural and Environmental Ethics* 419 at 430.

[157] Office of Science and Technology Policy, *Coordinated Framework for Regulation of Biotechnology*, 51 Federal Register 23,302 (June 26, 1986), online: http://www.epa.gov/biotech_rule/pubs/pdf/coordinated-framework-1986.pdf (consulted on June 26, 2015) at 3-4.

[158] *Ibid* at 3 (emphasis added.

[159] Food and Drug Administration, *Statement of Policy: Foods Derived from New Plant Varieties*, 57 Federal Register 22984 (May 29, 1992), available online: http://www.fda.gov/Food/GuidanceRegulation/GuidanceDocumentsRegulatoryInformation/Biotechnology/ucm096095.htm (consulted on June 25, 2015). The USA regulates GM food on the same basis as non-GM

In contrast, the EU's *Directive 2001/18/EC on the deliberate release into the environment of genetically modified organisms*[160] (the *Directive 2001/18/EC*) enforces a much stronger distinction between "organisms obtained through certain techniques of genetic modification which have conventionally been used in a number of applications and have a *long safety record*,"[161] and organisms "in which the genetic material has been altered in a way that does not occur *naturally* by mating and/or natural recombination."[162] This distinction led the EU to adopt a regulatory framework that would require that all GM food products be subjected to "a scientific evaluation of the highest possible standard … of any risks which they present for human and animal health and, as the case may be, for the environment"[163] prior to their distribution on the internal market. While American policy documents depict modern biotechnology as an extension of traditional techniques of genetic manipulation, EU regulation interprets it as a radically new one that presents unintended hazardous consequences, and therefore warrants special treatment.[164]

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food. See also *Food, Drug and Cosmetic Act* (21 U.S.C. § 301 (1983) § 342(a)(2)(C), 348(a)(2), 348(b), 348(c)); Food and Drug Administration, *Statement of Policy: Foods Derived from New Plant Varieties*, 57 Federal Register 22,984 (May 29, 1992), available online: http://www.fda.gov/Food/GuidanceRegulation/GuidanceDocumentsRegulatoryInformation/Biotechnology/ucm096095.htm (consulted on June 25, 2015) (the FDA states that if the "method by which food is produced or developed may in some cases help to understand the safety or nutritional characteristics of the finished product …, the key factors in reviewing safety concerns should be the characteristics of the food product, rather than the fact that the new methods are used"); Mandel, *supra* note 154 at 2218-19.

[160] See *Directive 2001/18/EC of the European Parliament and of the Council of 12 March 2001 on the deliberate release into the environment of genetically modified organisms and repealing Council Directive 90/220/EEC*, Official Journal L 106, 17/04/2001, P. 0001-0039 [*Directive 2001/18/EC*]. See also *Directive 2009/41/EC of the European Parliament and of the Council of 6 May 2009 on the contained use of genetically modified micro-organisms*, Official Journal L 125, 21/05/2009, P 0075-0097; *Council Directive 90/220/EEC of 23 April 1990 on the deliberate release into the environment of genetically modified organisms*, Official Journal L 117, 08/05/1990, P 0015-0027 (repealed).

[161] See *Directive 2001/18/EC*, *supra* note 160, Whereas (17) (emphasis added).

[162] *Ibid* at s 2(2) (emphasis added). See also Annex Part 1 (the Directive lists, and further isolates, some modern techniques of genetic modification as per s 2(2)).

[163] *Regulation (EC) No 1829/2003 of the European Parliament and of the Council of 22 September 2003 on genetically modified food and feed*, Official Journal L 268, 18/10/2003, P 0001-0023, Whereas (9)).

[164] *Ibid* s 1(a), 2-7, 11. See generally Stéphanie Mahieu & Christophe Verdure, "La régulation européenne des risques alimentaires : un palimpse moderne?" in Paul Nihoul & Stéphanie Mahieu (eds), *La sécurité alimentaire et la réglementation des OGM : Perspectives national, européenne et internationale* (Bruxelles:

To enact a framework that specifically regulated GM organisms and food under the precautionary principle, European lawmakers depended on portraying rDNA techniques as new — hence the insistence in regulatory documents on the distinction between modern biotechnology and traditional techniques of genetic manipulation. Newness signalled that societal needs had changed with the advent of deviant biotechnology, and that law needed to take account of this change with a corresponding treatment. American lawmakers, refusing to make the same observation, had therefore little use for a special regulatory framework — societal needs had not changed with the advent of modern biotechnology.

Again, presuming that the differences in legal treatment solely depend on newness would oversimplify a complex and contingent assemblage of economic pressures, international trade issues, scientific inputs, environmental concerns, traumatic events, and political manoeuvring that contributed to the establishment of the American and the European regulatory frameworks.[165] The stigma left by the European 'mad cow' disease crisis, for example, offered significant support to deviant representations of GM food.[166] However, the label of newness or its absence still factors in justifying either regulatory framework:

De Boeck & Larcier, 2005) 53; Stéphanie Mahieu, "Le contrôle des risques dans la réglementation européenne relative aux OGM : vers un système conciliateur et participatif" in Paul Nihoul & Stéphanie Mahieu (eds), *La sécurité alimentaire et la réglementation des OGM : Perspectives national, européenne et internationale* (Bruxelles: De Boeck & Larcier, 2005) 153. See also Ramjoué, *supra* note 156 at 421; Joseph Murphy, Les Levidow & Susan Carr, "Regulatory Standards for Environmental Risks: Understanding the US-European Union Conflict over Genetically Modified Crops" (2006) 36 *Social Studies of Science* 133 at 144.

[165] See Ramjoué, *supra* note 156 at 420, 425-28, 433; Joachim Scholderer, "The GM Foods Debate in Europe: History, Regulatory Solutions, and Consumer Response Research" (2005) 5 *Journal of Public Affairs* 263 at 264-68; Mandel, *supra* note 154 at 2217, 2176-79; Royal Society of Canada, *supra* note 153 at 202-03.

[166] *Ibid* ("[m]ost commentators agree that the high levels of public apprehension in Europe about food risks generally, and GM food risks specifically, are significantly coloured by the loss of trust in scientists and regulators resulting from the BSE crisis in Britain," at 211). See also Peter Andrée, "Biopolitics of GMO in Canada" (2002) 37 *Journal of Canadian Studies* 162 at 183; Jerome Ravetz, "Food Safety, Quality, and Ethics: A Post-Normal Perspective" (2002) 15 *Journal of Agricultural and Environmental Ethics* 255 at 262.

the same technology in both jurisdictions presents diametrically opposed characterizations, which results in different legal treatments.

Just as newness allowed European lawmakers to distinctively construct the elements they wished to regulate, critics of the American regulatory framework can label modern biotechnology as new to assign deviancy and call for legal reform. Gregory Mandel, for example, makes such an argument on the basis of four case studies demonstrating 'Gaps, Inexperience, Inconsistencies, and Overlaps' in the regulation of GM plants and animals.[167] Mandel's claim of newness differs from the EU's. Even while acknowledging the risks resulting from the development and exploitation of GM plants and animals,[168] he does not argue that rDNA techniques require special regulation because they radically differ from traditional techniques of genetic manipulation.[169] Instead, he contends that legislation designed to regulate conventional plants and animals cannot effectively and efficiently regulate their GM counterparts, which present unforeseen characteristics.[170]

The deviancy of modern biotechnology, here, directly derives from the inadequacy of the regulatory framework. For example, no American legislation specifically regulates the release of GM fish. The FDA has claimed authority over the regulation of GM salmon that continually produces growth hormone as a 'new animal drug' under the *Federal Food, Drug, and Cosmetic Act*, but Mandel finds this claim dubious at best, and even then argues

[167] *Supra* note 154 at 2230-31 (detailing the respective problems of gaps, overlaps, inconsistencies and inexperience).
[168] *Ibid* at 2190-2202.
[169] *Ibid* at 2174-75
[170] *Ibid* ("[c]onsidering that genetically modified products are regulated pursuant to statutes enacted decades prior to the advent of biotechnology itself, these deficiencies are not entirely surprising," at 2172); see also Mandel, *supra* note 23 at 564-68.

that the FDA remains unable to address all the relevant environmental concerns.[171] The Environmental Protection Agency would likely be best placed to address these concerns due to its staff's expertise in environmental risk assessment, but the Agency has already rejected any authority over GM fish.[172] Faithfully to evolutionary functionalism, Mandel portrays law, society, and technology as distinct, but related spheres of human activity, and requires law to adapt to better fulfill societal needs with regard to biotechnology, namely improvement of and protection from technology:

> Adequate federal regulation of biotechnology is the tool that can best achieve both results at once. Effective and efficient regulation is the mediator that will determine whether society reaps the spectacular advantages of biotechnology or succumbs to its potential dangers. Without proper regulation, society will face unnecessary risks, the benefits of biotechnology will be slowed severely and made more expensive, and the public will lack confidence in biotechnology products.[173]

Legal agents draw from law a number of concerns, norms and prejudices to re-articulate them as the attributes of technologies. The legal interpretation of technology produces situated knowledge they can deploy for varying purposes, most often regulation. Like all knowledge-producing activities, it reflects a number of biases, commitments and imperatives.[174] Obsolescence, albeit it heavily relies on law's interpretive power to represent technologies as deviant, conceals this power under the appearance of a purely descriptive endeavour based on objectively identifying and characterizing new technologies, and juxtaposing them to current legal rules. It takes for granted the question

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[171] *Supra* note 154 at 2209-11.
[172] *Ibid* at 2231-32.
[173] *Ibid* at 2171-72.
[174] See Sheila Jasanoff, "Law's Knowledge: Science for Justice in Legal Settings" (2005) 95(S1) *American Journal of Public Health* S49 at S51. See also Sheila Jasanoff, *Science at the Bar: Law, Science and Technology in America* (Cambridge: Harvard University Press, 1995) at 8-11, 207.

of newness and thus dissimulates normative claims about deviancy.[175] Description and prescription become a false distinction, hence my preference for 'interpretation'.

I do not take issue with the interpretive basis of obsolescence. I do not call for lawmakers, scholars and lawyers to withdraw themselves from the characterization of technologies, or purge it from normative commitments. I take issue with any feigning of objective description. Legal agents cannot provide evidence of law lag because law and technology are not autonomous variables: technologies acquire deviancy thanks to legal interpretation and its use of labels such as 'new'. Indeed, newness most often "function[s] as cover for very traditional state concerns"[176] that maintain "continuity in the midst of social change."[177] Taking for granted the authority of current legal rules as an adequate standard of technological deviancy betrays, to an extent, a lack of self-awareness.[178]

C. Old fashioned novelties

Cockfield regrets that legal scholarship lacks a general theory of law and technology, contrary to social sciences and humanities.[179] He believes the predominantly compartmentalized approach to law and technology explains the deficiency: legal scholars limit their study to how a specific field of law applies to new technologies or how different

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[175] See Tranter, *supra* note 4 at 69 (on the widely-shared descriptive approach of the 'law and technology enterprise').
[176] Monroe E Price, "The Newness of New Technology" (2000) 22 Cardozo L Rev 1885 at 1896.
[177] Gordon, *supra* note 74 at 61 (counting among the evolutionary-functionalist needs of society).
[178] See also Lawrence H Tribe, "Technology Assessment and the Fourth Discontinuity: The Limits of Instrumental Rationality" (1972) 46 S Cal L Rev 617 ("it may be that the most crucial dimensions of a particular technology's introduction into, and integration with, a society (for instance, the integration of computerized information networks) will relate less to the "impacts" of the technology itself than to the ways in which — the *processes* through which — individuals and communities interact with the evolving structures that the technology defines as it develops and is diffused," at 631-32).
[179] *Ibid* at 387-88.

rules from different fields apply to a specific device or technology.[180] This specialized approach keeps them from developing a consistent and comprehensive understanding of law and technology. Allegedly, legal scholarship would benefit from such a theory because, first, "technological developments determine certain paths and influence human behaviour, often in unanticipated ways"[181] and thus threaten interests law should protect; second, a general theory would enable richer exchanges between specialized fields and topics of law, and between general and traditional ones.[182]

Cockfield counts among a group of legal scholars that have, since the mid-1990s, taken a more general approach to law and technology,[183] an endeavour some elevate to a full-fledged academic discipline: 'technology regulation'.[184] One of these generalists, Roger Brownsword, offers a broad account of law lag.[185] According to Brownsword, when technology changes at a faster rate than law, it invalidates the latter's factual assumptions and produces a regulatory 'disconnection'. The law usually applies to static representation of technology, but as technology develops, this representation becomes increasingly out-dated, producing a gap between current law and new technology. Regulatory disconnection reduces the effectiveness of law — either to protect society against technological harm or to make sure it can enjoy its benefits. When a regulatory gap becomes too important, regulators must either re-affirm their legal schemes via teleological interpretation or reform

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[180].See also Moses, *supra* note 5 at 594.
[181] Cockfield, *supra* note 140 at 385.
[182] *Ibid* at 387-88.
[183] See Tranter, *supra* note 4 at 72-74.
[184] See Bert-Jaap Koops, *supra* note 70 (defined as "the study of how technologies are or should be regulated, technologies being the broad range of tools and crafts that people use to change or adapt to their environment, and regulation being the intentional influencing of someone's or something's behaviour," at 310).
[185] *Supra* note 2 at 161-65. See also Brownsword & Somsen, *supra* note 43 at 3.

them on the basis of an updated representation of technology.[186] Brownsword distinguishes between different types of disconnections, each warranting different legal responses.[187] The legitimacy of these responses, both the ends pursued and the means to pursue them, figure among his central concerns.[188]

While Brownsword pays attention to substantive gaps between rules and devices, Gary Marchant focuses on the inability of legal institutions and mechanisms to keep up with technological change. He first pins this 'pacing problem' on legal frameworks that embody a "static rather than dynamic view of society and technology."[189] Failing to articulate what a 'dynamic' view of society and technology would look like, Marchant keeps his work grounded in the example of a legislative scheme that only failed to anticipate how new information would make adopted standards obsolete.[190] To him, legislative and judicial processes "are slowing down with respect to their capacity to adjust to changing technologies."[191] He follows with a survey of scientific literature to show how technology propels itself forward and leaves law behind in areas such as nanotechnology, life sciences, and information and communication technologies.[192] Marchant finally proposes ten different techniques to shorten the gap between technological and legal change, including

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[186] Brownsword, *supra* note 2 at 165-67.
[187] *Ibid* at 160ff (for the differences between descriptive and normative disconnections, productive and unproductive disconnections, and intelligent and unintelligent reconnections).
[188] See for example Brownsword & Somsen, *supra* note 43 at 12ff.
[189] Gary E Marchant, "The Growing Gap Between Emerging Technologies and the Law" in Gary E Marchant, Braden R Allenby & Jonathan R Heckert (eds), *The Growing Gap Between Emerging Technologies and Legal-Ethical Oversight: The Pacing Problem* (Dordrecht: Springer, 2011) 19 at 23.
[190] *Ibid* at 23.
[191] *Ibid* at 23-24.
[192] *Ibid* at 25-27.

expedited rulemaking, self- and cooperative regulation, specialized courts, and sunset clauses.[193]

Cockfield's, Brownsword's and Marchant's proposals count among recent efforts from legal scholars and lawmakers to devise legal instruments and strategies that can match the rate of technological change. Technological neutrality numbers among such instruments:[194] by treating specific technologies as equivalent, rather than tying them to legal rules or discriminating among them, lawmakers can maintain the effectiveness and relevance of law in spite of technological change. Conversely, technological neutrality also encourages lawmakers to take into account and even use technology to achieve the ends embodied in legal rules.[195] These tools can variously take the form of new or modified standards, supervisory and monitoring technologies, and public consultation schemes, among others, and should help maintaining a "connection with the technology and its applications."[196]

Adopting a generalist approach to law and technology does not lead legal scholars to give up on the obsolescence trope. It might only extend it from micro- to macro-analysis. Even if legal agents continually refine their analysis, obsolescence constrains them to filling gaps between rules and technologies.[197] The compartmentalization of law and technology scholarship results, in fact, from the functional juxtaposition of discrete rules and

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[193] *Ibid* at 28-30. See also Moses, *supra* note 53 at 508; Friedman, *supra* note 31 at 85.
[194] See Craig, *supra* note 34 at 272-76. See generally Koops, *supra* note 39.
[195] See Gautrais, *supra* note 31 at 32-36.
[196] Brownsword & Somsen, *supra* note 43 at 3.
[197] *Ibid* ("[i]n short then, we need innovative thinking as regulators strive to create and sustain an environment that is legitimate and effective, that maintains connection with the technology and its application, and that meets cosmopolitan expectations," at 3); Roger Brownsword, "So What Does the World Need Now? Reflections on Regulating Technologies" in Roger Brownsword & Karen Yeung (eds), *Regulating Technologies: Legal Futures, Regulatory Frames and Technological Fixes* (Oxford: Hart Publishing, 2008) 23 ("[o]ne of the principal ideas associated with the underlying agenda is that, each time a new technology appears, or an established technology assumes a fresh significance or moves forward in some way, we should not, so to speak, have to re-invent the regulatory wheel," at 30).

technologies. Brownsword's and Marchant's contributions bear evident resemblance to Ogburn's cultural lag theory. Similarly to the standard cases above, Brownsword retains the technological-change-to-legal-change sequence and appraises disconnection by focusing on the 'gaps' between rules and devices, [198] as does Marchant.

Without eschewing obsolescence, the only general theory available proceeds from inductive extrapolation: from particular to general law lag. But for many legal agents, the proposition that '*all* law lags behind *all* technology' seems too extreme to be credible. The scepticism partly hinges on methodological grounds: the extreme particularism of law lag hardly supports generalizations. More crucially, while obsolescence emphasizes superficial distinctions between law and technology (through the functional discrepancies between rules and technologies), the legal interpretation of technology guarantees the capabilities of technologies never interfere with the prescriptions of law.

[198] See Brownsword, *supra* note 185 168 ("[t]echnology is capable of leaving the law behind at any phase of the regulatory cycle– before regulators have anything resembling an agreed position, before the terms of the regulation are finalized, and once the regulatory framework is in place," at 162). See also Brownsword & Somsen, *supra* note 43 at 26-31.

II. PRESCRIPTIONS AND CAPABILITIES

The previous chapter shows the ubiquity of the obsolescence stereotype in law and technology scholarship. The stereotype originates from and reinforces key assumptions in law and technology literature: technological development as a process of knowledge accumulation and material succession (*the creation and development of technology occurs outside the reach of law*); law and technology as a juxtaposition of positive rules and technologies (*legal agents can understand the spheres of law and technology through markers*); and newness as problematic (*only new technology merits attention*). Having established the law lag problem, legal agents address it through law reform (*law ought to assist society in coping with technological change*), ideally preventively (*lawmakers should intervene before technological change materializes*). In the end, any measure will only last until the next technological change again (*if and when law addresses technological change, it does so without overcoming obsolescence*). These assumptions reinforce the core postulate of the obsolescence trope: *law and technology are separate, but related*. They can interact, but they cannot constitute or transform each other.

The previous chapter also proposes an alternate model for legal and technological change: technological deviancy. Under this model, technology changes when it deviates from positive law, as determined by legal agents. While I would not mind seeing technological deviancy rival law lag in legal scholarship, my primary objective in proposing an alternative model was to demystify the latter model as a way to conceptualize the dynamics of legal and technological change. But even as I formulated a labelling theory of law and technology, I found myself making it very similar to its rival.

Under both models, the analyst perceives technology through the lens of law. Both models use the language of space and time to establish the problem of law and technology in terms of desynchronization. Law lag presumes that desynchronization occurs with the passage of time and as a result of the differing speed of legal and technological development. Technological deviancy, on the other hand, affirms that desynchronization occurs in real time, whenever a legal agent observes discrepancies between law and technology.

As I experimented with my formulation of technological deviancy, I anticipated accusations of legal determinism. After all, the deviancy model does suggest that technological change, at least interpretively, originates from law. But so does law lag: the predominant model reflects an evolutionary functionalist conception of law suggesting that law should and does assist society on its way towards progress. The model, therefore, portrays technological change in relation to a specific understanding of law's historical mission. Technological deviancy carries a different sort of ideological baggage and as such does not conceal its legal determinism — it counts on it.

This latter point hints towards something more fundamental. I originally hoped to demonstrate the existence and consequences of the obsolescence stereotype, deconstruct it, and propose a better underlying narrative of law and technology. As I progressed towards this aim and formulated the model of technology deviancy, another question attracted my attention: why do we even have such a thing as an obsolescence stereotype? I was once tempted to blame obsolescence on a lack of imagination within the legal community, but the thought now seems hasty and arrogant.

A more promising explanation points to a shared ideology. Legal agents routinely disagree about the legal significance of technology, how the law should apply to it, as well as the detriments and benefits of technology. Though they heatedly debate these issues, the vast majority of legal agents also agree that there is such a thing as technology, that technologies have defined properties and capabilities, that technology differs from law, that technology matters to society and law, that jurists can make relevant but limited contributions on such matters of society and technology, and, often, that law can (but does not always) lag behind technology in problematic ways. How far does this underlying agreement extend, and can it be analysed?

My answer lies in a phrase I used in the preceding chapter: the legal interpretation of technology. By 'legal interpretation of technology', I mean how legal agents practically and tacitly attribute meaning to technology — i.e. what technology is and what it can do. 'Practically', because legal agents learn to interpret technology through formal and informal socialization as ordinary citizens, law students, lawyers, jurists, officials, magistrates, lawmakers, etc. 'Tacitly', because legal agents generally do not perceive their interpretations of technology as such, and treat them instead as impersonal observations based on authoritative and objective knowledge. While both law lag and technology deviancy constitute legal interpretations of technology, only the latter model acknowledges it as such. The ubiquity of obsolescence in legal scholarship flows directly from the similar ways in which legal scholars interpret technology. Despite its practical and tacit nature, we can reveal legal interpretations of technology by examining premises generally agreed upon, such as the dichotomy between prescriptions and capabilities.

In "Recurring Dilemmas," Lyria Moses attempts to "[explain] why technological change generates legal problems."[1] Moses begins by defining technology. Noting technology's plurality of meaning, she settles for a "practical" definition, as opposed to an absolute one. Moses' practical definition situates technology squarely in the realm of means, whereas law only concerns itself with governing the use of these technologies. The distinction between law and technology does not reflect a dichotomy between ends and means, but rather the differences in how two types of means interact with the formation and pursuit of ends — legal prescriptions (may) and technological capabilities (can):

> There is one aspect of technological change … that links those technologies that have the most direct impact on law. This is the capacity of new technology to enable new forms of conduct, including alteration of the means by which similar ends are achieved. The current state of technology limits in practice what actions we *can* perform, what objects we *can* create, and what relationships we *can* form. Some technological change has a significant impact on what is possible. *In vitro* fertilization, for example, allowed infertile couples to bear and raise a genetically related child, created a new industry, and gave rise to a new thing, the *in vitro* embryo. The introduction of such significant changes into a world of rules that govern what actions we *may* perform, what objects we *may* create and use, and what relationships will be *recognized* can create legal problems. … new regulation may be necessary, existing rules may be rendered obsolete, and the application of existing rules to new situations may generate uncertainty or may lead to seemingly inappropriate results.[2]

As others who attempt to develop a general theory of law and technology, Moses still clings to obsolescence. Her definition of technology and its relationship to law is an abstraction of the functional level of rules and technologies, where discrepancies between markers constitute the main object of legal analysis. And yet, Moses offers a much more profound insight. When she uses the term "practical," as in a "practical definition of technology,"

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[1] Lyria B Moses, "Recurring Dilemmas: The Law's Race to Keep Up with Technological Change" (2007) U Ill JL Tech & Pol'y 239 at 243.

[2] *Ibid* at 245. Compare with Jennifer Chandler, "'Obligatory Technologies' and the Autonomy of Patients in Biomedical Ethics" (2011) 20 Griffith L Rev 905 ("[a]ny technology that works will enhance or extend human capacities in some way. As a result, a technology arguably frees people from some of the internal and external limits that not only fetter their ability to 'act freely in accordance with a self-chosen plan', but also hinder their ability to form that 'self-chosen plan'," at 907).

she does not mean what technology does in practice, or at least she does not limit herself to that meaning. Instead, “practical” refers to how “most scholars explore an aspect of technology that ties in with the topic of their work.”[3] Because scholars from different disciplines hail from different practices, they focus on different aspects of technology. I could not agree more.

Where Moses and I part ways, I suspect, is in her position that technology inherently embodies new capabilities that run contrary to legal prescriptions. As a famous psychologist wrote, “it is tempting, if the only tool you have is a hammer, to treat everything as if it were a nail.”[4] Similarly, what technology is and what it can do is in the eye of the beholder: the conflict between prescriptions and capabilities results from the legal interpretation of technology, not technology itself. Technology extends the capabilities of its users as long as legal scholars have a practical interest in prescription.

In this Chapter, I propose an interpretive approach to the study of law and technology. The approach draws inspiration from science and technology studies, and literary theory. From science and technology studies, and specifically from the social shaping of technology model, I draw on the work of engineer Keith Grint and sociologist Steve Woolgar. Grint and Woolgar argue that technology shares epistemic properties with text. As such, making sense of technology requires interpretation similar to how making sense of text requires interpretation. Both scholars insist that analysts of technology should include themselves as a relevant object of social analysis.

[3] *Ibid* at 244.
[4] Abraham H Maslow, *The Psychology of Science: A Reconnaissance* (New York: Harper & Row, 1966) at 15.

Grint and Woolgar, however, do not push their analogy much beyond the "technology-as-text" metaphor. This may explain why their work lacks explicit references to literary theory beyond inferences they draw from social constructivism. I reinforce their approach with the work of literary theorist and legal scholar Stanley Fish, whose analyses fits well with Grint and Woolgar's anti-essentialism.[5] Fish's contribution also allows me to connect law and technology through the humanities rather than through science and engineering.

I next examine a widespread, underlying agreement in law and technology scholarship: the centrality and supremacy of human agency. Obsolescence depicts the relationship between law and technology in a confrontational manner: new technological capabilities conflict with prevailing legal prescriptions. This confrontation, however, happens against the backdrop of profound ideological harmony between the instrumental theory of technology and the precept of legal prescriptivism.[6]

The instrumental theory posits that technology is neutral and determinate: it serves the ends of its users,[7] and operates according to a universal, objective and predictable internal logic. On the other hand, legal prescriptivism focuses on how legal institutions — regulatory regimes, officials and sanctions — effectively shape legal subjects.[8] The convergence of

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[5] The three of them are indebted to Thomas Kuhn's seminal work. See Thomas S Kuhn, *The Structure of Scientific Revolutions*, 4th ed (Chicago: Chicago University Press, 2012). See also Émile Durkheim, *Les formes élémentaires de la vie religieuse : le système totémique en Australie* (Paris: Presses Universitaires de France, 1968 at 206.
[6] See also Robert W Gordon, "The Role of Lawyers in Producing the Rule of Law: Some Critical Reflections" (2010) 11 Theoretical Inq L 441 (the rule of law's "barebones content … is that of a regime of rules, announced in advance, which are predictably and effectively applied to all they address, including the rulers who promulgate them — formal rules that tell people how the state will deploy coercive force and enable them to plan their affairs accordingly," 441).
[7] For convenience, the term 'user' also includes technology developers and producers.
[8] Roderick A Macdonald, "Here, There… and Everywhere: Theorizing Legal Pluralism; Theorizing Jacques Vanderlinden" in Nicolas Kasirer (ed.), *Étudier et enseigner le droit; hier, aujourd'hui et demain — Études offertes à Jacques Vanderlinden* (Montreal: Éditions Yvon Blais, 2006) 381 at 390 (as opposed to "how

instrumentalism and prescriptivism in law and technology practice ensures human agency prevails over technology, a situation considered essential for "the enterprise of subjecting human conduct to the governance of rules."[9] Technological capabilities and legal prescriptions conflict out of convenience for legal agents.

A. Reading groups

Fish counts among the originators of reader-response theory.[10] The theory responds to the formal school of interpretation, which posits that language and formal textual features carry positive meaning, both of which remain the same in any context. Readers extract or discover textual meaning by reading texts competently. Formalists have long butted up against the problem of disagreement: if meaning resides solely in the text and independently from surrounding circumstances, how can readers disagree about it? Formalists respond that while textual meaning remains objectively the same, readers vary in their ability to discover it. Disagreement about textual meaning reflects such variations, while changes in interpretation signal a refinement of reading skills and progress towards an essential truth.[11]

In contrast, reader-response theory posits that textual meaning does not flow from text, but from the interpretive strategies readers deploy to construct meaning. By making the reader "the functional authority for meaning,"[12] the theory shifts analytical focus from text and

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subjects shape institutions through their interpretations with, come to believe that their relationship with, and responsibility toward, law lies outside their imaginations and their practices," at 390).

[9] Lon Fuller, *The Morality of Law*, rev ed (New Haven: Yale University Press, 1969) at 106 (i.e. law).

[10] Todd F Davis & Kenneth Womack, *Formalist Criticism and Reader-Response Theory* (New York: Palgrave, 2002) at 81.

[11] See Stanley E Fish, *Doing What Comes Naturally: Change, Rhetoric, and the Practice of Theory and Legal Studies* (Durham: Duke University Press, 1989) at 141-43.

[12] Peter L Shillingsburg, "Text as Matter, Concept, and Action" (1991) 44 *Studies in Bibliography* 31 at 32.

language to reader.[13] Reader-response theorists do, however, face the reverse version of the formalist problem: if readers create textual meaning, how can they agree about it? Fish's greatest contribution to reader-response theory was to argue that social life structures the availability and the use of interpretive strategies, and polices deviant interpretations:

> It is interpretive communities, rather than either the text or the reader, that produce meanings and are responsible for the emergence of formal features. Interpretive communities are made up of those who share interpretive strategies not for reading but for writing texts, for constituting their properties. In other words, these strategies exist prior to the act of reading and therefore determine the shape of what is read rather than, as is usually assumed, the other way around.[14]

Creating textual meaning depends on implementing various interpretive strategies, which include but are not limited to "the making and revising of assumptions, the rendering and regretting of judgments, the coming to and abandoning of conclusions, the giving and withdrawing of approval, the specifying of causes, the asking of questions, the supplying of answers, the solving of puzzles."[15] Importantly, no reader uses these strategies in isolation. All readers interpret text as members of multiple interpretive communities that constrain the availability and use of interpretive strategies. Members of the same interpretive community generate the same textual meaning by employing the same interpretive strategies in the same ways.[16]

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[13] See Stanley E Fish, *Is There a Text in This Class? The Authority of Interpretive Communities* (Cambridge: Harvard University Press, 1980) at 172-73 (opposing "the assumption that there *is* a sense, that it is embedded or encoded in the text, and that it can be taken in at a single glance. ... In the procedures I would urge, the reader's activities are at the center of attention, where they are regarded not as leading to meaning but as *having* meaning," at 158). See also Fish, *supra* note 14 at 1325; Owen M Fiss, "Conventionalism" (1985) 58 S Cal L Rev 177 at 180; Sanford Levinson, "Law as Literature" (1982) 60 Tex L Rev 373 at 381-84.
[14] Fish, *supra* note 11 at 14.
[15] Fish, *supra* note 13 at 158-59.
[16] *Ibid* at 171-73, 318, 356-57. See also Maujinder S Sohal, "Legal Practice and the Case Against Theory: Dworkin versus Fish" [2000] UCL Jurisprudence Rev 234 at 240-41; Daryl J Levinson, "The Consequences of Fish on the Consequences of Theory" (1994) 80 Va L Rev 1653 at 1665.

All constraints on interpretation derive from ubiquitous and pre-determined "practice-specific stipulations of what is perspicuous and worth attending to."[17] When they read a text, readers cannot freely choose the interpretive strategies provided and sanctioned by one or another interpretive community they belong to. Instead, they are "possessed *by* knowledge"[18] of these strategies, which manifest through interpretation. This is what distinguishes explicit rules of interpretation from interpretive strategies. Fish would not consider the rules set out by the *Interpretation Act*,[19] for example, as interpretive strategies of the Canadian legal profession, mostly because these rules themselves require interpretation.[20] He might however count among such strategies the assumption that the *Act* is a legal text, more specifically a piece of legislation, and as such should be read as a prescriptive text of limited purview and carrying more weight than other legal texts. Lawyers learn to use and become constrained by such strategies through socialization, learning to identify legislation by paying attention to title, organization, drafting style, citation practices, etc.[21]

Disagreements about textual meaning do not show that one reader's skills surpass another's. Instead they signal that the readers belong to different interpretive communities or that they belong to an interpretive community that allows its members to disagree about

[17] Stanley E Fish, "How Come You Do Me Like You Do? A Response to Dennis Patterson" (1993) 72 Tex L Rev 57 at 64.
[18] Fish, *supra* note 17 at 59. See also Fish, *supra* note 11 at 144.
[19] RSC, 1985, c I-21.
[20] See Stanley E Fish, "Fish v Fiss" (1986) 36 Stan L Rev 1325 at 1326-27. Compare with Owen M Fiss, "Objectivity and Interpretation" (1981) 34 Stan L Rev 739.
[21] Fish's theory of interpretation focuses on tacit knowledge. He contemplates the internalization of explicit strategies, but only through and under practice. See *Ibid* ("there will eventually come a time when the novice player (like the novice judge) will no longer have to ask questions; but it will not be because the rules have finally been made sufficiently explicit to cover all cases, but because explicitness will have been rendered unnecessary by a kind of knowledge that informs rules rather than follows from them," at 1330). See also Fiss, *supra* note 12 at 190.

textual meaning. Communities determine the extent to which their members can argue about textual meaning and the strategies they should deploy to resolve their differences.[22] When members of the same interpretive community argue over textual meaning, they tacitly agree on much more than they explicitly disagree: lawyers may argue over the application of a section of the *Interpretation Act* and yet concur that the *Act* matters, that it has weight and scope, that its effectiveness in any one case depends on a jurist's ability to discipline its meaning, etc.

The problems of agreement and disagreement that plagued Fish's predecessors morphed into a problem of change: if interpretive communities are permanent and omnipresent features of interpretation, how can textual meaning change? Textual meaning changes because interpretive communities change; while they are omnipresent and permanent features of interpretation, they are neither static nor monolithic. Each community has a tacit and practical sense of self — of purpose and purview, of identity and boundaries in relation to other interpretive communities — and in consequence provides its members with strategies on how to deal with foreign elements:

> [I]n order for a formulation from economics or mathematics or anthropology to be seen as related to a problem or project in literary studies, literary studies would themselves have to be understood in such a way that the arguments and conclusions of economics or mathematics or anthropology were already seen by practitioners as at least potentially relevant. To put the matter in what only seems to be a paradox, when a community is provoked to change by something outside of it, that something will already have been inside, in the sense that the angle of its notice — the angle from which it is related to the community's project even before it is seen — will determine its shape, not *after* it has been perceived, but *as* it is perceived. And all of this will

[22] *Contra* Ana Severora, "'The Gun At Your Head Is Your Head': A Critique of Fish's Account of the Role of the Subconscious in Legal Interpretation" [2002] UCL Jurisprudence Rev 200 ("[w]e do know that judges, even though belonging to the same interpretative community, disagree in their interpretation of the same facts, statutes or precedents in a single case. Thus, if Fish's community is envisaged as constraining interpretation in a strong sense, then his theory fails to account for these judicial disagreements," at 204).

> follow from the community's understanding of itself as a mode of inquiry responsible to the facts and theorems of some, but not all, other modes of inquiry.[23]

At any one time an individual belongs to "innumerable interpretive communities in relation to which different kinds of belief are operating with different weight and force."[24] Individuals do not suffer from split loyalties because interpretive communities define their boundaries and instruct their members on how to navigate them.[25] Interpretive communities can accommodate foreign elements and multiple memberships because they "are at once homogeneous with respect to some general sense of purpose and purview, and heterogeneous with respect to the variety of practices they can accommodate. Any one of those practices exists in some relationship of assumed justification to that general sense."[26]

Consider rules governing the admissibility of expert testimony. Expert witnesses can contribute to adjudication provided they do not take over the fact-finding process. Therefore, courts have elaborated standards of admissibility to ensure that expert testimony conforms to the institutional imperatives of adjudication.[27] Of interest are Canadian rules of evidence governing the admissibility of expert testimonies based on novel scientific techniques. The Supreme Court of Canada in *R v J.-L.J.*[28] (*J.-L.J.*) adopted a test first

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[23] Fish, *supra* note 11 at 147.
[24] *Ibid* at 30.
[25] *Ibid* at 31-32.
[26] *Ibid* at 149.
[27] See for example *R v Mohan*, [1994] 2 SCR 9 at 20-25 (enumerating and explaining criteria for the admissibility of expert testimony: relevance, necessity in assisting the trier of fact, absence of any exclusionary rule, and a properly qualified expert). Before 1993, American courts allowed expert testimony on the basis of a 'general acceptance' test: judges admitted such evidence if members of the relevant scientific field generally accepted its underlying principle (see *Frye v United States*, 293 F 1013 (DC Cir 1923) at 1014).
[28] *R v J-LJ*, 2000 SCC 51, [2000] 2 SCR 600 at 606-08, 615-16. See also *White Burgess Langille Inman v Abott and Haliburton Co*, 2015 SCC 23 at para 23; *R v Trochym,* 2007 SCC 6, [2007] 1 SCR 239 ("[t]he 'gatekeeper function' of the courts referred to in J.-L.J. … is thus as important when facts extracted through the use of a scientific technique are put to the jury as when an opinion is put to the jury through an expert who bases his or her conclusions on a scientific technique," at 258).

formulated by its American counterpart in *Daubert v Merrell Dow Pharmaceuticals, Inc.* (*Daubert*) requiring courts to examine "whether the reasoning or methodology underlying the testimony is scientifically valid and of whether that reasoning or methodology can properly be applied to the facts in issue."[29] Because this test itself requires interpretation, it cannot be an interpretive strategy.[30] The indeterminacy of the test does not guarantee or even support scientific truth, and yet it is in that very indeterminacy that we can surmise such an interpretive strategy.

The test formulated by American and Canadian case law seeks the possibility of truth. The test presupposes that judges can import a standard of validation from 'real science' into adjudication to exclude 'junk science' from their proceedings.[31] The test, however, prevents any inquiry into truth by combining incompatible conceptions of scientific knowledge. Its first two criteria (falsifiability, and known or potential error rate) imply that "science progresses through clear falsifications of erroneous claims."[32] Conversely, the latter two (peer review and publication, and general acceptance) suggest that "knowledge accumulates through negotiation and consensus among members of the scientific community."[33]

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[29] *Daubert v Merrell Dow Pharmaceuticals, Inc*., 509 US 579 (1993) at 593-95 (Blackmun J). In 1999 the US Supreme Court extended *Daubert*'s test to all expert testimonies (see *Kumho Tire Co. v Carmichael*, 526 US 137 (1999) at 147).

[30] Fish, *supra* note 20 at 1326-27.

[31] *R v J-LJ*, *supra* note 28 at 611-12, 615, 630. See also Sheila Jasanoff, "Representation and Re-Presentation in Litigation Science" (2008) 116 *Environmental Health Perspectives* 123 at 123-24. The phrase 'junk science' implies that courts can fall prey to dubious scientific evidence. See *R v Mohan*, *supra* note 27 at 21 (there is a "danger that expert evidence will be misused and will distort the fact-finding process. Dressed up in scientific language which the jury does not easily understand and submitted through a witness of impressive antecedents, this evidence is apt to be accepted by the jury as being virtually infallible and as having more weight than it deserves," at 21 [Sopinka J]). See also Peter W Huber, *Galileo's Revenge: Junk Science in the Courtroom* (New York: Basic Books, 1991).

[32] Sheila Jasanoff, *Science at the Bar: Law, Science and Technology in America* (Cambridge: Harvard University Press, 1995) at 63.

[33] *Ibid*.

The test does not protect the court against junk science. Rather, the test enables and preserves the myth of truth in adjudication. The interpretive strategy lies not in the substance of the rules of evidence, but in the assumption that complying with these rules safely transports expert testimony from a place of uncertainty to a space where truth is possible.[34] After the judge has performed her gatekeeping functions and initiated the testimony into the space of adjudication, the interpretive community can instrumentalise the expert's authority for its own purposes.[35]

As it is the case for text, all claims about technology derive from interpretation.[36] When I say that technology derives from interpretation, I do not strictly mean that learning about technology involves reading texts about technology, that these texts require interpretation and that interpreting them will in turn affect our understanding of technology. That much is true, but my position is more radical: what technology is and what it can do is a matter of interpretation. Similarly to the premises of reader-response theory, 'readers' do not extract or discover technological meaning from technologies, but create and maintain it through interpretation.

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[34] See also Desmond Manderson, "*Et Lex Pertura*: Dying Declarations & Mozart's Requiem" (1999) 20 Cardozo L Rev 1621 at 1625 ("the law protects its legitimacy as a system — not a system of truth but of belief, closed and therefore impenetrable to any interrogation. A formal legal system conceals its origins and values behind an insistence on procedural requirements and supposed 'bright-line rules.' It does so in order to render impossible any substantive challenge to its legitimacy by pretending to an objectivity which is mythic," at 1638).

[35] See also Sheila Jasanoff, "Law's Knowledge: Science for Justice in Legal Settings" (2005) 95 *American Journal of Public Health* S49 at S50.

[36] See Keith Grint & Steve Woolgar, *The Machine at Work: Technology, Work and Organization* (Malden: Blackwell Publishers, 1997) at 32, 70; Keith Grint & Steve Woolgar, "Computers, Guns, and Roses: What's Social about Being Shot?" (1992) 17 *Science, Technology, & Human Values* 366 [Keith & Woolgar, "Computers, Guns"]; Steve Woolgar & Keith Grint, "Computers and the Transformation of Social Analysis" (1991) 16 *Science, Technology, & Human Values* 368 at 370, 374 [Woolgar & Grint, "Computers and Transformation"]; Steve Woolgar, "The Turn to Technology in Social Studies of Science" (1991) 16 *Science, Technology, & Human Values* 20 at 37-43 [Woolgar, "Turn to Technology"].

No technology is self-explanatory. As the interpreter always stands between technology and its meaning, there is no room for dissociated understanding.[37] The interpretation of technology is always made from a particular perspective. For example, having described the properties and capacities of digital surveillance technology, Arthur Cockfield argues that the jurist should "first [ask] whether the technology change has unduly subverted interests (such as privacy) that the law traditionally has protected. If the answer is 'yes', then creative legal policy responses … are called for to protect these interests."[38] However, it is my contention that the work of the analyst extends further. Legal analysis never begins with determining whether a technology "has unduly subverted interests that the law traditionally has protected" or any other question of the sort. Legal analysis begins with the analyst interpreting technology in real time, as she perceives it.

I can illustrate this point again with Cockfield's description of digital surveillance technology. Below, the author makes extensive uses of phrases such as "personal information," "sensitive information," "state scrutiny," "personal identity," "highly detailed information," and "surreptitious manner." I would argue that a legal agent would use these phrases because the interpretive strategies she employs lead her to interpret technology in relation to a concern central to her community, in this case, privacy:

> [T]he digitisation of personal information, combined with information networks and other emerging technologies, greatly increases the amount and detail of personal information subject to potential or actual state scrutiny.
>
> First, recent technological innovations facilitate the collection, use and disclosure of personal information that has been rendered into a digital format. Other highly sensitive forms of personal information, such as genetic identity via DNA samples, increasingly are collected and stored in databases by state agents, creating potential mistakes, tampering, outside access and so on.

[37] See Woolgar & Grint, "Computers and Transformation", *supra* note 36 at 374; Woolgar, "Turn to Technology", *supra* note 36 at 25, 32.

[38] Andrew J Cockfield, "Surveillance as Law" (2011) 20 Griffith L Rev 795 at 805.

> Second, contemporary information and communications technology facilitates the aggregation of detailed personal information: the relatively low cost and ease of compiling digital information makes it possible for state agents to accumulate highly detailed information about personal identity in government databases. …
>
> Third, new technologies permit the state to gather information about suspects under the investigation in a more surreptitious manner. …
>
> Fourth, technology developments have enhanced the ability of the private sector to collect, use and disclose personal information about their current or potential customers, making an attractive potential source of information for state agents pursuing criminal/terrorist investigations.[39]

It seems indeed difficult, if not impossible, to describe surveillance technology without referring to at least some notion of privacy. Interpreted as such, digital surveillance technology can hardly do anything else but "[subvert] interests … that the law traditionally has protected." Legal analysis of technology always begins with interpretation, namely the construction of the object of analysis through legal lens. Thus, law being a practice — something people do — the first assumption of obsolescence (*law and technology are separate, but related*) cannot stand.

To be clear, Cockfield is not wrong for interpreting technology. Interpretation is the only way for anyone to understand technology. The mistake lies not in interpreting surveillance technologies in one way or another, but in believing that the interpreter is doing anything but.[40] I do not contend that this author betrays professional bias or that he should interpret digital surveillance technology differently. My point, rather, is that there is a disconnect between what Cockfield is doing, and what he says he is doing. An interpretation may seem objective, self-evident, and incontrovertible, but only when virtually no one contests it. Objectivity, self-evidence and incontrovertibility do not depend on fit or accuracy, but

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[39] *Ibid* at 803-05.
[40] See also Fish, *supra* note 15 at 167.

persuasiveness. They are social achievements.[41] What makes Cockfield's interpretation of digital surveillance technology persuasive is the fact that many if not most of us know of and value privacy.[42]

An interpretive approach to law and technology will not seek to ascertain which interpretation of technology is factually true or legally valid. It seeks instead to understand how interpretations are made and why some interpretations are more persuasive than others.[43] Interpretive communities seem to play a central role: interpretations of technology, agreements and disagreements about its meaning, and the stability of technology's properties and capabilities flow from the constraints interpretive communities impose on the availability and use of interpretive strategies.

Legal agents employ interpretive strategies to make sense of technology. In their communities, each of which have a sense of their own boundaries — purpose, purview, membership, etc. — part of creating technological meaning usually involves incorporating elements from other communities, including scientific elements. But when legal interpretive communities employ foreign strategies to make sense of technology, they do so on their own terms, with their own strategies and for their own purposes.

Certain clarifications are in order. First, as a postulate, the truth is not out there. The legal interpretation of technology does not taint understandings of technology with professional

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[41] See Woolgar, "Turn to Technology", *supra* note 36 at 32. See also Levinson, *supra* note 16 ("our dependence on words like "true," "objective," and "rational" belies an implicit foundationalism that is built into our culture and ourselves," at 1670)
[42] See also Robert W Gordon, "Critical Legal Histories" (1984) 36 Stan L Rev 57 ("it is just about impossible to describe any set of 'basic' social practices without describing the legal relations among the people involved — legal relations that don't simply condition how the people relate to each other but to an important extent define the constitutive terms of the relationship," at 103).
[43] *Ibid* at 41. See also

or ideological biases, but constructs technology through practice. Legal agents cannot ignore the constraints of interpretation flowing from their specific experience, needs, and context, and without these constraints they could not make sense of technology. Nothing makes sense in a vacuum. And while interpretation might not be a constant of the universe, it is a constant of the human condition. Neither do members of other interpretive communities use superior strategies to understand technology. Again, the mistake resides in thinking that describing technology is anything but an interpretive endeavour. Scholars must pay attention to how communities condition understandings of technology, including their own, as their members learn about technology from observation, experience, literature, other media and consultation with various experts.

As the reception of Fish's theory of reading shows,[44] an interpretive approach to the study of technology can suffer accusations of solipsism and relativism.[45] But neither accusation holds water. Since all interpretation derives from social convention, "readers and texts … *are* structures of constraint, at once components of and agents in the larger structure of a field of practices, practices that are the content of whatever 'rules' one might identify as

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[44] See for example Severora, *supra* note 22 ("Fish's theory of (legal) interpretation is unsatisfactory in its account of judicial interpretation because of its trivial view of the self; and that the existence of the unconscious, as one of the constituents of the 'self' engaged in the process, gives a better account of the practice of judicial interpretation," at 200); Dennis Patterson, "The Poverty of Interpretive Universalism: Toward the Reconstruction of Legal Theory" (1993) 72 Tex L Rev 1 (arguing that Ronald Dworkin and Stanley Fish's interpretive "view of the human condition is fundamentally mistaken. It is not by virtue of interpretation that we have a common world. Rather, we have a world in concert with others because we understand the manifold activities that constitute that world. Catching on to and participating in these activities — knowing *how* to act — is the essence of understanding," at 55); Frederick Crews, "Criticism Without Constraint" (1982) 73 *Commentary* 65 (more generally, "[i]f [reader-response theory] is accepted, meaning ceases to be a stable object of inquiry and one interpretation is as lacking in persuasiveness as any other. The inevitable corollary is that debates among critics are entirely pointless," at 65). But see Stanley E. Fish, "How Come You Do Me Like You Do? A Response to Dennis Patterson" (1994) 72 Tex L Rev 57.

[45] See for example Langdon Winner, "Upon Opening the Black Box and Finding It Empty: Social Constructivism and the Philosophy of Technology" (1993) 18 *Science, Technology & Human Values* 362 at 372-74.

belonging to the enterprise."[46] Legal agents cannot assign whatever property or capacity to technology that they see fit — this is one of the main results of the legal interpretation of technology. A lawyer cannot wish a soul-stealing camera into existence, precisely because her community forbids lending any credence to mystical interpretations of technology. After all and as Robert Gordon rightly observes, law's power lies "in its capacity to persuade people that the world described in its images and categories is the only attainable world in which a sane person would want to live."[47]

B. Instrumental technology and prescriptive law

Adherence to the instrumental theory of technology among legal agents results from legal interpretation. A popular theory of technology,[48] the two tenets of the instrumental theory — determinacy and neutrality — address some of the most pervasive concerns about technology, respectively, how it works and who controls it.[49] The theory favours optimism: even though we might reject technologies or their uses, technology as a whole can still support human wellbeing provided we have enough control over its use.[50] The instrumental theory's emphasis on control fits with tenets of legal prescriptivism. Legal agents focus on

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[46] Fish, *supra* note 21 at 1339.
[47] Gordon, *supra* note 42 at 109.
[48] See Arthur Cockfield & Jason Pridmore, "A Synthetic Theory of Law and Technology"(2007) 8 Minn JL Sci & Tech 475 at 479; Andrew Feenberg, *Critical Theory of Technology* (New York: Oxford University Press, 1991) at 5.
[49] See Mary Tiles & Hans Obierdek, *Living in a Technological Culture: Human Tools and Human Issues* (London: Routledge, 1995) at 13-14; *ibid* at 4. The cited literature uses the word rational instead of material. I prefer the latter as to distinguish it from cognitive models of technological development. See Wiebe E Bijker, "Sociohistorical Technology Studies" in Sheila Jasanoff, Gerald E Markle, James C Peterson & Trevor Pinch (eds), *Handbook of Science and Technology Studies*, rev ed (Thousand Oaks: Sage Publications, 1995) 229 at 239-41.
[50] See Tiles & Oberdiek, *supra* note 49 at 20, 30; Feenberg, *supra* note 48 at 5-6; Langdon Winner, *The Whale and the Reactor: A Search for Limits in an Age of High Technology* (Chicago: University of Chicago Press, 1989) at 5-6, 46.

the conjunction of prescriptions and capabilities (or lack thereof) because it allows them to control technology through legal subjects.

Indeed, if we believe "law is about externally-imposed rules and analogous normative statements,"[51] then depicting technology as capability-granting tools puts law to work as the solution to the problem of technology: law governs whoever controls technology. The compatibility of the instrumental theory and legal prescriptivism thus derives from a fundamental interpretive strategy within the legal community: assigning primacy to human agency.

Human agency is the cornerstone of both the instrumental theory and legal prescriptivism. The theory relies on the philosophical distinction between means and ends: upon determining the end one wishes to pursue, one rationally chooses the most adequate means to fulfill it. Doing so, the means–ends dichotomy affirms the primacy of agency from ends to means, and the neutrality of means in relation to the chosen ends. Many jurists are familiar with such metaphysics. The means–ends dichotomy supported the argument of leading positivist H.L.A. Hart and others that law, as a technical means, is sharply distinct from the moral and political ends it serves.[52]

In contrast, Lon Fuller remained quite sceptical of the means–ends dichotomy. He held that individuals define and select ends on the basis of available means.[53] While he conceded

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[51] Macdonald, *supra* note 8 at 390.
[52] See Pauline Westerman, "Means and Ends" in Willem J Witteveen & Wibren van der Burg (eds), *Rediscovering Fuller: Essays on Implicit Law and Institutional Design* (Amsterdam: Amsterdam University Press, 1999) 145 at 146.
[53] See generally Lon L Fuller, "Means and Ends" in Kenneth I Winston (ed), *The Principles of Social Order: Selected Essays by Lon L Fuller* (Durham: Duke University, 1981) 47 at 56-62. See also Lon L Fuller, *The Morality of Law*, rev ed (New Haven: Yale University Press, 1969) ("in a legal system, and in the institutional forms of society generally, what is means from one point of view is end from another … means and ends stand in a relation of pervasive interaction," at 197) [Fuller, *Morality of Law*].

that law could fulfill a wide variety of substantive ends, Fuller underlined agency as a core component of the morality of law. Law, he argued,

> cannot be neutral in its view of man himself. To embark on the enterprise of subjecting human conduct to the governance of rules involves of necessity a commitment to the view that man is, or can become, a responsible agent, capable of understanding and following rules, and answerable for his defaults.[54]

While I would not consider Fuller a prescriptivist, the precept of legal prescriptivism would indeed fail should individuals lack the capacity to understand rules and to follow them on their own accord.

Law and technology practice is based on complementary conceptions of law and technology. Legal interpretation favours the instrumental theory of technology because its metaphysics provide law with the practical necessity of agency. The theory shifts action from the technology to its user, whose agency requires law's discipline. By addressing the problem of control, legal prescriptivism makes sure technology delivers on its promise of a comfortable present and a better future, and preserves the optimism of the instrumental theory. Thanks to the complementarity of instrumental theory and legal prescriptivism, rules and technologies may conflict, but law and technology never do.

In this section I track the above complementarity to its breaking point. In light of the implications of instrumental theory, technology does not raise a legal challenge, but rather a political one — except when technology endangers not merely the prescriptions of law, but law itself. My discussion successively analyses the jurisprudence of Rudolph Von Jhering, the principle of technological neutrality and the political theology of Carl Schmitt. The jurisprudence of Jhering offers a complementary understanding of law and technology

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[54] *Ibid* at 162. See also Pierre Schlag, "Law as the Continuation of God by Other Means" (1997) 85 Cal L Rev 427 at 434-36.

founded in classical physics and philosophical dualism. Technological neutrality illustrates the tension between the absence of a legal challenge and the legitimacy of a political one. Finally, behold the Anti-Law and despair.

1. Objective means to subjecting ends

German jurist Rudolph von Jhering pioneered modern legal theory and jurisprudence.[55] He criticized his contemporaries for focusing on legal questions of little practical application and rejected a metaphysical science of law in favour of a jurisprudence that aimed to improve the effectiveness of law.[56] To do so, Jhering developed an evolutionary functionalist conception of law, and initiated the movement of sociological jurisprudence that brought fame to the likes of Roscoe Pound and H.L.A. Hart.

Jhering's adaptable work supports a wide variety of intellectual projects,[57] but Jhering never specifically addressed technology in his writings other than on a figurative level. However, his jurisprudence directly and explicitly originates from philosophical foundations that perfectly fit the two main tenets of the instrumental theory, respectively, neutrality and determinacy.[58] Jhering's work shows how the metaphysics of the instrumental theory fit the requirements of legal prescriptivism. These metaphysics, in turn, inform the legal interpretation of technology.

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[55] See Elise Nalbadian, "Introductory Concepts on Sociological Jurisprudence: Jhering, Durkheim, Ehrlich" (2010) 4 Mizan L Rev 348 at 349; William Seagle, "Rudolf von Jhering" (1945) 13 U Chi L Rev 71 at 71.
[56] See Roger Berkowitz, "From Justice to Justification: An Alternative Genealogy of Positive Law" (2011) 1 UC Irvine L Rev 611 at 627; Seagle, *supra* note 55 at 71-73.
[57] See Iredell Jenkins, "Rudolph von Jhering" (1960) 14 Vand L Rev 169 ("the impact of Jhering was greater than that of many men of commensurate stature because he was such a many-sided thinker; he himself absorbed many influences and held them in unstable solution, so he in turn influenced diverse movements which had little else in common," at 169-70); Seagle, *supra* note 55 at 86.
[58] See Jenkins, *supra* note 57 ("Jhering was the typical German professor at least to the extent of evolving his extremely practical theory from a purely philosophical conception," at 83).

According to Jhering, the world obeys two fundamental laws. Both of these laws derive from a Cartesian dualism of mind and matter, and a clockwork conception of nature. While the law of causality governs nature — "[*n*]*o effect without a cause*"[59] — the law of purpose governs will — "*no volition … without purpose*."[60] In nature every effect mechanically derives from an antecedent cause, while in will every action psychologically results from an antecedent purpose.[61] Will requires the co-operation of nature to realize its purpose. Quenching thirst, for example, depends on the availability of drinkable water.[62] And yet we still dominate nature since "every human will is a source of causality to the external world."[63] Human action triggers effects in a natural world bound by the law of causality. While nature can affect the body, nature "must obey the will whenever it so desires."[64] The fulfillment of human ends may depend on available means, but the means exist in relation to human purpose. Water does not subordinate the thirsty individual. Rather, the thirsty individual assigns 'drinkability' to water and subordinates it to her will by drinking. Purpose, therefore, governs both will and nature.[65]

Jhering's representation of the world would place technology in the realm of nature. While the materialization of purpose depends on the cooperation of natural laws, such cooperation occurs thanks to "the right knowledge and application of these laws … [Nature] carries out

[59] Rudolph von Jhering, *Law as a Means to an End*, translated by Isaac Husik (Boston: Boston Book Co, 1913) at 2.
[60] *Ibid*.
[61] *Ibid* at 2-3, 7-9.
[62] *Ibid* at 16.
[63] *Ibid* at 17.
[64] *Ibid.*
[65] *Ibid* 16-17 ("life is the practical application, by way of purpose, of the external world to one's existence," at 6).

all our orders without refusal, provided these have been given in the right manner."[66] This quote could not better capture the determinacy and neutrality of technology: technologies serve their users as long as their users operate them correctly. Jhering would likely agree with modern and prevalent definitions of technology as the "human modification of the environment for a useful purpose,"[67] "the understanding of and ability to employ, manipulate, alter the physical/human environment and the products of that understanding,"[68] or as "a design for instrumental action that reduces the uncertainty in the cause-effect relationships involved in achieving a desired outcome."[69]

While technologies conflict with rules, legal prescriptivism and instrumental theory keep the peace between law and technology. Legal prescriptivism portrays law as "externally-imposed rules and analogous normative statements,"[70] and focuses on whether, how and why these rules coerce legal subjects.[71] As for the instrumental theory, by submitting technology to human will, it prevents technologies from interfering with decisions to obey or disobey the law. The instrumental theory and legal prescriptivism reconcile technology use to the rule of law.

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[66] *Ibid* at 16. See also Tiles & Obierdek, *supra* note 49 at 31 (knowledge of nature allows to free oneself from nature).

[67] Arthur J Cockfield, "Towards a Law and Technology Theory" (2004) 30 Man LJ 383 at 384. See also Bert-Jaap Koops, "Ten Dimensions of Technology Regulation" in Morag Goodwin, Bert-Jaap Koops & Ronald Leenes (eds), *Dimensions of Technology Regulation: Conference Proceedings of TILTing Perspectives on Regulating Technology* (Nijmegen: Wolf Legal Publishers, 2010) 309 (defining technologies as "the broad range of tools and crafts that people use to change or adapt to their environment," at 310).

[68] Julia Black, "Decentring Regulation: Understanding the Role of Regulation and Self-Regulation in a 'Post-Regulatory' World" (2010) 54 CLP 103 at 137.

[69] Everett M Rogers, *Diffusion of Innovations*, 5th ed (New York: London, 2003) at 13.

[70] Roderick A Macdonald, "Unitary Law Re-form, Pluralistic Law Re-Substance: Illuminating " (2007) 67 La L Rev 1113 at 1118.

[71] See Roderick A Macdonald & David Sandomierski, "Against Nomopolies" (2006) 57 N Ir Legal Q 610 at 623; Jhering, *supra* note 59 ("[a]ll such imperatives whether concrete or abstract are legally binding on him to whom they are directed; he who does not observe them sets himself in opposition to the law," at 252).

Unsurprisingly, the instrumental theory is predominant in legal practice. The neutrality of technology supports attributing liability to technology users when they harm others through technology use. For examples, while the defects of early automobiles caused many accidents, "the definite tendency [in American tort law] was to assign fault to the user, rather than engage in a probing review of the technology." [72] Shifting responsibility from one user to another, e.g. from the driver to the manufacturer, would again derive from an instrumental theory that resists conceiving technology as inherently harmful.

Consider Quebec's no-fault regime for automobile accidents causing bodily injury or death. The *Automobile Insurance Act* suspends the application of Quebec's ordinary civil liability rules for automobile accidents and establishes a public insurance scheme. [73] However, despite the law explicitly stipulating that victims of car accidents should be compensated "regardless of who is at fault," [74] lawmakers still find ways to deny compensation when the victim uses her automobile in a deviant manner, for example to commit suicide.[75] The Supreme Court of Canada, despite its liberal interpretation of the phrase "automobile accident" under the *Act*,[76] still limits the its application to victims that

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[72] See Kyle Graham, "Of Frightened Horses and Autonomous Vehicles: Tort Law and Its Assimilation of Innovations" (2012) 52 Santa Clara L Rev 1241 at 1261.

[73] RSQ, c A-25.

[74] *Ibid* s 5. See Thérèse Rousseau-Houle, "Le régime québécois d'assurance automobile, vingt ans après" (1998) 39 *Les Cahiers de Droit* 213 at 220-223.

[75] See Daniel Gardner, "L'interprétation de la portée de la Loi sur l'assurance automobile: un éternel recommencement" (2011) 52 *Les Cahiers de Droit* 167 at 186ff. See for example *LS (Sucession de) v Société de l'assurance automobile du Québec*, 2008 QCTAQ 09694 ("[*d*]*étourner un véhicule de son utilisation normale, comme le font certaines personnes désireuses de mettre fin à leur jours, lui fait perdre sa nature d'automobile au sens de la loi,*" at 187). But see *DD v Société de l'assurance automobile du Québec*, 2009 QCTAQ 11340 para. 51-53 (finding that whether the victim willingly committed the act that led to bodily injury or death is irrelevant to the application of the Act).

[76] *Automobile Insurance Act*, *supra* note 73 (the Act defines 'accident' as "any event in which damage is caused by an automobile," art 1).

use the car "*as a vehicle*,"[77] i.e. for the purpose transportation. Lawmakers might find it less objectionable to allow the *Act* to compensate victims of accidents deriving from the deviant use of a car should lawmakers conceive this technology not instrumentally: as a societal phenomenon rather than a matter of individual choice.[78]

According to the instrumental theory, technology does not affect our ability to determine the ends worth pursuing, but merely extends our capacities to pursue them.[79] The decision to engage in car surfing remains fully my own. I should therefore remain accountable for this decision and not evade civil or criminal liability when something goes wrong, whether or not I used technology. Therein lies the complementarity: while prescriptivism assigns blame, the instrumental theory guarantees someone will be available to bear it. As the example of the *Automobile Insurance Act* illustrates, lawmakers have a hard time overcoming the philosophical assumption that "the purposes of things are nothing more than the purposes of the person by whom they are applied."[80]

Technology belongs to nature not only because it obeys will, but also because it embodies natural knowledge. Instrumental theory portrays technology as the rational application of knowledge obtained from natural sciences.[81] Failing to acquire and apply accurate knowledge will result in technological failure.[82] Technology embodies logical, objective and universal truths that "maintain their cognitive status in every conceivable social

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[77] *Westmount (City) v. Rossy*, 2012 SCC 30, [2012] 2 SCR 136, at para. 52 (LeBel J). See also *Affaires sociales — 389*, [2000] TAQ 33 ("[*l'*]*automobile doit être utilisée pour les fins auxquelles elle est destinée, c'est-à-dire le transport d'un lieu à l'autre,*" at para. 6).
[78] See Gardner, *supra* note 75 at 194.
[79] See Moses, *supra* note 3 (on "the capacity of new technology to enable new forms of conduct, including alteration of the means by which similar ends are achieved," at 245).
[80] Jhering, *supra* note 59 at 53.
[81] See Tiles & Oberdiek, *supra* note 49 at 29.
[82] Jhering, *supra* note 59 ("if the bullet falls to the ground before it reaches the goal, this fact proves that the person shooting took less powder than nature demanded to carry the bullet to the goal," at 16).

context."[83] Existing autonomously from its users, technology serves them without adopting their biases and interests.

Focusing on technological change neglects a fundamental premise of the instrumental theory: being determinate, technology persists. It seems hardly possible to conceive of technology transfer, for example, without assuming that the properties and capacities of technologies persist in different contexts. Analysts often problematize the matter as setting up effective, low-cost and fair channels of technology transfer, and adapting the new context to maximize the efficiency of the transplanted technology.[84] The formulaic problem of technology transfer portrays the context in which a technology is used as an independent variable, its performance as a dependent one, but the technology itself remains a constant.

While the topic of technology transfer expanded from international development to the commercialization of academic research, much of the literature remains focused on the same determinants.[85] Even the most critical strand of literature still focuses on institutional contamination and vocational integrity, assuming that technology persists despite

[83] Feenberg, *supra* note 48 at 6. See also Tiles & Oberdiek, *supra* note 49 at 29.

[84] See for example Keith E Maskus, "The Role of Intellectual Property Rights in Encouraging Foreign Direct Investment and Technology Transfer" (1998) 9 Duke J Comp & Int'l L 109 (focusing on the role of intellectual property rights in attracting foreign direct investments and technology); Wesley Shrum & Yehouda Shenhav, "Science and technology in Less Developed Countries" in Sheila Jasanoff, Gerald E Markle, James C Petersen & Trevor Pinch (eds), *supra* note 49, 627 at 635-38 (reviewing literature on technology transfer from developed countries to least developed countries); John H Barton, "Technology Transfer and LDC's: A Proposal for a Preferential Patent System" (1971) 6 Stan J Int'l Stud 27 (recommending that least developed countries should enact only a highly modified patent system that aims strictly at pricing technologies and encouraging domestic innovation).

[85] See generally Samuel Trosow, Michael B McNally, Laura E Briggs, Cameron Hoffman & Cassandra D Ball, *Technology Transfer and Innovation Policy at Canadian Universities: Opportunities and Social Costs*, FIMS Library and Information Science Publications, Paper 23, 2012; Canada, *Innovation Canada: A Call to Action* (Ottawa: Public Works and Government Services, 2011) at 76; Jennifer L Croissant & Laurel Smith-Doerr, "Organizational Contexts of Science: Boundaries and Relationships between University and Industry" in Edward J Hackett, Olga Amsterdamska, Michael Lynch & Judy Wajcman (eds), *The Handbook of Science and Technology Studies* (Cambridge, The MIT Press, 2008) 691.

contextual change.[86] Determinacy and neutrality thus coalesce into a rather optimistic view of technology transfer. In 1949, President Harry Truman invited his fellow Americans and international allies to realize peace and prosperity by "[making] available to peace-loving peoples the benefits of our store of technical knowledge in order to help them realize their aspirations for a better life."[87] Like law,[88] technology can address societal needs and steer society along the predetermined path to progress.

Thanks to the complementarity of the instrumental theory and legal prescriptivism, an individual cannot avoid the authority of law by blaming technology for her actions, and she can adapt her use of technology to conform to legal prescriptions. Keeping law and technology fundamentally distinct — will and nature, purpose and causality — preserves technology's aura of objective and universal determinacy, free from the ethical and political contingencies of law. Legal practice, in turn, instrumentalises the determinacy of technology to pursue ends of its own.

2. The challenge of technology

The instrumental theory assigns responsibility for technologies' benefits and inconveniences to technology users. It guarantees that technologies are the means to our ends, that our technological future rests firmly within our grasp, and that we will prevail or fail on our own accord. As a result, law must step in to govern technology users.

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[86] See for example Brett Frischmann, "The Pull of Patents" (2009) 77 Fordham L Rev 2159 (using micro-economic analysis to project how commercialization of academic research would change the inner infrastructure of universities); Mark Lemley, "Are Universities Patent Trolls?" (2008) 18 Fordham Intel Prop Media & Ent LJ 611 at 625.

[87] Harry Truman, *Inaugural Address*, Washington DC, 20 January 1949, available online at: http://www.trumanlibrary.org/whistlestop/50yr_archive/inagural20jan1949.htm (consulted on 11 August 2015, emphasis added).

[88] That is, under an evolutionary–functionalist conception of law (see Gordon, *supra* note 42 at 59-63).

Technology, as depicted by the instrumental theory, does not interfere with the coercion of will through law, nor does it obstruct the administration of justice.

While the theory poses a significant political challenge to lawmakers, it does not require law to change its own nature or let go of its fundamental precepts. It only puts emphasis on the effective use of law, its organization, and the allocation and management of resources for the administration of law. Legal agents adopt the instrumental theory of technology because they see the world through legal prescriptivism. I will continue to use the work of Jhering to examine the legal interpretation of technology, to which I add the principle of technology neutrality as one of the more recent manifestations of the complementarity of instrumental theory and legal prescriptivism.

Not to be confused with the neutrality of technology (the assumption that technologies have no end in themselves and instead serve the ends of their user), the principle of technology neutrality broadly holds that law "can and should be developed in such a way that [it is] independent of any particular technology."[89] Also known as 'technological neutrality' or 'media neutrality', [90] technology neutrality achieved legitimacy and international popularity despite its ambiguity:[91] beyond its basic proposition, the principle splinters into

[89] Carys J Craig, "Technological Neutrality: (Pre)Serving the Purposes of Copyright Law" in Michael Geist (ed.), *The Copyright Pentology* (Ottawa: University of Ottawa Press, 2013) 271 at 272.
[90] See Vincent Gautrais, *Neutralité technologique: rédaction et interprétation des lois face aux changements technologiques* (Montréal: Éditions Thémis, 2012) at 32-33 (while media and technological neutrality are often used interchangeably, as I will do here, the author warns that significant differences may subsist).
[91] See Cameron J Hutchison, "Technological Neutrality Explained & Applied to CBC v SODRAC" (2015) 13 Can J L & Tech 101 at 101; Gautrais, *supra* note 90 at 1-2, 42-50; Chris Reed, "Taking Sides on Technology Neutrality" (2007) 4 *SCRIPT-ed* 263 ("consensus among legislators seems to have developed in an almost complete absence of any clear understanding what the term 'technology neutrality' might actually mean," at 265).

a number of meanings.[92] And although some have expressed doubts about its utility,[93] the principle has made its way into case law,[94] legislation[95] and international treaties without much debate.[96]

Vincent Gautrais notes three approaches to technological neutrality. Under the first approach, 'indifference', lawmakers should avoid mentioning specific technologies. Under the second, 'non-discrimination', lawmakers should avoid favouring one technology over others. Under the third, 'consistency', lawmakers should maintain the effect of law from

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[92] See Bert-Jaap Koops, "Shoult ICT Regulation Be Technology-Neutral?" in Bert-Jaap Koops, Miriam Lips, Corien Prins & Maurice Schellekens (eds), *Starting Points for ICT Regulation: Deconstructing Prevalent Policy One-Liners* (The Hague: TMC Asser Press, 2006) 77 at 83-90 (identifying no less than seven distinct meanings for technology neutrality).

[93] Gautrais, *supra* note 90 at 44-49; Gregory R Hagen, "Technological Neutrality in Canadian Copyright Law" in Michael Geist (ed.), *supra* note 89, 307 at 310-13; Lyria B Moses, "Creating Parallels in the Regulation of Content: Moving from Offline to Online" (2010) 33 UNSWLJ 581 at 592-93; Paul Ohm, "The Argument Against Technology-Neutral Surveillance Laws" (2010) 88 Tex L Rev 1685 at 1691-94; Reed, *supra* note at 275-82.

[94] See for example *Canadian Broadcasting Corp v SODRAC 2003 Inc*, 2015 SCC 57 [*CBC*]; *Entertainment Software Association v SOCAN*, 2012 SCC 34, [2012] 2 SCR 231 at 239 [*ESA*]; *Rogers Communications Inc v SOCAN*, 2012 SCC 35, [2012] 2 SCR 283 at 305-07 [*Rogers*]; *SOCAN v Bell Canada*, 2012 SCC 36, [2012] 2 SCR 326 (Abella J: "technological neutrality … seeks to have the *Copyright Act* applied in a way that operates consistently, regardless of the form of media involved, or its technological sophistication," at 342) [*Bell*]; *Robertson v Thomson Corp*, 2006 SCC 43, [2006] 2 SCR 363 at 382-83 [*Robertson*].

[95] See CCQ (under the title "Media for writings and technological neutrality:" "[a] writing is a means of proof whatever the medium, unless the use of a specific medium of technology is required by law. Where a writing is in a medium that is based on information technology, the writing is referred to as a technology-based document within the meaning of the Act to establish a legal framework for information technology," art 2837). See also Code civil ("L'écrit sous forme électronique est admis en preuve au même titre que l'écrit sur support papier, sous réserve que puisse être dûment identifiée la personne dont il émane et qu'il soit établi et conservé dans des conditions de nature à en garantir l'intégrité," art 1316-1).

[96] *United States Convention on the Use of Electronic Communications in International Contracts*, United Nations, New York, 2007, available online at: http://www.uncitral.org/pdf/english/texts/electcom/06-57452_Ebook.pdf (consulted on 18 August 2015) ("[*b*]*eing of the opinion* that uniform rules should respect the freedom of parties to choose appropriate media and technologies, taking account of the principles of technological neutrality and functional equivalence, to the extent that the means chosen by the parties comply with the purpose of the relevant rules of law").

one technology to another.[97] Between *Robertson v Thomson*[98] in 2006 and *CBC v SODRAC*[99] in 2015, the Supreme Court of Canada tried all three.[100]

a. Where there is a will

If all technology users are free to choose their own purpose, how can we expect them to pursue beneficial ends? According to Jhering, nature and society intervene in the formation of purpose through levers enticing will towards the common good: pleasure and pain (nature), and rewards and coercion (society).[101] Coercion, of which law and state constitute the highest forms, realize one's purpose "by means of mastering another's will."[102] Law coerces action through rules that compel conduct: "[e]very norm contains a conditioned imperative, and consists therefore always of the two elements, the *conditioning* (presuppositions, facts of the case) and the *conditioned* (imperative). A norm can therefore always be rendered by the formula, if… then."[103] Having no power over nature, law has conduct for its object and will for its subject.[104]

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[97] Gautrais, *supra* note 90 at 32-36. See also Hutchison, *supra* note 91 at 109-10.
[98] *Robertson*, *supra* note 94.
[99] *CBC*, *supra* note 94.
[100] I doubt that this variety of opinion over technology neutrality results from incomprehension on the part of the justices of the Court. The failure to resolve the ambiguity of technology neutrality could result from compromises made through the Court's shared decision-making process, a process Justice Abella once compared to "having eight husbands" (see Beverley McLachlin, Andromache Karakatsanis & Michael J Moldaver, "Supreme Court Appointments: The Honourable Justice Michael J Moldaver and the Honourable Justice Andromache Karakatsanis" (2011) 43 Ottawa L Rev 125 at 132).
[101] Jhering, *supra* note 59 at 25. The levers of pleasure and pain ensure self-preservation and propagation (*ibid* at 25ff, 72-73). Commerce, for its part, manages the creation and distribution of rewards by "*connecting one's purpose with the interest of another*" (*ibid* at 28). Jhering also evokes the altruistic levers of duty and love, but failed to cover them in a promised, yet not delivered volume.
[102] *Ibid* at 176.
[103] *Ibid* at 262 (Jhering also takes into account legal rules that seem not, at first glance, to issue any imperative for human conduct, at 250-51).
[104] *Ibid* at 250-51 ("[t]he law has power only over man, not over nature," at 337). See also Hans Kelsen, *Introduction to the Problems of Legal Theory: A Translation of the First Edition of the Reine Rechtslehre or Pure Theory of Law*, translated by Bonnie L Paulson & Stanley L Paulson (Oxford: Clarendon, 1996) at 29.

While technology pays no attention to law, law reaches technology by coercing the will of technology users. Legal rules cannot compel harmfulness out of guns, but the *Criminal Code* of Canada can forbid gun users to carry such a weapon "for a purpose dangerous to the public peace or for the purpose of committing an offence."[105] Legal interpretation tailors technology to law's proclivities. Assuming technologies serve no end but the purpose of their users and that the law coerces nothing but legal subjects, technologies do not present a challenge to law as long as technology users remain legal subjects.

Some may find that I dispense with this challenge in a cavalier manner: is it not technology that raises problem in any of the previous chapter's standard cases?[106] It could, if legal agents did not explain technology away by shifting the focus onto technology users. The instrumental theory does not present law with an impossible challenge, nor does it require law to change its nature. It only demands that law does what it does best (according to legal prescriptivism): compelling the will of technology users by formulating and enforcing rules of conduct. One can hardly find a better match.

Consider the first approach to technological neutrality, indifference, as per *Robertson v Thomson* (*Robertson*). *Robertson* was a class action of freelance authors against newspapers publishers. The publishers had created a database of articles published in physical newspapers, including pieces written by freelancers who had not consented to this subsequent use. The case raised the issue of determining whether the publishers had unlawfully reproduced newspapers or individual articles. Providing the former, publishers had not infringed on the freelancers' copyright: they held copyright over the newspapers

[105] *Criminal Code*, RSC, 1985, c C-46 s 88(1).
[106] See Sub-Section II.A.1.

as collective works, and could therefore freely reproduce a substantial part of them. Providing the latter, the publishers had infringed upon the freelancers' copyright over their individual articles.

The majority found in favour of the freelancers, ruling that storing their articles onto the databases withdrew them from collective works where they initially appeared. As a result, publishers could not escape liability on the basis of their own copyright over the collective works.[107] Writing for the majority, justices LeBel and Fish took note that the *Copyright Act*[108] was indifferent to technology when it came to establishing copyright:

> Media neutrality is reflected in s. 3(1) of the *Copyright Act* which describes a right to produce or reproduce a work "in any material form whatever". Media neutrality means that the *Copyright Act* should continue to apply in different media, including more advanced ones. But it does not mean that once a work is converted into electronic data anything can then be done with it. The resulting work must still conform to the exigencies of the *Copyright Act*. Media neutrality is not a licence to override the rights of authors — it exists to protect the rights of authors and others as technology evolves.[109]

Technological neutrality posits that, when appropriate, legal rules can sustain technological change by remaining indifferent to it: the law's primary interest is in technology users — their purposes and their conduct — not technology.[110]

However, sustainability through indifference does not limit itself to law and technology. It derives from a principle that legal norms should be drafted in general terms. Lon Fuller did warn against "introducing such frequent changes in the rules that the subject cannot orient his action by them."[111] When Jean-Marie-Étienne Portalis provided the same advice more

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[107] *Robertson*, *supra* note 94 at 378-79.
[108] *Copyright Act*, RSC, 1985, c C-42.
[109] *Ibid* at 382-83 (LeBel & Fish JJ).
[110] See Hutchison, *supra* note 91 at 110-13; Craig, *supra* note 89 at 281 (designating the majority's approach to technological neutrality 'minimalist'). See also Hagen, *supra* note 93 at 324; Koops, *supra* note 92 at 83-84.
[111] Fuller, *Morality of Law*, *supra* note 53 at 39. See also Gautrais, *supra* note 90 at 192-200.

than two hundred years ago, he did not do so to overcome technological change, at least not primarily. The generality of the statute, or of other legal norms, exists not on account of technological change, but of restless men and women:

> [H]ow does one bind the action of time? How to go against the course of the events, or the imperceptible inclination of morals? How to know and calculate in advance what experience alone can reveal? Can foresight ever extend to things beyond the reach of thought?
>
> A code, however complete it may seem, is no sooner finished than thousands of unexpected questions present themselves to the magistrate. For these laws, once drafted, remain as written. Men, on the other hand, never rest. They are always moving; and this movement, which never ceases and whose effects are variously modified by circumstances, continually produces some new fact, some new outcome.
>
> …
>
> The function of the statute is to set down, in broad terms, the general maxims of the law, to establish principles rich in consequences, and not to deal with the particulars of the questions that may arise on every subject.[112]

While Portalis did not "live in a time of profound technological change and innovation,"[113] neither do today's legal agents. Not that the latter deny technological change, but that technology has limited significance in comparison to the conduct of individuals presumed to have agency over technology. Technology neutrality as indifference maintains legal practice in spite of technological change.

Obsolescence encourages us to see only the latest technological developments (*only new technology is worthy of attention*), but to paraphrase a well-known saying: most legal agents have little concern for most technologies most of the time. And yet, my assertion that technology signifies less for legal agents than it might for others is nothing new. If distinguishing what matters from what does not is all that legal interpretation of technology

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[112] Jean-Étienne-Marie Portalis, Preliminary Address on the First Draft of the Civil Code, available online at: http://www.justice.gc.ca/eng/abt-apd/icg-gci/code/index.html (21 August 2015).

[113] *R v Fearon*, 2014 SCC 77, [2014] 3 SRC 621 at 667 (Karakatsanis J).

can do, it has little to offer. Technology neutrality as non-discrimination, which engages with the function of technologies, might prove more impactful.

b. Technology as a medium of justice

Technology neutrality as non-discrimination aspires to formal justice between technology users. Writing for the minority in *Robertson*, Justice Abella adopted this second approach when she affirmed "[i]f [technology] neutrality is to have any meaning, it must permit the publishers to convert their daily print edition into electronic form."[114] For Justice Abella, placing the newspapers into databases constituted a different means to the same end: the newspaper, in either electronic or physical form, exhibited the "skill and judgment of the newspaper's editors exercised in selecting and editing the articles."[115] Therefore, denying copyright in the new technology amounted to technological discrimination.[116]

As "a principle of action according to which beings of the same essential category must be treated in the same manner,"[117] formal justice implies that subjects that deserve similar treatment share a common identity.[118] Technology neutrality establishes this common identity through technology: by treating like technologies alike, lawmakers can treat like

[114] *Robertson*, *supra* note 94 at 393 (Abella J).
[115] *Ibid* at 394-95.
[116] See *ibid* at 393-95 (Abella J: "there is no reason why the nature of the database in which the electronic editions are housed should change the designation and character of those editions," at 395). See also *Rogers*, *supra* note 93 at 307; Craig, *supra* note 89 at 282.
[117] Chaïm Perelman, *Éthique et droit* (Bruxelles: Éditions de l'Université de Bruxelles, 1990) at 30 (translation mine). See also Jhering, *supra* note 59 (formal justice aims to establish "*uniformity* in the application of the norm to all cases when it is once established," and is as such "[t]he problem of the judge," at 275).
[118] Perelman, *supra* note 117 at 28-29.

users alike. Lawmakers have relied on different methods to determine the likeness of technologies,[119] but increasingly turn towards functional equivalence.[120]

Functional equivalence consists in determining the finality of a legal rule and then "[analogizing] between a known technology (that falls within the rule) and a new one (that we are not sure about) to see if they perform the same function, notwithstanding their obvious differences."[121] It relies on explicit knowledge about both technologies, but also and especially on familiarity, practical logic and experience. In that context, while function seems to be an inherent attribute of technology, it is rather a proxy of the common identity formal justice requires.[122]

It is nonsensical, from within the instrumental theory, to affirm that non-discrimination achieves formal justice between technologies rather than between their users. As they only serve the purposes of their users, technologies have no function: their determinacy only privileges some uses over others in the eyes of some users rather than others. Function

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[119] The analogical approach is a longstanding one (see Gautrais, *supra* note 90 at 107; W Tim Murphy, "The Oldest Social Science? The Epistemic Properties of the Common Law Traditions" (1991) 54 Mod L Rev 182 at 198), but some commentators doubt its utility in the context of law and technology: concerns that initially motivated the enactment of the legal rule governing the baseline may not apply to the new one, and analogies can serve distinct privileges over others — both limitations can result in inadequate conclusions (see for example Gautrais, *supra* note 90 at 107-11; Gregory N Mandel, "History Lessons for a General Theory of Law and Technology" (2007) 8 Minn JL Sci & Tech 551 at 553-63). These limitations are hardly specific to technology, however, and without denying them I would not even consider them more prominent in the context of law and technology — they may only seem more apparent or critical to those who disagree with the analogy operated and the result it produces.

[120] Craig, *supra* note 89 ("functional equivalent technologies should generally attract similar treatment," at 275). See also Hagen, *supra* note 93 at 317; Moses, *supra* note 3 ("technological neutrality … is about ensuring that only relevant differences result in different treatment," at 271).

[121] Hutchison, *supra* note 91 at 115. See also Gautrais, *supra* note 90 at 77-79. There is a degree of confusion between technology neutrality and functional equivalence. Technology neutrality attempts to define good lawmaking in the context of technological change. What constitutes 'good' lawmaking varies from one approach to another. Functional equivalence refers more specifically to the characteristics of techniques that matter the most for legal purposes, i.e. 'functions'. Functional equivalence can thus support all three approaches of technology neutrality I have enumerated here, and assist in realizing their aims.

[122] See Gautrais, *supra* note 90 at 105-06 (arguing that insistence on function and finality makes functional equivalence a variant of teleological interpretation).

results from the projection of human will onto the determinacy of technology. When legal agents establish function, they speculate on the purposes of legal subjects through the intermediary of technologies, and attribute the result of such speculation onto the technologies themselves.

Legal prescriptivism relies on the metaphysics of instrumental theory. To ensure technology never exceeds the capacities of law, legal agents interpret agency into technology. Function enables prescriptivists to visualize legal subjects through technology and subject their visualized conduct to the governance of rules.[123] The function of a technology represents the latent purpose of an average user: a generalized capability for action.

If it were not for the determinacy of technology, lawmakers would be confronted with technology users' infinite variety of ends. In such circumstances, the law could not formulate general imperatives, nor could it conceive a common identity between technology users. Because technology persists, it provides a channel for formal justice: once legal agents have attributed a function to one or more technologies, the latter will carry such function with enough stability to enable general legal rules and formal justice among all their users. Assigning a capability to a technology via its function makes the associated conduct ripe for regulation. In turn, the focus on function makes the regulation opposable to all of the technology users.

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[123] See also Hannah Arendt, "Reflections on Violence" (1969) *New York Review of Books*, online: http://www.nybooks.com/articles/archives/1969/feb/27/a-special-supplement-reflections-on-violence/ ("[s]ince the end of human action, in contrast with the products of fabrication, can never be reliably predicted, the means used to achieve political goals are more often than not of greater relevance to the future world than the intended goals") (29 August 2015).

c. Agree to disagree about technology neutrality

According to the last of the three approaches to technology neutrality, consistency, the consequences of applying the law should remain the same despite technological change.[124] Consistency provoked much debate among the members of the Supreme Court of Canada. This approach first surfaced in *ESA v SOCAN*[125] (*ESA*), a five-to-four decision pronounced in 2012. Shortly after the ruling, Justice Pelletier of the Federal Court of Appeal, confronted with a case tightly intertwined with the principle, complained that the Court's decisions presented so many different conceptions of technology neutrality that it failed to provide sufficient guidance on the matter.[126] The Supreme Court of Canada would clarify its views in the appeal of Justice Pelletier's decision in *Canadian Broadcasting Corporation v SODRAC 2003 Inc.* [127] (*CBC*), only three years later.

The composition of the Court changed dramatically between *Robertson* and *CBC*.[128] Justice Abella, dissenting in *Robertson*, wrote for the majority with Justice Moldaver in *ESA*, but in *CBC*, she was in dissent. Justices LeBel and Fish, who wrote for the majority in *Robertson*, sided with dissenting Justice Rothstein in *ESA*, who would write for the majority in *CBC*. Justice Deschamps, who stood among the majority in *Robertson*, sided with justices Abella and Moldaver in *ESA* along with Chief Justice McLachlin and Justice

[124] See Craig, *supra* note 89 ("the principle cannot perform this role effectively if conceived (or rhetorically invoked) as a limited principle of formal non-discrimination that merely justifies the extension of copyright's reach. Rather, I argue, it must be conceived in a functional sense, shaping copyright norms to produce a substantively equivalent effect across technologies, with a view to preserving the copyright balance in the digital realm," at 272); Hagen, *supra* note 93 ("whatever balance of benefits may be set by legislation, private actors may undermine that balance through their use of technology," at 309); Gautrais, *supra* note 90 at 34-36.
[125] *ESA*, *supra* note 94.
[126] See *Canadian Broadcasting Corporation v SODRAC 2003 Inc*, 2014 FCA 84 at para 34-40.
[127] *CBC*, *supra* note 94.
[128] By 2012, Justice Cromwell, Moldaver, and Karakatsanis had replaced Justices Bastarache, Binnie, and Charron. By 2015, Justices Wagner, Gascon, and Côté had replaced Justices Lebel, Fish, and Deschamps.

Karakatsanis. These changes allowed for technology neutrality as consistency to take hold, for a time. When the parties in *CBC* pleaded their case, six new judges had joined the bench since *Robertson*. Justices LeBel and Fish had left the Court, but a new majority joined Justice Rothstein, leaving justices Abella and Karakatsanis in the minority. As a result, the Court's take on technology neutrality lacks consistency.

ESA hinged on whether the transmission of a copyrighted work via the Internet constitutes a communication under the *Copyright Act*.[129] The appellants argued that equating the online delivery of video games to a communication within the *Act* establishes an inappropriate distinction between their physical and electronic distribution: it imposes a fee for musical works integrated in video games specific to online distribution.[130] Justices Abella and Moldaver agreed with the appellants and invalidated the decision of the Copyright Board, adopting the third approach to technology neutrality:

> In our view, the Board's conclusion that a separate, "communication" tariff applied to downloads of musical works violates the principle of technological neutrality, *which requires that the* Copyright Act *apply equally between traditional and more technologically advanced forms of the same media* … there is no practical difference between buying a durable copy of the work in a store, receiving a copy in the mail, or downloading an identical copy using the Internet. The Internet is simply a technological taxi that delivers a durable copy of the same work to the end user.[131]

As one author rightly noted,[132] the phrase "apply equally" signals the majority paid special attention to the consistency of the law's application, and sought to preserve the "traditional balance between authors and users … in the digital environment."[133] In dissent, Justice

[129] *Copyright Act*, *supra* note 108 (granting copyright holders the sole right "to communicate the work to the public by telecommunications," s 3(1)(f)).
[130] *ESA*, *supra* note 94 at 238-39, 255-58.
[131] *Ibid* at 239 (Abella & Moldaver JJ, emphasis added).
[132] Craig, *supra* note 89 at 283. See also Hagen, *supra* note 93 ("[t]he Supreme Court grounds the principle of technological neutrality in the principle of prescriptive parallelism," at 320).
[133] *ESA*, *supra* note 94 at 240 (Abella & Moldaver JJ). See also Craig, *supra* note 89 at 284.

Rothstein argued for the indifference and non-discrimination approaches, judging that the majority's application of technology neutrality exceeded the limits of the *Copyright Act*.[134]

Justice Rothstein rallied the Court to his side three years later in *CBC*. *CBC* pitted the Canadian Broadcasting Corporation (CBC), a producer and broadcaster of television programs against the Society for Reproduction Rights of Authors, Composers and Publishers in Canada (SODRAC), a collective society managing reproduction rights. The conflict arose when, during negotiations for a new reproduction license, SODRAC demanded a fee to cover copies created incidentally to broadcasting activities. These copies derive from the operation of digital content management systems used by broadcasters such as CBC. The parties failed to reach an agreement, and SODRAC asked the Copyright Board of Canada to establish a statutory licence. The Board rejected CBC's argument that the proposed fee contradicted industry practice, and required it to pay royalties specific to broadcast-incidental reproduction.[135] Following the majority's opinion in *ESA*, CBC pleaded to the Supreme Court of Canada that, since technology neutrality protects "the proper balance between users and right holders in a digital environment,"[136] CBC should not have to pay an additional fee for conducting the same broadcast activities with new technology.

Justice Rothstein returned to his line of argument in *Robertson* and *ESA* to adopt a more limited approach to technology neutrality, namely indifference and non-discrimination. Since the legislator did not give any indication that broadcast-incidental copies derived

[134] *Ibid* at 279 (Rothstein J, emphasis added).
[135] *CBC*, *supra* note 94 at para 7-26, 118-33.
[136] *Ibid* at para 46 (quoting the appellants' factum).

from new technology should be treated differently from any other form of reproduction under the *Copyright Act*, neither should the Court. The majority partially allowed the appeal on the ground that the Board failed to apply the principle of technological neutrality in determining the tariff applicable to broadcast-incidental copies.[137]

In contrast, Justice Abella elevated technology neutrality to "a core principle of statutory interpretation under the *Copyright Act*."[138] She reunited the indifference and non-discrimination approaches under the aim of consistency: maintaining the effects of law despite technological change.[139] SODRAC, she argued, had no entitlement to a tariff for broadcast-incidental copies since they result from technical imperatives rather than reproductions within the meaning of the *Copyright Act.*[140]

The disagreement between justices Rothstein and Abella over technology neutrality takes place against a formal conception of the rule of law, one that hinges on assigning the legislature the exclusive power to enact legal rules, leaving courts with a monopoly over their interpretation.[141] Indeed, much of Justice Rothstein's critique of the majority's

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[137] *Ibid* at para 49-55, 70-96 (Rothstein J: "[t]he principle of technological neutrality is recognition that, absent parliamentary intent to the contrary, the *Copyright Act* should not be interpreted or applied to favour or discriminate against any particular form of technology," at para 66; "[i]t is evident from the Board's reasons in this case and the reasoning underlying the historical use of the 1:3.2 ratio, that the valuation of the licence fee covering CBC's broadcast-incidental copying did not apply a valuation method consistent with the principle of technological neutrality because there was no comparison of the value contributed by the copyright protected reproductions as between CBC's prior technology and its new digital technology," at para 92).

[138] *Ibid* at para 148, 162.

[139] See also Craig, *supra* note 89 at 292-93 ("what we see in ESA is a markedly broader, functional vision of technological neutrality as a guiding principle that actively distinguishes between technological means and restricts copyright's reach in new contexts with a view to achieving consistency in effect; so, if not in the language of the *Act*, where can the principle, in this form, find its origin and justification? The answer, I suggest, is simple and lies in the overarching policy goals of the copyright system as articulated by the Supreme Court," at 292).

[140] *Ibid* at 150-53, 164-70.

[141] David Dyzenhaus & Evan Fox-Decent, "Rethinking the Process/Substance Distinction: *Baker v Canada*" (2001) UTLJ 193 at 197-205. See also Jhering, *supra* note 59 at 275 (the formal conception of the rule of law

interpretation of the *Copyright Act* in *ESA* proceeded from a sharp distinction between the purviews of each institution:

> A media neutral application of the Act, however, does not imply that a court can depart from the ordinary meaning of the words of the Act in order to achieve the level of protection for copyright holders that the court considers is adequate.
>
> Any concerns arising from the independent protected rights in the digital context are concerns of policy, which are properly within the domain of Parliament in defining the scope of copyright. …
>
> Indeed, it would be hazardous for the courts to delimit the scope of broadly defined rights in the digital environment without the benefit of a global picture of the implications for all the parties involved… providing exceptions to the right to communicate by telecommunication is properly left to Parliament.[142]

Again in *CBC*, he affirms that "[i]t is not for the Court to do by 'interpretation' what Parliament chose not to do by enactment."[143] In *CBC* Justice Abella did not contradict this part of Justice Rothstein's opinion. Instead, she implicitly supported it by basing her conclusions on the interpretation of the *Copyright Act*. She maintained that her conception of technological neutrality derives from a reasonable and well-supported reading of the *Act* that entrusts judicial and administrative authorities with the task of "maintaining the balance that best supports the public interest in creative works."[144] Justice Rothstein did not contradict his colleague's conception of technology neutrality. He only said that this conception has no place within the Court's jurisdiction, and refused to involve the Court in what I would describe as the political challenge of technology.

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is similar to Jhering's distinction between material and formal justice, the former being the affair of the legislator, the second the duty of the judiciary).

[142] *ESA*, *supra* note 94 at 279-80 (Rothstein J). See also *CBC*, *supra* note 94 at para 52-55 (Rothstein J); Hagen, *supra* note 93 ("[o]ne possible rationale [for technology neutrality] is that legislatures, rather than courts, should decide whether to extend the benefits of new dissemination technology to copyright owners," at 310);.

[143] *CBC*, *supra* note 94 at 53 (Rothstein J).

[144] See *CBC*, *supra* note 94 at 146, 147-50, 162. See also *ESA*, *supra* note 94 at 240; *Théberge v Galerie d'Art du Petit Champlain inc,* [2002] 2 SCR 336 at para 30-31; Craig, *supra* note 89 at 292-93 ("technological neutrality, as presented by the majority in ESA, is not a new and overarching policy parachuted into Canadian copyright law; rather, it is a principled interpretive tool mandated by the overarching policy of Canada's copyright law — the preservation or continuing pursuit of an appropriate balance between protecting authors and promoting the public interest," at 293).

The political challenge of technology consists in securing through the powers of the state the conditions of social life for a society composed of technology users. Again, this formulation derives from Jhering's jurisprudence. While technology belongs to nature and as such defers to causality, law belongs to will and defers to purpose — more specifically, collective purpose. Collective purpose forms when individuals sharing interests gather in groups, the largest of which is a society.[145] Shared interests — which Jhering describes as the "conditions of social life"[146] — are preponderant over individual ones by virtue of the quantitative majority of those holding these shared interests. This preponderance justifies coercing the will of individuals who may undermine them. To implement and regulate coercion, society "takes the form of the State."[147] The state coerces action by applying force against deviant individuals or by compelling their will with law.[148] The political challenge of technology requires that the state distinguish purposes that support the conditions of social life from those that undermine them and effectively coerce technology users.

As members of the highest appeal court of Canada that come from dramatically different backgrounds, justices Abella and Rothstein agree on more than they disagree. In conformity with their sense of this community's purpose and purview, they agree that

[145] See Jhering, *supra* note 59 (Jhering defined society as "a union of a number of persons who have combined for the prosecution of a common purpose, and hence every one of them in acting for the purpose of the society at the same time acts for himself," at 67).
[146] *Ibid* at 331-35, 341-43, 352 (the "conditions of social life" include both physical and subjective requirements that make living in society meaningful and fulfilling, and "embrace everything that forms the aim of human striving and struggling: honor, love, activity, education, religion, art, science," at 331-32. While Jhering considered some conditions universal and perpetual, others change depending on context. Invariable conditions of social life include the "*preservation of life*, *reproduction of the same*, *labor*, and *trade,*" at 338).
[147] *Ibid* at 231-32.
[148] *Ibid* at 176-78, 220-23, 231-33 (law secures "*the conditions of social life*, procured by the power of the State," at 330).

technology neutrality must derive from the *Copyright Act*, that there are limits to which they must discuss the facts of the case and that they must draft their respective opinions using a particular literary and rhetorical style suitable to their position and understandable to the public (or, failing that, to the legal profession). Agreeing on such matters makes it possible for the members of this interpretive community to have an orderly discussion about their disagreement and for other communities to make sense of this disagreement.

The disagreement over technology neutrality as consistency, it could be said, has nothing to do with the legal interpretation of technology, but rather the application of a statutory text (the *Copyright Act*) in conformity with the institutional practice of the Court. However, I believe both matters to be connected. Technology neutrality helps discriminate between material and non-material facts for the purposes of legal analysis. In all of its incarnations, the principle effectively translates widespread tacit assumptions about technology into operational terms, namely indifference, non-discrimination and consistency. These assumptions derive from the instrumental theory.

According to the instrumental theory's tenet of determinacy, technology develops and operates solely on the basis of an internal, autonomous and persistent logic. Jhering conceptualized this logic as nature's "law of causality" and made will the master of nature by assimilating will to a cause. Technology remains neutral in relation to the ends its users pursue. Technology's subservience to will persists in time. The nature of an activity and its ensuing legal treatment do not depend on the means used to conduct it, but instead on the purpose of the individual endowed with will who implements the activity in its totality, from cause to end. On the basis of instrumental theory and through the intermediary of

technology neutrality, the metaphysics of technology direct the attention of legal agents to their realm of influence — again, will.

The Supreme Court of Canada says as much when it declares "[t]he Internet is simply a technological taxi that delivers a durable copy of the same work to the end user"[149] or that "[t]he difference between synchronization and broadcast-incidental copies is tied to the fundamentally distinct activities of production and broadcasting. They are different functions. … [The difference] would exist regardless of the technologies used either to produce or to broadcast."[150] Both quotes limit the extent to which technology should be taken into account for the purpose of legal analysis.

In both cases, the justices explain technology away so the Court may focus on the conduct of the parties and the intent of the legislator — two manifestations of an overbearing agency that forms the basis of law's claim over technology. In matters of technology as in matters of jurisdiction, justices Rothstein and Abella agree on more than they disagree. While persistent, the determinacy of technology does not impose itself onto legal analysis: it

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[149] *ESA*, *supra* note 94 at 239 (Abella & Moldaver JJ). Justice Abella often resorts to such formulas. See for example *CBC*, *supra* note 94 (Abella J: "[t]he broadcast-incidental copies described above are strictly technical in nature in that they are created solely for purposes integral to the process of broadcasting television programs," at para 138; "their creation cannot be seen as distinct from the central activity of broadcasting without violating the principle of technological neutrality," at para 139; "technological neutrality prizes substance over form," at para 150; "central activity was the focus of the legal analysis, not the incidental technological process by which it took place," at para 155; "[t]he essential character of the broadcasting activity does not change with the adoption of modern digital technologies that are dependent on the creation of incidental copies in order to accomplish the activity," at para 164; "The focus is on *what function* the technology is performing, not *how* it is performing it*,"* at para 181); *ESA*, *supra* note 94 (Abella & Moldaver JJ: "a 'download' is merely an additional, more efficient way to deliver copies of the game to customers," at 239; "Parliament only changed the *means of transmitting* a communication. The word 'communicate' itself was never altered," at 246; "[a]lthough a download and a stream are both 'transmissions' in technical terms (they both use "data packet technology"), they are not both 'communications' for purposes of the Copyright Act," at 247).
[150] *CBC*, *supra* note 94 at para 62 (Rothstein J).

entirely stems from the analyst's reading of technology, as provided by the strategies of her interpretive community.

Technology neutrality is persuasive because it tells legal agents what they already know.[151] By applying the principle, they reinforce their beliefs about law and technology through legal practice. Convenience makes the instrumental theory a core component of the legal interpretation of technology. The theory supports rather than contradicts a legal community's sense of purpose and purview. When it fits and pervades legal practice, the instrumental theory ascends to the sacred position of common sense. Common sense makes or breaks technology neutrality, not clarity.[152]

Recognizing the human element of technology, along with the predominance of agency, confidently refocuses legal agents on the requirements of justice. Technology neutrality carries into law the same optimism and hopeful aspirations the instrumental theory carries into technology. It reflects the conviction that legal practice can survive technological change, that legal agents need not alienate themselves to reap the benefits and face the difficulties of technological change. They can navigate the storm with a combination of disinterest, fairness and commitment to proven ideals. Some may fail to meet the political challenge of technology, but the potential of its resolution through legal practice endures — that is, until the Anti-Law.

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[151] I borrow the turn of phrase from Mark Rose, "Copyright and Its Metaphors" (2002) 50 UCLA Law Review 1 at 10.

[152] *Contra* Craig, *supra* note 89 at 291ff; Hagen, *supra* note 93 at 323ff; Gautrais, *supra* note 90 at 98-99. The ambiguity of technological neutrality results from how the principle conflates the absence of a legal challenge (indifference and non-discrimination) with the eminence of a political one (consistency). The usefulness of technological neutrality does not depend on its clarity of meaning. Legal communities already dispose of principles and techniques to perform the work envisioned by proponents of the principle. What they may lack is the confidence to use them amidst the uncertainty and complexity of technological change. Technological neutrality, thanks to an ambiguity that can accommodate many and more of these principles of techniques, can supply that confidence.

3. The Anti-Law

If we consider the instrumental theory with legal prescriptivism, technology does not raise a legal challenge, but a political one. The political challenge of technology consists of securing the conditions of social life in a society composed of technology users. To meet this political challenge, the state relies on force and law. The instrumental theory of technology would hold that even new technologies do not present a legal challenge. Indeed, technology being neutral, its user is no less susceptible to coercion than any other legal subject and law can compel her to use technology in conformity with its prescriptions. The determinacy of technology ensures that it persists in a given form and therefore can be governed by law in conformity with formal justice. All is well.

Because the subservience of technology to the will of its user persists through time, the governance of technology never requires law to step out of its realm of influence. Agency reigns, capability changes, prescription abides. And yet, when confronted with technology, many legal agents do not exhibit such confidence. Law and technology literature is fraught with alarming remarks about how law must keep up with technology before catastrophe strikes. If 'all is well' … why so anxious?

Legal communities create technological meaning on the basis of practice, a practice I have associated with legal prescriptivism. By focusing on human conduct and assuming human agency, legal prescriptivism leads legal agents to interpret technology in conformity with the instrumental theory. This theory carries the metaphysics that best fit the practice of legal communities, namely the determinacy and neutrality of technology.

Such interpretation enables legal agents to apply law to technology with a significant degree of confidence, most of the time. Indeed, this account may prove unsatisfactory for those who either share none of that confidence — believing technology "can cause large scale destruction of lives and property and destroy society's ethical and philosophical foundations"[153] — or who have taken note of how much of legal scholarship reproduces popular fears about technology,[154] predicting catastrophes borne out of particle accelerators, nanotechnology, artificial intelligence, genetically modified crops, etc.[155] Faithfully to an interpretive approach, I should explain how technology can generate both confidence and anxiety, and situate this explanation in the strategies of legal agents.

Legal agents do not interpret technology in isolation. The modern culture in which they live puts much stock in the ambiguity of technology. Kieran Tranter astutely emphasizes this point by recalling *Frankenstein*,[156] the story in which a 'modern Prometheus' carries the potential for both good and evil. Blinded by purpose, the will-full Dr. Victor Frankenstein fails to see the Monster's evil before he can prevent it.[157] Tranter rightly notes that Mary Shelley's character fits the depiction many legal scholars reserve to scientists.

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[153] Michael Gemignani, "Laying Down the Law to Robots" (1984) 21 San Diego L Rev 1045 at 1047. See also Braden R Allenby, "Governance and Technology Systems: The Challenge of Emerging Technologies" in Gary E Marchant, Braden R Allenby & Joseph R Hekert (eds), *The Growing Gap Between Emerging Technologies and Legal-Ethical Oversight: The Pacing Problem* (Dordrecht: Springer, 2011) 3 at 8ff (after describing how the locomotive profoundly changed the world, Allenby describes some recent technological developments as "The Five Horsemen of Emerging Technologies").

[154] See Kieran Tranter, "The Law and Technology Enterprise: Uncovering the Template to Legal Scholarship on Technology" (2011) 3 LIT 31 at 34; Lyria B Moses, "Why Have a Theory of Law and Technological Change?" (2007) 8 Minn JL Sci & Tech 589 at 598-99.

[155] See for example Richard A Posner, *Catastrophe: Risk & Response* (Oxford: Oxford University Press, 2004) at 30-43.

[156] Mary W Shelley, *Frankenstein; or The Modern Prometheus* (London: Lackington, Hugues, Harding, Mavor & Jones, 1818).

[157] Kieran Tranter, "Nomology, Ontology, and Phenomenology of Law and Technology" (2007) 8 Minn JL Sci & Tech 449 at 451-53. See also Langdon Winner, *Autonomous Technology: Technics-Out-of-Control as a Theme in Political Thought* (Cambridge: MIT Press, 1977) at 306-13.

Richard Posner kindly demonstrates: "[s]cientists want to advance scientific knowledge rather than to protect society from science … Not that scientists are indifferent to public safety; but it is not their business and sometimes it is in competition with their business."[158]

Experience dictates that technology involves unintended consequences, and in the more spectacular and shocking cases leaves behind disasters such as Titanic, Bhopal, Lac-Mégantic and Deepwater Horizon. Philosopher Langdon Winner argues that, in fact, we expect technology to have unintended consequences:

> [T]echnology always does more than we intend; we know this so well that it has actually become part of our intentions. Positive side effects are in fact a latent expectation or desire in any plan for innovation. Negative side effects, similarly, are experienced as necessary evils that we are obligated to endure. Each intention, therefore, contains a concealed "unintention," which is just as much a part of our calculations as the immediate end in view.
>
> Imagine a world in which technologies accomplish only the specific purposes one had in mind in advance and nothing more. It would be a radically constricted world and one totally unlike the world we now inhabit. The simple logic of means and ends, tools and use, is ultimately of little help in understanding what technology has to do with change. It is like noticing *B* follows *A* while forgetting the other twenty-four letters and their myriad of combination in words and sentences.[159]

Much of law and technology scholarship shares this expectation.[160]

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[158] Posner, *supra* note 155 at 99. See *ibid* at 453.
[159] Winner, *supra* note 157 at 98.
[160] See for example Gregory N Mandel, "Regulating Emerging Technologies" (2009) 1 LIT 75 ("technology cannot advance without some freedom in research and development, but too much freedom could lead to a calamity that forecloses any opportunity for the technology. The challenge is how to simultaneously leverage a promising technology's anticipated benefits while guarding against its potential risks, particularly when the potential risks of the technology cannot be suitably understood until the technology develops further, at 75); Michael Kirby, "New Frontier: Regulating Technology by Law and 'Code'" in Roger Brownsword & Karen Yeung (eds), *Regulating Technologies: Legal Futures, Regulatory Frames and Technological Fixes* (Oxford: Hart Publishing, 2008) 367 ("[i]f taken too far, [the precautionary principle] could instil a negative attitude towards science and technology and encourage excessive regulation in the attempt to avoid any risks. Life is risky. Most technological innovations carry some risk. An undue emphasis on precaution, for fear of any risks, would not be food for science or technology or for the global economy or for innovation in thought as well as action," at 377).

The determinacy of technology clashes with the indeterminacy of technological change. "[I]n a time of profound technological change and innovation,"[161] the detrimental effects of technology only become clear after the fact.[162] New technologies appear suddenly and with unintended consequences, and thus prevent lawmakers to assert effective control.[163] Not only is technological change difficult to predict, but so are legal disputes arising from it.[164] As one author, wiser than most, said: "nobody knows anything."[165] Indeterminacy short circuits legal prescriptivism with a seemingly insurmountable challenge: technology without determinacy. Technological change denies law "a normal, everyday frame of life to which it can be factually applied, and which is subjected to its regulation."[166] Legal agents are left with a duty — *law ought to assist society in coping with technological change* — that cannot be fulfilled with Jhering's 'If … then …' formula.

Two major strategies have emerged to discipline the indeterminacy of technological change: speculation and discretion. A staple of law and technology scholarship, speculation involves "a creative process of looking at what *is* and projecting, imaging and dreaming what *could be*."[167] The literature on automated vehicles does not discuss liability issues

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[161] *R v Fearon*, *supra* note 113 at 667 (J Karakatsanis).
[162] See Michael AC Dizon, "From Regulating Technologies to Governing Society: Towards a Plural, Social and Interactive Conception of Law" in Heather M Morgan & Ruth Morris (eds), *Moving Forward: Tradition and Transformation* (Newcastle: Cambridge Scholars Publishing, 2012) 115 at 121-22; David Collingridge, *The Social Control of Technology* (London: Frances Pinter Ltd, 1980) at 16-19. See also Koops, *supra* note 67 at 314-15; Moses, *supra* note 3 at 257-58, 275; Gaia Bernstein, "When New Technologies Are Still New: Windows of Opportunity for Privacy Protection" (2006) 51 Vill L Rev 921 at 921, 937-46.
[163] See Moses, *supra* note 3 at 246, 257-58.
[164] See Mandel, *supra* note 119 at 552.
[165] Graham, *supra* note 72 at 1241.
[166] Carl Schmitt, *Political Theology: Four Chapters on the Concept of Sovereignty* (Chicago: University of Chicago Press, 2005 [1922]) at 13.
[167] Kieran Tranter, "The Speculative Jurisdiction: The Science Fictionality of Law and Technology" (2011) 20 Griffith L Rev 817 at 820 [Tranter, "Speculative Jurisdiction"]. See also Kieran Tranter, "The Laws of Technology and the Technology of Law" (2011) 20 Griffith L Rev 753 at 755 [Tranter, "Laws of Technology"].

and reform proposals on the basis of existing cases of accidents involving automated vehicles. Rather, on the basis of prototypes, projected development and science fiction, authors portray a future where numerous users routinely enjoy this technology and in which accidents involving automated cars are rare yet inevitable.[168] By substituting observation and experience for prediction and imagination, speculation provides legal agents enough determinacy to anticipate law lag and support legal reform.[169] Legal prescriptivism transcends technological change by adjusting Jhering's formula from 'If … then …' to 'What if …? Then …'.

Discretion takes a radically different approach. It treats indeterminacy as determinacy: the fact that technology persistently changes becomes its most important trait, at least for regulatory purposes. Because of indeterminacy, of persistently changing technology, legal agents cannot hope to conceive legal institutions that can sustain technological change. If technology always changes, there will always come a time where it exceeds the capacities of the current legal system. In other words, *if and when law addresses technological change, it does so without overcoming obsolescence*. Rather than solving one law lag at a time, legal agents propose to meet dynamic technology with more flexible institutions that can take a variety of measures to adapt to new circumstances.[170] If the legislative process

[168] See for example David C Vladeck, "Machines Without Principals: Liability Rules and Artificial Intelligence" (2014) 89 Wash L Rev 117 at 119-27; Sophia H Duffy, "Sit, Stay, Drive: The Future of Autonomous Car Liability" (2013) SMU Sci & Tech L Rev 453 at 454-56; Jeffrey K Gurney, "Sue My Car, Not Me: Products Liability and Accidents Involving Autonomous Vehicles" (2013) U Ill JL Tech & Pol'y 247 at 248-54; Gary E Marchant & Rachel A Lindor, "The Coming Collision Between Autonomous Vehicles and the Liability System" (2012) 52 Santa Clara L Rev 1321 at 1321-22.

[169] See Tranter, *supra* note 157 at 472.

[170] See for example Gautrais, *supra* note 90 at 211ff; Lyria B Moses, "The Legal Landscape Following Technological Change: Paths to Adaptation" (2007) 27 *Bulletin of Science, Technology & Society* 408 at 412 (comparing the advantages of different rule-making institutions, including courts and professional regulation); Lyria B Moses, "Understanding Legal Responses to Technological Change: The Example of In Vitro Fertilization" (2005) 6 Minn JL Sci & Tech 505 at 580-82, 607; Collingridge, *supra* note 162 at 23ff.

fails to keep up with technological change, lawmakers could adopt more responsive measures:

> The reason why many statutes fail to keep up with technological change is that the legislative process is cumbersome. If rules are formulated in legislation, the limits inherent in the words used continue until the legislation can be amended. However, legislation can be designed to give other institutions (such as agencies and courts) room to maneuver in interpreting legislation in light of technological change. This can be done by (1) delegating to an administrative agency the power to resolve uncertainties, (2) employing broad language so as to allow maximum scope for interpretation, or (3) creating standards rather than rules, thus allowing the agency or courts to make adjustments.[171]

Unlike speculation, which focuses on determinacy, discretion concerns itself with agency. More specifically, it ensures shared interests and collective purpose overpower technology users even as their capabilities remain unpredictable. With discretion, legal prescriptivism transcends technological change by adopting 'When …, then whatever works' as the organizing principle for the coercion of technology users.[172]

Both speculation and discretion reveal that the indeterminacy of technology does not lead legal agents to question or re-evaluate the instrumental theory and legal prescriptivism coupling. On the contrary, they only latch onto these assumptions more vigorously. A literature of description and coercion becomes one of anticipation and exception when legal agents fear for the worst.

What is then the 'worst' for anyone "fully alive to the overall spirit of laws"[173] in a "time of profound technological change and innovation"?[174] What do legal agents fear most

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[171] Moses, *supra* note 154 at 607.

[172] See also Han Somsen, "Cloning Trojan Horses: Precautionary Regulation of Reproductive Technologies" in Roger Brownsword & Karen Yeung (eds), *supra* note 159 221 at 232, 236, 241-42 (arguing that, in some instances, the precautionary regulation to reproductive technologies "provides *any* regulator *indefinite* powers to restrict or sanction *any* activity on the basis of *any* degree of uncertainty of *any* nature for the sake of *any* real *or* potential right-holder, and *any* real *or* potential right," at 242).

[173] Portalis, *supra* note 112.

[174] *R v Fearon*, *supra* note 113 at 667 (J Karakatsanis).

about technology? If we follow the instrumental theory and legal prescriptivism to their bitter end, the worst scenario would be a technology granting its user the capability to resist the prescriptions of law and free her to pursue any purpose she wills — namely, the 'Anti-Law'.[175] The Anti-Law confers upon its user the force to ignore law.[176]

Force plays a central role in legal prescriptivism. Jhering defines force as "the maintenance of one's own purpose by means of denying in principle and suppressing in fact the purpose of the other."[177] His jurisprudence makes the coercive power of law dependent entirely on force: law can compel action only as long as state authorities can force that action.[178] The state has the sole power to enact law because it detains, within its jurisdiction, a force no other individual or group can surpass.

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[175] I confess taking inspiration from the third opus of the *Mission: Impossible* film series. Its heroes pursue an arms dealer seeking a technology called the 'Rabbit's Foot'. Speculating upon the nature of this particular MacGuffin, a character played by Simon Pegg recalls a professor that

> used to sort of scare the underclassmen with this story about how the world would eventually be eviscerated by technology. You see, it was inevitable that a compound would be created, which he referred to as the 'Anti-God'. It was like an accelerated mutator, a sort of, you know, like an unstoppable force of destructive power that would just lay waste to everything. To buildings and parks and streets and children and ice cream parlours, you know? So whenever I see, like, a rogue organization, willing to spend this amount of money on a mystery tech, I always assume it's the Anti-God. End-of-the-world kind of stuff, you know? But, no, I don't have any idea what it is. I was just speculating. (See JJ Abrams (dir), *Mission: Impossible III*, Paramount, 2006)

[176] The aspiration is not without precedent. See for example John P Barlow, "A Decaration of the Independence of Cyberspace" (8 February 1996) online: Electronic Frontier Foundation, https://www.eff.org/cyberspace-independence (9 February 2016):

> Governments of the Industrial World, you weary giants of flesh and steel, I come from Cyberspace, the new home of the Mind. On behalf of the future, I ask you of the past to leave us alone. You are not welcome among us. You have no sovereignty where we gather.
>
> We have no elected government, nor are we likely to have one, so I address you with no greater authority than that with which liberty itself always speaks. I declare the global social space we are building to be naturally independent of the tyrannies you seek to impose us. You have no moral right to rule us nor do you possess any methods of enforcement we have true reason to fear.

[177] *Supra* note 59 at 180.

[178] *Ibid* at 190, 240, 246, 248.

Supreme force constitutes the defining characteristic of the state and source of law's existence.[179] Should a technology confer upon its user a force that surpasses the state's, it would short-circuit the social organization of coercion. To preserve its supremacy over those it governs, the state must maintain and expand its technological arsenal while preventing others from amassing and organizing their own — an endeavour towards which it can use law.[180] The Anti-Law presses the state in a permanent arms race against private technologists, one in which it deploys both force and law.

The phrase 'arms race' evokes weapons of mass destruction. Due to the violence they can unleash, nuclear weapons seem to be the quintessential Anti-Law.[181] An individual holding a nuclear weapon could indeed threaten countless lives. Even without ever using such a technology, she would diminish the coercive power of the law, being in a position to rival the supremacy of state force and therefore to disobey legal rules. Indeed, in addition to taking police, military and covert action against nuclear terrorism on their territory and abroad, states have agreed to a number of international measures meant to prevent 'rogue' individuals, groups and states from obtaining loose nuclear weapons.[182]

And yet, we should not conclude that technologies such as weapons of mass destruction amount to Anti-Law solely because they confer force upon their user: law lives on even as

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[179] *Ibid* at 233-35 ("[i]t is not the expression of a norm by the State that lends it the character of a legal norm, but only the circumstance that it obligates its organs to carry the same out by means of external coercion," at 252).

[180] See Jhering, *supra* note 59 at 237 (the comparison between the State and the people's swords).

[181] See *Legality of the Threat or Use of Nuclear Weapons* (Advisory Opinion), July 8, 1996, (1996) ICJ Reports 226 ("[t]he destructive power of nuclear weapons cannot be contained in either space or time. They have the potential to destroy all civilization and the entire ecosystem of the planet," at 243).

[182] See Elli Louka, *Nuclear Weapons, Justice and the Law* (Cheltenham: Edward Elgar, 2011) at 231-51.

worldwide security "remains reliant on the continuing self-control of the leaders of global powers."[183] The relationship between law and force is far subtler.

Jhering considered law to be the historical and pragmatic product of force. Unconstrained force transitions to a self-controlled order when the supreme ruler realizes that moderation better serves her interest. Upon that realization she agrees to a social contract that "regulates the relations of both parties and allows the weak to remain *free*, *viz*., a contract of *peace*."[184] Law does not enslave nor exile force, nor is law vanquished by force. Law emerges from force. Law changes hands from one forceful ruler to another, provided society survives the transition.

A technology does not merit the characterization of Anti-Law if it only enables its user to replace one order with another.[185] Two possibilities for the Anti-Law thus remain. The speculative first flash-freezes society into complete and permanent annihilation, and incidentally negates all order.[186] The discretionary second tactically destroys law, leaving force intact. The first eventuality is only Anti-Law incidentally to Anti-Life. The second one seems to be the only one worth considering, which leaves me reflecting on its form.

The state is the Anti-Law. The state can ignore the rule of law by virtue of its supreme force. Liberal democracies bind the state's supreme force with a constitution. Typically,

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[183] *Ibid* at 13.
[184] See Jhering, *supra* note 59 at 183. See also (*ibid* at 182-83, 190-91, 233, 282-83; "[l]aw, therefore, in this full sense of the word, means the bilaterally binding force of the statute; self-subordination on the part of the State authority to the laws issued by it," at 267).
[185] *Ibid* at 235 ("[e]ven though force may in the course of time assume more and more frequently forms which are compatible with the order of law, still instances happen even in a well-regulated legal environment where it refuses obedience to law, and as naked energy, whether by governmental *coups d'état* or popular revolutions, accomplishes the same work as it did formerly, when it first built up the social order, and laid down the law," at 193). Total annihilation brought by nuclear war would obviously put an end to law, although the demise of law would be incidental to that of social life.
[186] See Kurl Vonnegut, *Cat's Cradle* (New York: Delta Trade Paperpbacks, 1998 [1963]).

this constitution formally separates state powers, with the legislator enacting legal rules, the judiciary interpreting them and the administration implementing them.[187] Such an institutional arrangement aims to guarantee the protection of individual rights and liberties by establishing an order where coercive actions taken by the state are not left to the discretion of public officials, but are justified in law. In other words, the constitution establishes the rule of law.[188]

However, constitutional principles, Carl Schmitt famously argued, cannot hold in times of emergency. In the presence of an immediate danger posing an existential threat, liberal democracies must tolerate exceptions to the rule of law and provide unlimited discretion to an unshackled executive power that will effectively supress the threat. Crucially, the legal order cannot codify an unpredictable exception, nor can it determine what will be needed to resolve the crisis that triggered it.[189] "Sovereign," Schmitt wrote, "is who decides on the exception."[190]

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[187] See Jocelyn Stacey, "The Environmental Emergency and the Legality of Discretion in Environmental Law" (2016) 53 OHLJ forthcoming, available online at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2619688 (2 September 2015); Dyzenhaus & Fox-Decent, *supra* note 144 at 197-205; Martin Loughlin, "Procedural Fairness: A Study of the Crisis in Administrative Law Theory" (1978) 28 UTLJ 215 at 216. See also Geneviève Cartier, "Procedural Fairness in Legislative Functions: The End of Judicial Abstinence?" (2003) 53 UTLJ 217 at 221-22 (with the increasing development of the welfare state, the legislator has more heavily delegated legislative and policy functions to the administrative branch).

[188] See Brian Z Tamanaha, "The History and Elements of the Rule of Law" (2012) Sing J Legal Stud 232 at 233-35; Sanford Levinson, "Constitutional Norms in a State of Permanent Emergency" (2006) 40 Ga L Rev 699 at 707-08; David Dyzenhaus, "The Permanence of the Temporary: Can Emergency Powers Be Normalized" in Ronald J Daniels, Patrick Macklem & Kent Roach (eds), *The Security of Freedom: Essays on Canada's Antiterrorism Bill* (Toronto: University of Toronto Press, 2001) 21 at 28.

[189] Schmitt, *supra* note 166 at 6-7, 13. I draw inspiration — if not outright steal — from Professor Jocelyn Stacey's insightful work on environmental and constitutional law, more specifically on the exercise of discretion in the context of a permanent emergency (see Stacey, *supra* note 187). See also Oren Gross, "Chaos and Rules: Should Responses to Violent Crises Always Be Constitutional?" (2003) 112 Yale LJ 1011 at 1029).

[190] *Supra* note 166 at 5.

What amounts to an emergency, how to address it and how it is resolved are left to the discretion of executive power. Like Schmitt and according to Jhering, binding the state with rules laid out in advance undermine its ability to face unpredicted threats.[191] He vigorously argued that when government "finds itself placed before the alternative of sacrificing either the law or the welfare of society,"[192] it can and must ignore law to save society. While emergencies take many forms,[193] they all constitute "an unforeseeable, existential threat that cannot be anticipated by law."[194]A state absolutely bound by its own legal rules would leave its citizens helpless against a threat law can neither predict nor overcome.[195]

What makes the exception tolerable to liberal democracies is the assumption that an emergency is, by definition, exceptional and temporary. Once the crisis ends, we expect a return to normalcy and the rule of law as soon as the crisis ends.[196] However, "bright-line distinctions between normalcy and emergency are frequently untenable, as they are constantly blurred and made increasingly meaningless."[197] Emergencies can endure long enough to become permanent, meaning that measures adopted to address them turn into normalcy.[198] Indeed, after 9/11, many authors discussed the difficulties of maintaining the rule of law in times of a permanent crisis of national security.[199]

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[191] *Supra* note 59 at 290. The idea of granting unrestrained executive in times of crisis goes back to ancient Rome, and was taken up by many other philosophers, including John Locke: see Levinson, *supra* note 188 at 712, 721-22; Gross, *supra* note 189 at 1102-04.
[192] Jhering, *supra* note 59 at 315-16.
[193] They include for example war, terrorist threats, natural disasters, economic crises, and environmental catastrophes. See Stacey, *supra* note 187; Levinson, *supra* note 188 at 725-27; Gross, *supra* note 189 at 1025.
[194] Stacey, *supra* note 187 at 8.
[195] Jhering, *supra* note 59 at 314-18.
[196] See Gross, *supra* note 189 at 1036.
[197] *Ibid* at 1071.
[198] Levinson, *supra* note 188 at 738-39; *ibid* at 1073-75.
[199] See Stacey, *supra* note 187; Levinson, *supra* note 188 at 705-08, 739-41; Gross, *supra* note 189 at 1027-28.

Living “in a time of profound technological change and innovation”[200] implies living in a permanent crisis. Law and technology literature attributes these characteristics to technological change, depicting it as an “an unforeseeable, existential threat that cannot be anticipated by law.” Technological change does not have to effectively present an extreme threat to be treated as a crisis or emergency; it only needs to suggest it. Most science-fiction references in law and technology literature reflect dystopian visions of the future and a fundamental conflict between technology and nature. Dismissing such references as flavour text underestimates their importance: they promote conservative lawmaking by tapping into popular culture[201] and cast technology users as potential villains.[202] Speculation and discretion work in tandem to depict technological change as unpredictable and harmful. The most adequate response is a forceful containment of the existential threat backed by indeterminate powers.

The indeterminacy of technological change stems from the same place as the determinacy of technology: legal prescriptivism. Technology acquires indeterminacy simultaneously to legal agents becoming familiar with the limits of their interpretive strategies. Under the impulse of popular depictions of technological change, they reposition these limits without denying them. An unshackled and unjustified force, the indeterminacy of technology is a conceptional boogeyman. The interpreter projects the limits of her strategies onto technology and treats them as inherent properties. Technology persistently changes because available strategies fail to satisfy the interpreter, whose practice relies on ‘rational’

[200] *R v Fearon*, *supra* note 113 at 667 (Karakatsanis J).
[201] See Tranter, “Speculative Jurisdiction”, *supra* note 169 at 836; Posner, *supra* note 155 at 100-10 (dystopian science fiction also portrays a triumphing human spirit).
[202] See Gross, *supra* note 189 at 1082-89 (“[t]he clearer the distinction between ‘us’ and ‘them’ and the greater threat ‘they’ pose to ‘us,’ the greater in scope the powers assumed by government and tolerated by the public become,” at 1082-83).

conclusions based on 'objective' facts. Treating these limits as properties of technology incidentally allows the interpreter to maintain confidence in her community's strategies. Legal communities propose to contain technological change the same way they would contain force: negate it by determining all circumstances in which it can be used (speculation) or contain it by setting up the conditions within which the use of force is permitted (discretion). The security of legal prescriptivism and the instrumental theory is paid for with anxiety and opacity.

III. TECHNOMORPHISM AND INTERTEXTUALITY

The previous two chapters introduced the legal interpretation of technology. Doing so, they propose to combine a radical social constructivist approach to the study of technology with reader-response literary theory in order to study law and technology through the humanities. Legal interpretation explains why law and technology practice would have such a thing as an obsolescence stereotype, and enables examining its assumptions, starting with the boundary between law and technology.

The legal interpretation of technology calls for a different set of epistemological and methodological commitments, starting with the following premise: the meaning of technology — what technology is and what technology can do — flows from interpretation. Under an interpretive approach to law and technology, the scholar does not seek to determine which interpretation of a technology is true or should prevail. Instead, she examines how legal agents formulate interpretations of technology and what makes some interpretations more persuasive than others.

In the second Chapter, I also presented one of the most prevalent interpretations of technology among legal communities. Indeed, their members accommodate legal prescriptivism by attributing determinacy and neutrality to technology, and by denying them the capacity to interfere with human agency and, by extension, with the application of law. Some interpretations of technology are so persuasive that they appear incontestable. By re-describing the same reality in different terms, we may demystify predominant interpretations and depict them as merely commonplace, rather than common sense. I

commit the present chapter to this endeavour, specifically with regard to the distinction between law and technology.

Consider Don Connelly's *Who's in Charge Here?* (Figure 1). The painting depicts a conflict set in a room filled with monitors and screens, bearing the inscription "MISSION CONTROL." One screen displays a satellite deployed or retrieved in outer space. The intrusion of three outsiders upsets the four technicians. A lawyer leads the intruders, followed by a character wearing a suit and a third one dressed in overalls holding a sign and raising a fist. The interaction between a technician and the lawyer is at the front and centre: the former points angrily at the screen while operating his monitor, the second orders him to stop while brandishing a stamped document. At the bottom right of the illustration we can read: "Who's in charge here?" The question may be spoken by one of the characters or the artist, and suggested to the observer.

Figure 1. Don Connelly, *Who's In Charge Here?*, 1994[1]

[1] Don Connolly is a Canadian painter. He served within the Royal Canadian Air Force for fifteen years as a navigator, instructor, and staff officer.

The setting of the conflict is significant. The launch of Sputnik in 1957 by the Union of Soviet Socialist Republics prompted a political crisis for the United States of America and their allies. Not only did the Soviets' technology outpace theirs, but the launch of Sputnik II less than a month later suggested the USSR could launch nuclear weapons from outer space. In response, the American government mobilized its resources to surpass the Soviets, starting with the establishment of the National Aeronautics and Space Administration (NASA) in 1958 and its expansion under the Kennedy and Johnson administrations.[2] The political crisis prompted a professional one among lawyers. The technocratic ideology of the Rocket State suggested that scientists and engineers had not only the capacity to solve societal problems, but also the authority to determine what should be done: mastery over both ends and means. Normativity did not follow from what the law dictated, but from what technology enabled.[3] Concerned with losing their authority over normative questions, many legal professionals attempted to wrestle it away from so-called technocrats. "Who's in charge here?" was indeed the question of the day.[4]

Connolly's painting caricatures the interference of laymen in technological matters. The characters standing at the right clearly do not belong in MISSION CONTROL, as shown by their accoutrements, their position in relation to their surroundings (outside the rows of monitors, unlike the technicians) and the reactions they provoke from others. And yet, it is

[2] See Barton Beebe, "Law's Empire and the Final Frontier: Legalizing the Future in the Early *Corpus Juris Spatialis*" (1999) 108 Yale LJ 1737 at 1744-47. See also Kieran Tranter, "The Law and Technology Enterprise: Uncovering the Template to Legal Scholarship on Technology" (2011) 3 LIT 31 at 36.
[3] See Beebe, *supra* note 2 at 1747-53.
[4] See for example Eugène Pépin, "The Legal Status of the Airspace in the Light of Progress in Aviation and Astronautics" in Senate Committee on Aeronautical & Space Sciences, *Legal Problems of Space Exploration: A Symposium* (Washington: US Senate, 1961) 188 (exhorting lawyers "not to let themselves be outdistanced by technicians," at 194; Kenneth B. Keating, "The Law and the Conquest of Space" (1958) 30 NY St B Bull J 72 (arguing that, for lawyers, conquering outer space comes down to "choos[ing] between greatness and oblivion," at 80).

precisely the awkwardness of their presence that conveys the triumph of law over technology. While technicians interact with the equipment and react to the presence of the outsiders, the outsiders show remarkable indifference towards MISSION CONTROL: they keep their eyes closed, a literal refusal to take notice of their surroundings. I project onto Connelly's work my understanding of technology neutrality, which in all its approaches explains technology away in order to focus solely on its users — the lawyer only addresses the technicians to which he presents a document to. The rule of law extends to a room over which technicians should reign supreme, but their very presence guarantees that the rule of law extends to MISSION CONTROL along with wherever else one finds legal subjects.

No matter how persuasive the aforementioned interpretation of Connolly's painting, it can still tell a different story about law and technology. Following the launch of Sputnik and the establishment of the Rocket State, lawyers endeavoured to define outer space and extend law to this newly formed jurisdiction, and assert their professional relevance and authority through codification.[5] Space lawyers presented themselves as a countercultural response to the Rocket State, but in doing so they largely reflected its technocratic form: governing technology through law encouraged an instrumental use of law.[6]

Connolly does not personify law, for example as the figure of Lady Justice.[7] Rather, he objectifies and instrumentalises it in the form of a seal-stamped document. Paper, not the idealized figure, fits the bureaucratic and time-consuming experience of law. The lawyer

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[5] See Tranter, *supra* note 2 at 39-40; Beebe, *supra* note 2 at 1759-63.
[6] See Tranter, *supra* note 2 at 43-44; Beebe, *supra* note 2 at 1766-67. See also Kieran Tranter, "Nomology, Ontology, and Phenomenology of Law and Technology" (2007) 8 Minn JL Sci & Tech 449 at 455-61.
[7] See Jacques de Ville, "Mythology and the Images of Justice" (2011) 23 L & Lit 324 at 348-52. See also Desmond Manderson, "Klimt's Jurisprudence: Sovereign Violence and the Rule of Law" (2015) 35 OJLS 515.

deploys his Hartian device in the same manner as the technician operates his monitor: one hand wields the instrument, the other expresses purpose… but whose purpose? The lawyer is as much a part of the culture of MISSION CONTROL as the technicians. They use different instruments, but their instruments define them as well.

The conjunction of instrumental theory and legal prescriptivism is only one interpretation of law and technology. This interpretation hinges on keeping the two separate, and succeeds at it by routinely excluding the distinction between law and technology from legal analysis.[8] Here I attempt to overcome this distinction and offer alternatives by considering technomorphist accounts of law.

Specifically, I will consider a number of issues relevant to the field of law and technology through the lens of substantive theories of technology. Substantive theories deny the neutrality of technology. Instead they argue that technology displaces human agency in favour of its own normative structures. Law becomes a product of these structures, rather than a fully distinct institution capable of governing technology. I will conclude this Chapter with a summary of the present Part.

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[8] See for example Lyria B Moses, "Recurring Dilemmas: The Law's Race to Keep Up with Technological Change" [2007] U Ill JL Tech & Pol'y 239 ("excluded from the notion of technology used here are technologies in the form of legal regulation. These topics raise different issues to those technologies associated more closely with applied science and engineering. New regulatory techniques are themselves legal change, so an examination of the impact on law is circular," at 246-47).

A. “Machine men with machine minds and machine hearts”[9]

Substantive theories hold that technology imposes ends of its own.[10] While they all share this general claim, the three theories discussed here articulate it in different ways: ‘technological determinism’ flows from materialist history, Jacques Ellul’s ‘Technique’ is a sociological account of modern society and Martin Heidegger’s ‘Enframing’ is an ontological study of technology. Their differences explain why I have chosen to present each of these theories in relation to a specific topic relevant to law and technology, rather than to sustain a single thread of discussion to which I would apply all theories. And so, I discuss technological determinism in relation to techno-regulation, Ellul’s Technique as a critical perspective on legal instrumentalism and Heidegger’s Enframing to reflect on legal research. While they raise different problems, substantive theories emphasize the same concern: law cannot govern technology without substantive content of its own.

1. Lex machina

Technological determinism depicts “technology as an essentially autonomous entity that develops according to a logic and a direction of its own, and then has determinate impacts on society.”[11] Because technology develops autonomously, no kind or amount of social influence can transform it. These two interdependent claims propose a theory of socio-

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[9] Charlie Chaplin (dir), *The Great Dictator*, United Artists, 1940.

[10] See Andrew Feenberg, *Critical Theory of Technology* (New York: Oxford University Press, 1991) at 6-7 (Feenberg does not include technological determinism as a substantive theory, but I believe it can bear the general label for reasons exposed below).

[11] Stewart Russell & Robin Williams, “Social Shaping of Technology: Frameworks, Findings and Implications for Policy with Glossary of Social Shaping Concepts” in Knut Sorensen & Robin Williams, *Shaping Technology, Guiding Policy: Concepts, Spaces and Tools* (Cheltenham: Edward Elgar, 2002) 37 at 39.

technical change emphasizing how the determinacy of technology conditions human thought, action and relationships.

This determinist account elevates technology as the most important source of social change.[12] Humans cannot hope to transform technology: they can only adapt to it. Technological determinism subverts the second tenet of the instrumental theory — neutrality — by limiting effective action in material terms and therefore curtails the exercise of human agency. Technology's extension of the means available to its users structures their needs and the ends they pursue.[13]

Historian Lynn White's work on the stirrup provides a classic example of technological-determinist history. The invention of the stirrup enabled warriors to mount horses into battle: it secured a stable position without which they could not launch powerful attacks and endure hard blows without being unhorsed. The stirrup made the mounted warrior the supreme fighting unit of his time. However, this elite fighting force demanded an unprecedented amount of resources: armour, equipment, horses, training, lodging, etc. White claimed that feudal society emerged in order to provide these resources.[14]

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[12] See Bruce Bimber, "Three Faces of Technological Determinism" in Merrit R Smith & Leo Marx (eds), *Does Technology Drive History? The Dilemma of Technological Determinism* (Cambridge: MIT Press, 1994) 79 at 84; Langdon Winner, *Autonomous Technology: Technics-Out-of-Control as a Theme in Political Thought* (Cambridge: MIT Press, 1977) at 75-76.

[13] *Ibid* at 83-84. While not determinists themselves, many authors emphasize the transformative power technology has over society. See for example Jennifer Chandler, "'Obligatory Technologies' and the Autonomy of Patients in Biomedical Ethics" (2011) 20 Griffith L Rev 905 at 907-09, 918-19. See also Langdon Winner, *The Whale and the Reactor: A Search for Limits in an Age of High Technology* (Chicago: University of Chicago Press, 1986) at 6-12 ("technologies are not merely aids to human activity, but also powerful forces acting to reshape that activity and its meaning," at 6).

[14] Lynn T White, *Medieval Technology and Social Change* (New York: Oxford University Press, 1978) at 38.

Decades before White's controversial thesis, Karl Marx had also emphasized how technology directs history: "The hand-mill gives you society with the feudal Lord; the steam-mill, society with the industrial capitalist."[15] Historian Robert Heilbroner repurposed Marx's quote to argue that technology changes along an obligatory sequence of discoveries: "it is impossible to proceed to the age of the steam-mill until one has passed through the age of the hand-mill, and that in turn one cannot move to the age of the hydroelectric plant before one has mastered the steam-mill, nor to the nuclear power age until one has lived through that of electricity."[16] Heilbroner believed this natural sequence explained how people could independently invent the same technology, and made technological development inherently incremental and predictable.[17] Technology would thus not solely provoke change, but also order it.

Technological determinism is vigorously criticized. The theory provoked much discussion among philosophers and social scientists, most of which challenge it on closely related analytical and philosophical grounds. Indeed, technological determinism offers an

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[15] Karl Marx, *The Poverty of Philosophy*, cited in Robert L Heilbroner, "Do Machines Make History?" (1967) 8 *Technology and Culture* 335 at 335. Through his general theory of historical materialism, Marx claimed forces of production determine all aspects of life — economic, social, political, and spiritual. See Winner, *supra* note 11 at 77-86 (for an analysis of technological determinism in Marx's work). Qualifying Marx as a technological determinist rests on questionable assumptions, most notably by interpreting the "forces of production" as technology. However, by using the phrase forces of production, Marx brought "together under a single concept the instruments, energy and labor involved in the active effort of individuals to change material reality to suit their needs," at 78). See also Donald A Mackenzie, "Marx and the Machine" (1984) 25 *Technology and Culture* 473 at 479; Bruce Bimber, "Karl Marx and the Three Faces of Technological Determinism" (1990) 20 *Social Studies of Science* 333 at 344-47. But see also William H Shaw, ""The Handmill Gives You the Feudal Lord": Marx's Technological Determinism" (1979) 18 *History and Theory* 155 at 168.

[16] Heilbroner, *supra* note 15 at 336-37. See also Bimber, *supra* note 12 (according to technological determinism, "[h]istory is predetermined by scientific laws which are sequentially discovered by people and which, in their inexorable application, produce technology," at 338).

[17] Heilbroner, *supra* note 15 at 337-38 ("[i]n the future as in the past, the development of the technology of production seems bounded by the constraints and capability and thus, in principle at least, open to prediction as a determinable force of the historic process," at 340). See also William F Ogburn, *Social Change with Respect to Cultural and Original Nature* (New York: Dell Pub, 1966) at 90ff (Ogburn lists almost a hundred fifty inventions different people discovered independently).

inadequate and simplistic account of socio-technological change, one that discourages political engagement in technological development:

> The reaction against technological determinism in studies of technology produced a range of arguments as to its inadequacy as an explanation and its ideological function in mystifying and furthering the interests of dominant groups which benefit from technological change. *This critical work asserted that technology is shaped in form and content by social forces, and that its social effects are not determined simply by the nature of the technology*. Instead of technology being treated as a 'black box' in history and sociology, or a mystery exogenous variable in economics, the approach insisted that the process and content of technological activities and products should be amenable to social investigation. There is … "no inherent or compelling logic of technical development" and such patterns and logics as exist are explicable socially. *In terms of a politic critique, since current technologies and their effects are shaped by certain social forces — to the advantage of some social interests and the detriment of others — technological development should be able to be steered according to different social goals*.[18]

Many detractors of technological determinism hold that, thanks to the essential flexibility of its design, technology can potentially support a variety of societal goals.[19]

Some of technological determinism's fiercest critics launched the social shaping of technology (SST) model. SST is an offshoot science and technology studies that, in its broadest definition, includes approaches such as the 'social construction of technology' and 'actor-network theory'.[20] SST scholars produced numerous case studies examining

[18] Russell & Williams, *supra* note 11 at 39 (emphasis added), quoting Harald Rohracher, *Technology Policy: Would Social Studies of Technology Make a Difference?* (Graz: IFZ, 1998).
[19] See Feenberg, *supra* note 10 ("technology is not a thing in the ordinary sense of the term, but an ambivalent process of development suspended between different possibilities. This 'ambivalence' of technology is distinguished from neutrality by the role it attributes to social values in the design, and not merely the use, of technical systems. On this view, technology is not a destiny but a scene of struggle. It is a social battlefield, or perhaps a better metaphor would be a *parliament of things* on which civilizational alternatives are debated and decided," at 14); Winner, *supra* note 13 (envisioning "a process of technological change disciplined by the political wisdom of democracy," at 55).
[20] See Keith Grint & Steve Woolgar, *The Machine at Work: Technology, Work and Organization* (Cambridge: Polity Press, 1997) at 97; Robin Williams & David Edge, "The Social Shaping of Technology" (1996) 25 *Research Policy* 865 at 866; Langdon Winner, "Upon Opening the Black Box and Finding It Empty: Social Constructivism and the Philosophy of Technology" (1993) 18 *Science, technology & Human Values* 362 at 364; Donald A Mackenzie & Judy Wajcman, "Introductory Essay: The Social Shaping of Technology" in Donald A MacKenzie & Judy Wajcman (ed), *The Social Shaping of Technology: How the Refrigerator Got Its Hum*, 1st ed (Philadelphia: Open University Press, 1985) at 6-7.

how social life affects the design, manufacture and production of technology to support the claim that society and technology co-produce each other.[21]

The work of Trevor Pinch and Wiebe Bijker on the development of the bicycle, for example, sought to demonstrate the "interpretive flexibility" of this technology: not only in terms of design variations, but also in terms of the expectations with regard to these variations.[22] At the end of the nineteenth century, different models of bicycles offered a range of benefits and drawbacks that advantaged some users over others. Over a period of twenty years, user groups championed specific technological solutions that best suited their own needs. This process involved not only material variations, but also advertisement campaigns undermining rival models, notably by denying the problems they sought to solve. Pinch and Bijker argue that the definitive understanding of what a bicycle is only materialized after its interpretive flexibility stabilized into a set of components only now considered essential features of this technology. The bicycle was therefore as much a social achievement as it was a technical one.[23]

Despite the criticism, technological determinism persists. The theory strives in a culture that holds scientific and technological advancements as hallmarks of progress, and treats their unintended and uncontrolled consequences as necessary evils.[24] It reflects popular experience of technology. Individuals routinely encounter and use technologies without

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[21] See generally Stewart Russell & Robin Williams, *supra* note 11; Donald A Mackenzie & Judy Wajcman, *The Social Shaping of Technology*, 2nd ed (Philadelphia: Open University Press, 1999). See also Winner, *supra* note 13 at 20-36 (for Winner's classic argument on the politics of artefacts).
[22] Trevor J Pinch & Wiebe E Bijker, "The Social Construction of Facts and Artefacts: Or How the Sociology of Science and the Sociology of Technology Might Benefit Each Other" (1984) 14 *Social Studies of Science* 399 at 421ff.
[23] *Ibid* at 411-19.
[24] See Merrit R Smith, "Technological Determinism in American Culture" in Merrit R Smith & Leo Marx, *supra* note 11 at 2-5, 7-8; Winner, *supra* note 12 at 98.

much knowledge of how they came to be, and accept that technologies will only function optimally if they behave in a specific way.[25] As one philosopher of technology observes, it seems to be the primary function of technology to determine: "to give a definite, artificial form to a set of materials or to a specific human activity."[26] Technological determinism pictures technology as a 'black box' impervious to social influence, discourages any non-technical attempt to transform technology and therefore "promotes a passive attitude to technological change."[27]

It would be bold to claim that legal practice holds technological determinist views. Despite invitations to consider the co-production of law and technology,[28] much of its literature leaves an impression of technological determinism. Offhand remarks that "[a]s technology develops, so too must the law"[29] or that "[l]egislation is naturally reactive to innovation"[30] support the recurring criticism of law's failures to keep up with technological change.[31]

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[25] See Sally Wyatt, "Technological Determinism Is Dead; Ling Live Technological Determinism" in Edward J Hackett, Olga Amsterdamska, Michael Lynch & Judy Wajcman (eds), *The Handbook of Science and Technology Studies*, 3rd ed (CambridgeL MIT Press, 2008) 165 at 169. See also Chandler, *supra* note 13 at 911-12; Paul Edwards, "From 'Impact' to Social Process: Computers in Society and Culture" in Sheila Jasanoff, Gerald E Markle, James C Petersen, and Trevor Pinch (eds), *Handbook of Science and Technology Studies*, rev ed (Thousand Oaks: Sage Publications, 1995) 257 at 268.

[26] Winner, *supra* note 12 at 75.

[27] Donald A Mackenzie & Judy Wajcman, "Introductory Essay: The Social Shaping of Technology" in Donald A MacKenzie & Judy Wajcman (ed), *supra* note 21 at 5. See also Wyatt, *supra* note 25 at 174. See for example Donald J Gillies, "Technological Determinism in Canadian Telecommunications: Telidon Technology, Industry and Government" (2004) 15 *Canadian Journal of Telecommunication* 1 at 8-9.

[28] See for example Douglas C Harris, "Condominium and the City: The Rise of Property in Vancouver" (2011) 36 Law & Soc Inquiry 694; Peter D Norton, "Street Rivals: Jaywalking and the Invention of the Motor Age Street" (2007) 48 *Technology and Culture* 331; Kieran Tranter, 'The History of the Haste-Wagon': The *Motor Car Act 1909* (VIC), Emergent Technology and the Call for Law" (2005) 29 Melb U L Rev 843.

[29] Jonathan J Darrow & Gerald R Ferrera, "Who Owns a Decedent's E-Mails: Inheritable Probate Assets or Property of the Network?" (2007) 10 NYU J Legis & Pub Pol'y 281 at 319.

[30] Olivier Fournier & John J Lennard, "Rebooting Money: The Canadian Tax Treatment of Bitcoin and Other Cryptocurrencies" (2014) 11 *Canadian Tax Foundation, 2014 Conference Report* 1 at 2.

[31] See Gary E Marchant, "The Growing Gap Between Emerging Technologies and the Law" in Gary E Marchant, Branden R Allenby & Joseph R Herket (eds), *The Growing Gap Between Emerging Technologies and Legal-Ethical Oversight: The Pacing Problem* (Dordrecht: Springer, 2011) 19 at 25-28; Moses, *supra* note 8 at 241-43; Lyria B Moses, "Understanding Legal Responses to Technological Change: The Example of *In Vitro* Fertilization" (2005) Minn JL Sci & Tech 505 at 515-18.

They suggest that technology develops autonomously from law, and treat law's adaptation to technological change as wholly unproblematic. They put the onus on legal agents to adapt law to technology, not the other way around, and discourage considering law's hindrance of technological change under a positive light.[32] The phrase 'law lag' does not merely signal a discrepancy between legal rules and new technologies provoked by technological change, it also implies that law should adapt in kind; Justice Karakatsanis' use of evolutionary language is quite telling in that regard.[33]

These remarks could be treated as mere clichés that cannot sustain rigorous analysis, not to be overestimated. Indeed, numerous legal scholars question and explicitly reject technological determinism,[34] and I believe most jurists would accept the proposition that law has at least some influence over technological development:

> The law affects what technologies are developed — general duties in tort law affect product design; requirements for government approval of specific technologies (such as drugs) affect particular industries; patent law, procurement policies and funding or tax deductions for research encourage technological development (either generally or in specific areas); and specific requirements in regulations precisely prescribe design criteria for some technologies. Law can be used to channel social resistance to technology, as in the example of labelling.[35]

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[32] See Marchant, *supra* note 31 at 27.
[33] *R v Fearon*, 2014 SCC 77, [2014] 3 SCR 621 ("as technology changes, our law must also evolve," at 667).
[34] See for example Lyria B Moses, "How to Think about Law, Regulation and Technology: Problems with 'Technology' as a Regulatory Target" (2013) 5 LIT 1 at 2; Vincent Gautrais, *Neutralité technologique : rédaction et interprétation des lois face aux changements technologiques* (Montréal: Éditions Thémis, 2012) at 68-69; Dana R Irwin, "Paradise Lost in the Patent Law Changing Visions of Technology in the Subject Matter Inquiry" (2008) 60 *Florida Law Review* 775 at 815-16, 823; Robert P Merges, "Locke for the Masses: Property Rights and the Products of Collective Creativity" (2008) 36 Hofstra L Rev 1179 at 1181-82; Gaia Bernstein, "When New Technologies Are Still New: Windows of Opportunity for Privacy Protection" (2006) 51 Vill L Rev 921 at 929; Jason Young, "Surfing While Muslim: Privacy, Freedom of Expression & the Unintended Consequences of Cybercrime Legislation" (2004) 9 *International Journal of Communications Law & Policy* 1 at 40. But see Christopher Arup, "The Study of Law and Technology" (1986) 10 Bull Austl Soc Leg Phil 25 ("on the other hand, an idealist view suggests too strongly that the course of technological change is open and alterable," at 26).
[35] Lyria B Moses, "Agents of Change: How the Law 'Copes' with Technological Change" (2011) 20 Griffith L Rev 763 at 766.

What is interesting is not so much that legal agents would believe law affects technological change, but how they believe it does. In the above quote, the phrase "law affects what technologies are developed" implies that law does not itself develops technologies, but only influences technological change through the intermediary of its subjects. Indeed, a prescriptive premise immediately precedes the above quote: "Legal change affects behaviour, as people change their behaviour (at least to some extent) to assure compliance. … Legal change thus has the capacity to influence technological change."[36] The author shifts an epistemic claim ('law affects behaviour') into a descriptive one ('law influences technology'). Rejecting technological determinism facilitates re-affirming the instrumental theory on the basis of legal prescriptivism: with enough knowledge, technology users can command its development; with enough coercion, law can command their conduct.

This is a crude — but I believe still faithful — analysis of Lawrence Lessig's *Code*.[37] Lessig famously emphasized that the law shares regulatory functions with other modes of regulation and for advocating that law can extend the range of its power by asserting control over these other modes. Cyberspace provides him the opportunity to explain his theory of meta-regulation. According to Lessig, authors affirming that the special properties of cyberspace prevent law from regulating online behaviour wrongly assume

> that the nature of cyberspace is fixed — that its architecture, and the control it enables, cannot be changed — or that government cannot take steps to change this architecture.
>
> Neither assumption is correct. *Cyberspace has no nature; it has no particular architecture that cannot be changed. Its architecture is a function of its design* — or … its code. This code can change, either because it evolves in a different way, or because government or business pushes it to evolve in a particular way. And while particular versions of cyberspace do resist effective regulation, it does not follow that every version of cyberspace does so as well. Or alternatively, there are versions of

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[36] *Ibid.*

[37] Lawrence Lessig, *Code and the Other Laws of Cyberspace* (New York: Basic Books, 1999).

> cyberspace where behavior can be regulated, and the government can take steps to increase this regulability.[38]

Lessig's use of the term "architecture" supports his point that the design of cyberspace results from choice made and implemented by coders. Law can regulate online behaviour by regulating these coders.[39] He aims to defeat a technological-determinist cyberspace by re-affirming the agency of coders and their status as legal subjects.[40]

Lessig's theory points to four types of constraints that operate in concert to regulate human behaviour: law, markets, social norms and architecture.[41] Lessig defines architecture as "the world as I find it, understanding that as I find it, much of this world has been made."[42] Architecture regulates human behaviour by materially restricting action, whether these constraints result from nature or technology. Because formulated and implemented design choices produce much of architecture, lawmakers can shape architecture and direct these design choices to coopt the regulatory power of architecture and indirectly regulate behaviour for their own purposes.[43] Regulation thus provides jurists with an opening into the determinacy of technology.

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[38] Lawrence Lessig, "The Law of the Horse: What Cyberlaw Might Teach" (1999) 113 Harv L Rev 501 at 506 (emphasis added). See for example David Johnson & David Post, "Law and Borders: The Rise of Law in Cyberspace" (1996) 48 Stan L Rev 1367 ("[t]he rise of an electronic medium that disregards geographical boundaries throws the law into disarray by creating entirely new phenomena that need to become the subject of clear legal rules but that cannot be governed, satisfactorily, by any current territorially based sovereign," at 1370). See also *ibid* at 24-28.
[39] Lessig, *supra* note 38 at 509-10. Compare with Johnson & Post, *supra* note 38 at 1370-76.
[40] Lessig, *supra* note 38 (Lessig describes law as "an order backed by a threat directed at primary behaviour," and attempts to illuminate "the limits on law as a regulator and about the techniques for escaping those limits," at 502). See also Lawrence Lessig, "The New Chicago School" (1998) 27 J Legal Stud 661 at 663 at 677-82 ("[l]aw (in its traditional, or Austinian, sense) directs behaviour in certain ways; it threatens sanctions *ex post* if those orders are not obeyed," at 662).
[41] Lessig, *supra* note 37 at 86-95; *ibid* (Lessig defines regulation in the broadest sense, meaning "the constraining effect of some action, or policy, whether intended by anyone or not. In this sense, the sun regulates the day, or a market has a regulating effect on the supply of oranges," at 662 n 1).
[42] *Ibid* at 663.
[43] Lessig, *supra* note 37 at 93-95; *ibid* at 662-70.

Lessig's work encouraged other scholars to explore how technologies' regulatory functions embody societal concerns, and to examine the use of techno-regulation to change behaviour and transform or prevent its impacts.[44] But as the boundary between law and technology blurs in functional terms (both being regulatory measures), some may wish to reinstate this boundary on normative terms by re-affirming the centrality of agency. According to this line of argument, while technology can effectively regulate behaviour, 'techno-regulation' leads to an incidental (and problematic) loss of agency:

> Although the prospect of self-enforcement which design-based instruments [offer] may be attractive to regulators, socio-legal scholars have amply demonstrated the vital role which enforcement officials often play to resolve problems arising from the indeterminacy of rules … Because rules rely on human agency for their operation, they may be vulnerable to avoidance through formalistic interpretations by regulatees or lax enforcement by regulators. But it is also the scope for human agency that provides the source of their ingenuity and flexibility, breathing life into their apparently simple frame. … *Although insensitivity to human agency provides the basis for guaranteeing the effectiveness of design-based instruments which override human agency, it is this rigidity and consequent lack of responsiveness that will generate injustice when unforeseen circumstances arise*.[45]

Removing the possibility of disobedience may threaten democratic values, erode principles of good governance and prevent the development of a moral community.[46] This critique suggests that adopting technology for regulatory purposes surrenders a part of our humanity.[47] In this case, techno-regulation means a loss of agency, one that may be extrapolated to a loss of sovereignty:

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[44] See Karen Yeung, "Towards an Understanding of Regulation by Design" in Roger Brownsword & Karen Yeung (eds), *Regulating Technologies: Legal Futures, Regulatory Frames and Technological Fixes* (Oxford: Hart Publishing, 2008) 79 at 81-87 (offering a taxonomy for design-based regulatory instruments and their modalities). See also Ben Bowling, "Crime Control Technologies: Towards an Analytical Framework and Research Agenda" in Roger Brownsword & Karen Yeung (eds), *Regulating Technologies: Legal Futures, Regulatory Frames and Technological Fixes* (Oxford: Hart Publishing, 2008) 51.
[45] Yeung, *supra* note 44 at 106 (emphasis added).
[46] *Ibid* at 95-102 (doubting even the effectiveness of techno-regulation: "the task of designing standards that will accurately and precisely hit the regulator's desired target is likely to prove exceedingly difficult," at 106); Roger Brownsword, "So What Does the World Need Now? Reflections on Regulating Technologies" in Brownsword & Yeung (eds), *supra* note 44, 23 at 26.
[47] See Winner, *supra* note 12 at 34-38.

> The Internet attack on state jurisdiction advocates an important technological determinism that is problematic for the relationship between law and technology. In general, the advocates of denying state jurisdiction would effectively transfer rule-making power to technologists and technologies. Sovereign states, however, have an obligation to protect their citizens and to assure that technologies empower rules of law rather than undermine the protection of citizens; states must be able to assure their citizens' rights within their national territories. As technology enables noxious behavior online, states need ways to prevent and sanction Internet activities that violate their chosen rules of law …
>
> *In effect, the rule of law as expressed by sovereign states must be supreme over technological claims. The rule of law must take precedence over technological choices in establishing the boundaries that society imposes on noxious online behaviour*. The supremacy of law, at the same time, must provide incentives for innovation and the development of technologies that can support public policy choices made by states.[48]

There are a number of difficulties with such views. On its own, rejecting technological determinism does not elucidate the processes of technological and societal change; it only rejects technological determinism as an account of these processes. Presuming that technology does not change autonomously does not necessarily bring more opportunities for control. On the contrary, technological change may be virtually impossible to anticipate and control if we now have to account not only for technical determinants, but also social ones. In these circumstances, rejecting technological determinism as a theory of technological change can still leave us with no other option but adapting to technology once its unintended effects have manifested — determinism through indeterminacy.[49]

But even if lawmakers had all relevant information at their disposal and could direct behaviour with absolute effectiveness, they still would not have the power to affect technological change. Indeed, using law to direct technological change on the basis of the instrumental theory of technology and legal prescriptivism inevitably takes one back to technological determinism. Indeed, when Lessig affirms that the ability of government to

[48] Joel R Reindenberg, "Technology and Internet Jurisdiction" (2005) 153 U Pa L Rev 1951 at 1969 (emphasis added).

[49] See Winner, *supra* note 12 at 88-89.

regulate cyberspace is a matter of design, he implies that the capability of coders is inherently limited by computer code. Coders can shape cyberspace at the behest of lawmakers, but they rely on technology to do so. Lessig forms his conclusions on the basis of a conceptual and material distinction between law and technology that allows interaction. Founded on the dual identity of technology users and legal subjects, these interactions enable lawmakers to direct technological change through prescriptions, but only to the extent to which they can maintain the distinction between law and technology.

It is through this distinction that technological determinism creeps back into legal analysis and lawmaking. Positing any distinction between law and technology presumes that some portion of the latter is irreducibly 'technological' and therefore impervious to external influence.[50] The instrumental theory portrays that irreducible core through the tenet of determinacy. Lawmakers cannot hope to overcome determinacy: they can require that coders shape cyberspace in a certain way, but only within the real limits of their technological capabilities. As a result, technology determines the power law has over technological change. No matter how capable lawmakers become, at a certain point, the only option left to them is to adapt to the features of technology.[51] The problem lies not in admitting there are limits to which law can affect technological change, but instead in taking these limits for granted. In order to question these limits we must question the distinctions we make between law and technology.

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[50] See also Grint & Woolgar, *supra* note 20 at 16-21 (SST scholars also tend to assume that a core component of technological change remains irreducible and impervious to societal influence).
[51] See for example Bernstein, *supra* note 34; Jay P Kesan & Rajiv C Shah, "Shaping Code" (2005) Harv JL & Tech 319.

2. Legal instrumentalism

French polymath Jacques Ellul counts among the scholars who examined the reliance of modern society on instrumental rationality.[52] A jurist and a historian, Ellul wove sociology and theology together in a dialectical program spanning over forty books and a thousand articles.[53] The question of freedom, which Ellul understood as the active emancipation from all forms of determinism, pervaded his work.[54] In his theological project, he argued that falling from the Garden of Eden threw humanity out of freedom and into a state of necessity.[55] Technology signals the attempt to create an artificial state of freedom: the City of Eden. This attempt fails as technology inevitably takes over our destiny and distracts us from authentic freedom, namely communion with God.[56]

In sociological terms, the fate of humanity becomes that of "Technique." Ellul defined Technique as "the totality of methods rationally arrived at and having absolute efficiency (for a given stage of development) in every field of human activity."[57] Technique possesses characteristics of its own that make it stand apart from mere technical processes. As

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[52] See for example Jürgen Habermas, *Towards a Rational Society: Student Protest, Science and Politics*, translated by Jeremy J Shapiro (Boston: Beacon Press, 1970 [1967]) at 81; Max Weber, *The Protestant Ethic and the Spirit of Capitalism*, translated by Talcott Parsons (London: Routledge, 2001 [1905]) at 123-24.

[53] Because of the dialectical nature of Ellul's methodology, fully understanding his view of technology requires giving attention to both his sociological and theological work. See for example Jacob E Van Vleet, *Dialectical Theology and Jacques Ellul: An Introductory Exposition* (Minneapolis: Fortress Press, 2014) at 2. Constraints of time and space prevent me from applying an equal treatment to Ellul's work, having focused mainly on Ellul's *Technological Society*. I have however resorted to the work Andrew Goddard to familiarise myself with Ellul's theology and keep it in mind as I discussed his sociology of technology. See Andrew Goddard, *Living the Word, Resisting the World: The Life and Thought of Jacques Ellul* (Carlisle: Paternoster Press, 2002).

[54] Jacques Ellul, *The Technological Society*, translated by John Wilkinson (New York: Knopf, 1964) at xxxiii [Ellul, *Technological Society*]. See also Jacques Ellul, *À temps et à contretemps, Entretiens avec Madeleine Garrigou-Lagrange* (Paris: Le Centurion, 1981) at 162.

[55] Vleet, *supra* note 53 at 69, 80-82.

[56] *Ibid* at 139, 151.

[57] *Technological Society*, *supra* note 54 at xxv (Ellul arrived at this definition "by examining each activity and observing the facts of what modern man calls technique in general, as well as by investigating the different areas in which specialists declare they have a technique," at xxv).

technical processes spread in all areas of life, Technique turns society into a technological society or, in other words, a machine.[58]

Ellul's magnum opus, *The Technological Society*, provides a critical perspective into the origins of legal instrumentalism. Classic legal instrumentalists such as Rudolph Von Jhering and American jurist Roscoe Pound used the metaphor of technology to criticize their formalist rivals and formulate a new conception of law capable to solve contemporary and future challenges. They depicted formalists as being possessed by an ineffective technology of law, while instrumentalists would use it as an obedient and efficient tool to bring about progressive reforms.

Today, legal instrumentalism casts law as an empty vessel capable to serve any end.[59] The fact that lawyers now routinely use terms such as 'instrument', 'tool' and 'mechanism' to describe law shows how metaphors can become reality.[60] Early legal realists were certainly not the first to instrumentalise law. But explicitly defining law as an instrument distinguishes their mechanical jurisprudence from their predecessors.

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[58] *Ibid* at 129. See also Lawrence H Tribe, "Technology Assessment and the Fourth Discontinuity: The Limits of Instrumental Rationality" (1972) 46 S Cal L Rev 617 ("[o]ne necessary ingredient of a mode of thought fully adequate to the assessment of any major technology … must be a realization that to develop the technology in any given direction is to 'remake' its developers and users in a particular way," at 650).

[59] See Leslie Green, "Law as a Means" in Peter Cane (ed), *The Hart-Fuller Debate in the Twenty-First Century* (Oxford: Hart, 2010) 169 at 170; Brian Z Tamanaha, *Law as a Means to an End: Threat to the Rule of Law* (New York: Cambridge University Press, 2006) at 25-27, 35; Annelise Riles, "A New Agenda for the Cultural Study of Law: Taking on the Technicalities" (2005) 53 Buff L Rev 973 at 1001. An instrumental conception of law does not necessarily means a law devoid of end: some scholars hold an instrumental conception of law, but insist it serves a specific end of its own. See for example Lon L Fuller, *The Morality of Law*, rev ed (New Haven: Yale University Press, 1969) at 145-46 ("the purpose I have attributed to the institution of law is a modest and sober one, that of subjecting human conduct to the guidance and control of general rules," at 146).

[60] See Riles, *supra* note 59 at 980-81, 1002-08, 1014.

a. Mechanical jurisprudence

Technology captures the imagination of legal scholars prone to describe law as a system of implements: "Like other machines, the law machine is designed to perform work — in this case, legal work — in response to instructions. The operator of the machine supplies the appropriate instruction and the machine, if properly designed and powered, performs it."[61] The law-as-machine metaphor draws from the instrumental theory of technology: the latter quote echoes of Jhering's laws of causality and purpose. The instrumentalist expects law to function in a predictable and determinate manner, at the behest of its operator who deploys knowledge to design, power and instruct it. Law bears no responsibility for its failures or successes; these only belong to its operator who uses it "properly," in a technically "appropriate" manner. Law does not usurp the will of its user, but supports the materialization of her purpose: "Once an end has been decided upon, law can be used in any way possible to advance the designated end, without [legal] limit."[62]

Legal instrumentalism derives from the realist critique of classic legal formalism at the turn of the twentieth century, the former of which then stood as a prevalent understanding of law. Classic legal formalism depicted "law as an autonomous, comprehensive, and rigorously structured doctrinal science … governed by a set of fundamental and logically demonstrable scientific-like principles."[63] In Germany, the schools of analytical and historical jurisprudence shone as the crown jewels of legal formalism. Both schools defined

[61] John H Merryman, "Comparative Law Scholarship" (1998) 21 Hastings Int'l & Comp L Rev 771 at 778. See also James B White, "Law as Rhetoric, Rhetoric as Law: The Arts of Cultural and Communal Life" (1985) 52 U Chi L Rev 684 at 685-86; Winner, *supra* note 21 at 40-42 (the analogy of law and technology is an old one, surfacing notably in the writings of Plato and Jean-Jacques Rousseau).
[62] Tamanaha, *supra* note 59 at 219.
[63] Hanoch Dagan, "The Realist Conception of Law" (2007) 57 UTLJ 607 at 611.

law as a closed body of rules and concepts from which jurists could deduct the one right and only solution to any legal problem using formal logic.[64]

Confident in its perfection, formalists saw little need for law to change to accommodate external ends, such as policy goals or societal values. Rather, law changed on the basis of its internal content and inherent properties, not at the whim of jurists entrusted only with stating, not making, the law.[65] Formalists, therefore, cared little for law's effectiveness. Instead, they preserved its integrity and internal coherence as an end in itself.

Rudolph Von Jhering had little love for legal formalism. He criticized it for privileging a de-humanized method based on the application of abstract principles with little regard for resolving practical problems. Jhering compared it to "clock-work, which runs its regulated course, into which no disturbing hand enters,"[66] and emphasised the formalists' inability to adapt to new circumstances. One of Jhering's contemporaries mocked the

> prevailing ideal of the jurist … sit[ting] in his cell armed only with a thinking-machine. … One hands him any case you will, actual or hypothetical, and, performing his duty, he is prepared with the help of purely logical operation and a secret technique, intelligible only to himself, to point out with absolute exactness the decision predetermined by the law-giver.[67]

Jhering considered it a mistake to reduce judicial activity to "a purely mechanical thing" akin to "the duck constructed by Vaucanson, which carried out the process of digestion

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[64] See Mathias Reimann, "Nineteenth Century German Legal Science" (1990) 31 BC L Rev 837 at 880-83, 860-61; James E Herget & Stephen Wallace, "The German Free Law Movement as the Source of American Legal Realism" (1987) 73 Va L Rev 399 at 401-07.

[65] See Dagan, *supra* note 63 at 611-12; Tamanaha, *supra* note 59 at 15-18 (law would change on the basis of its inherent properties, not at the whim of jurists); David Lyons, "Legal Formalism and Instrumentalism: A Pathological Study" (1981) 66 Cornell L Rev 949 at 950-52.

[66] Rudolph Von Jhering, *Law as a Means to an End*, translated by Isaac Husik (Boston: Boston Book Co, 1913) at 193 [Jhering, *Law as Means*]. See also Rudolph von Jhering, *The Struggle for Law*, 5th ed, translated by John J Lalor (Chicago: Callaghan and Co, 1879) at 5-6 [Jhering, *Struggle for Law*].

[67] Hermann Kantorowitz, *Der Kampf um die Rechtswissenschaft* (Heidelberg: C Winter's Universitätsbuchhandlung: 1906) quoted in Roscoe Pound, "The Scope and Purpose of Sociological Jurisprudence" (1912) 25 Harv L Rev 489 at 596.

mechanically; the case is thrown into the judging machine in front, and it comes out again as a judgment behind."[68] He believed law emerged from energetic struggles of interests powered by will and action.[69] Correspondingly, jurists needed to adapt law "to the conditions of the people, to their degree of civilization, to the needs of the time."[70]

Early American realists also rejected legal formalism. Roscoe Pound, their precursor, argued against legal formalism's aversion for external sources of change and knowledge. According to Pound, formalism led too many judges to prioritize the common law over progressive legislation.[71] As a result, these judges often limited the application of legislation or even ignored it altogether:

> Let us not be afraid of new legislation, and let us welcome new principles, introduced by legislation, which expresses the spirit of the time. Let us look the facts of human conduct in the face. Let us look to economics and sociology and philosophy, and cease to assume that jurisprudence is self-sufficient. *It is the work of lawyers to make the law in action conform to the law in the books, not by futile thunderings against popular lawlessness, nor eloquent exhortations to obedience of the written law, but by making the law in the books such that law in action can conform to it, and providing a speedy, cheap and efficient legal mode of applying it*. … Let us not become legal monks. Let us not allow our legal texts to acquire sanctity and go the way of all sacred writings. *For the written word remains, but man changes*.[72]

While Jhering directed his criticism towards theorists, Pound concerned himself with lawyers and judges.[73] He exhorted his American colleagues to "make each court within its

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[68] *Law as Means, supra* note 66 at 295. See also William Seagle, "Rudolf Von Jhering" (1945) 13 U Chi L Rev 71 (Jhering once imagined having died and ascended to a Heaven of Juristic Concepts, where one found illustrious members of the analytical and historical schools in a cold, desolated place littered with their machines, including "a hair-splitting machine capable of splitting a hair into 999,999 accurate parts," at 89).
[69] Jhering, *Law as Means, supra* note 66 at 193, 245. See also Jhering, *Struggle for Law*, *supra* note 66 at 5-6, 8, 19-20, 27-28, 91-92.
[70] Jhering, *Law as Means*, *supra* note 66 at 328.
[71] See Robert S Summers, "Pragmatic Instrumentalism in Twentieth Century American legal Thought — A Synthesis and Critique of Our Dominant General Theory about Law and its Use" (1981) 66 Cornell L Rev 861 at 870, 890.
[72] Roscoe Pound, "Law in Books and Law in Action" (1910) 44 Am L Rev 12 at 35-36 (emphasis added).
[73] See Roscoe Pound, "The Scope and Purpose of Sociological Jurisprudence" (1911) 25 Harv L Rev 140 at 146. See also HLA Hart, "Jhering's Heaven of Concepts and Modern Analytical Jurisprudence" in HLA Hart, *Essays in Jurisprudence and Philosophy* (Oxford: Oxford University Press, 1983) 265 at 268.

proper scope a bureau of justice rather than ... a sort of slot machine into which facts of a controversy are put above and from which the decision is taken out below."[74] Pound discredited judicial activity reduced to the "purely mechanical task" of formal logic in which rules remain "in a fixed and final form, and cases [are] to be fitted to the rules."[75] He not only thought that legal formalism failed to predict the outcomes of legal disputes, but also that such a "jurisprudence of conceptions brings about a mechanical administration of justice which defeats its own ends,"[76] and in doing so flies in the face of social justice, practicality and common sense.[77]

Jhering, Pound and others used the metaphor of technology to caricature legal formalism. Their depictions of the thinking-machine, the digesting automaton and slot machine personify the formalist as a lifeless machine operating at the behest of a superior body of rules and principles. As an excrescence of that body, she cannot distance herself from it, even in the direst circumstances. The aforementioned images picture a jurist being fed instructions and processing them automatically: she possesses no agency.

We find in Jhering and Pound the suggestion that technology diminishes humanity. They sought to put back "the human factor in the central place and relegat[e] logic to its true position as an instrument"[78] by reversing its relation to jurists: relegating law to the status of a mere means allows one to regain agency as its operator able to use the law to pursue worthy ends, provided of course that she has the knowledge required to master the law and

[74] Roscoe Pound, "Legislation as a Social Function" (1913) 18 Am J Soc 755 at 768.
[75] Roscoe Pound, "Mechanical Jurisprudence" (1908) 8 Colum L Rev 605 at 607.
[76] Roscoe Pound, *Jurisprudence*, v 1 (Saint-Paul: West Pub Co, 1959) at 97.
[77] See Pound, *supra* note 72 at 24; Pound, *supra* note 75 at 618, 620-21.
[78] Pound, *supra* note 75 at 610. See also Jhering, *Law as Means*, *supra* note 66 at 285-86; Jhering, *Struggle for Law*, *supra* note 66 at 36.

improve on its now inherently flexible constituent parts. In their vision, the jurist ceases to be a servile machine, instead taking on the role of an engineer capable of mastering her instrument. Jacques Ellul would have found the idea regrettably naïve.

b. Social engineering

Rejecting legal formalism, Jhering and Pound highlighted law's capacity to change, adapt to prevailing circumstances in order to effectively resolve societal problems, pursue social justice and implement progressive legislation. Jhering inspired a 'free law' movement that would deliver law from the shackles of formal logic and tradition.[79] Pound took note of this movement, renamed it "sociological jurisprudence" in opposition to the formalists' "mechanical jurisprudence."

Like Jhering, Pound considered law not as an end in itself, but as a means to an end.[80] Classic legal instrumentalists hoped to see jurists join with scientists and engineers to transform the world for the better, notably by enacting progressive legislation.[81] Pound idealized law as "a continually more efficacious social engineering"[82] in which "[b]etter legal machinery extends the field of legal effectiveness as better machinery has extended the field of industrial effectiveness."[83] Law would cease to be an automaton to become an

[79] See Herget & Wallace, *supra* note 64 at 407-09, 416-17.
[80] See generally Roscoe Pound, "The Need for a Sociological Jurisprudence" (1907) 19 Green Bag 607; Pound, *supra* note 73. See also *ibid* at 422ff (on the influence of the free law movement on classic legal realism).
[81] See Summers, *supra* note 71 at 870, 890. See also Roscoe Pound, *Jurisprudence*, v 3 (Saint-Paul: West Pub Co, 1959) ("[a] time where men have succeeded in dividing the indivisible, have learned to fly, have developed incredible speeds, have wrought miracles of transmission of speech, sound and sight, and are talking seriously of travel in extraterrestrial space and of creating an artificial additional moon, is not one to set limits to the possibilities of science," at 20); Pound, *supra* note 80 at 608.
[82] Roscoe Pound, *An Introduction to the Philosophy of Law* (New Haven: Yale University Press, 1922) at 98-99 (emphasis added).
[83] *Ibid* at 97.

obedient and polyvalent tool designed and operated by the jurist–engineer. The latter would wield this tool for the benefit of the public interest, supported by modern science.

Pound's enthusiastic vision of law as social engineering betrays, in Ellul's words, "man's ancestral worship of the mysterious and marvellous character of his own handiwork."[84] As a social phenomenon that pervades all of modern society, Technique stems from a fascination with efficiency: observing that the use of some means yield more results than others. As we take notice of diverging results, we apply reason through experimentation to understand what makes some means more efficacious than others and to produce increasingly efficient means. The application of reason thus multiplies the means available, but constrains their selection on the sole basis of efficiency.[85]

In Ellul's sociology, "efficiency" refers not to achieving maximum productivity at a minimum cost, but the total augmentation of technical operations: producing more effective means *and* eliminating less effective ones.[86] In a technological society — the world Ellul insists we live in — efficiency is the only indicator of value and the sole end worthy of pursuit: "taking over the traditional values of every society without exception, subverting and suppressing these values to produce at last a monolithic world culture in which all non-technological difference and variety is mere appearance."[87]

Technique is a sociological phenomenon. While it stems from the application of instrumental rationality to human activity, reason alone does not suffice to bring about the

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[84] *Technological Society*, *supra* note 54 at 24.
[85] *Ibid* at 64-74.
[86] Goddard, *supra* note 53 at 136-37.
[87] Ellul, *Technological Society*, *supra* note 54 at x. See also Winner, *supra* note 21 at 46-47, 57 ("[i]t is characteristic of societies based on large, complex technological systems, however, that moral reasons other than those of practical necessity appear increasingly obsolete, 'idealistic,' and irrelevant," at 36).

technological society. Indeed, Ellul explains, effectiveness once guided human activity alongside many other factors, such as aesthetics, tradition and justice.[88] Efficiency was limited to specific fields of activity, such as the military. But during the eighteenth century, major societal changes paved the way for Technique to become the autonomous and defining social force of modern society, a society that prioritizes efficiency over all other considerations. These changes include a growing base of technologies; a demographic expansion requiring the satisfaction of human needs through technical means and the satisfaction of technical needs through human capital; an economic context stable enough to facilitate experimentation, but flexible enough to integrate its products; the encouragement by all social classes to engage in technical activities; and the plasticity of the social environment.[89] Ellul considered this last development as the most decisive change. Society became unprecedentedly susceptible to the influence of Technique after the disappearance of taboos and the disintegration of a rigidly organized and diverse social life — leaving only the state intact.

Ellul's emphasis on social plasticity takes us back to nineteenth-century legal formalism. Formalism may have prevented the law to reach a summit of effectiveness, but it also prevented effectiveness from overcoming law as the only consideration worthy of attention. By pursuing a conception of justice based on the preservation of liberty and status quo,[90] formalism would have slowed down the progress of Technique within law.

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[88] Ellul, *Technological Society*, *supra* note 54 at 110.
[89] *Ibid* at 47-60.
[90] See Pound, *supra* note 76 at 510-11, 514-19, 522-26, 540-43; Roscoe Pound, "Making Law and Finding Law" (1916) 82 Cent LJ 351 at 351-52; Roscoe Pound, "Legislation as a Social Function" (1913) 18 Am J Soc 755 at 757-61 ["Legislation as Social"]; Pound, *supra* note 80 at 612-15.

Consider the historical school of jurisprudence: a branch of classic German legal formalism championed by Friedrich Von Savigny in the second half of the nineteenth century. The historical school held that law emanated from human interaction. Jurists could examine the history of law to identify its core principles and organize them into a coherent system that included custom, legislation and legal science itself. The historical school considered this system the very source of law: law could change, but changes had to logically derive from the recognized canon.[91] The very "tendency of the lawyer to regard artificiality in law as an end, … and to judge rules and doctrines by their conformity to a supposed science and not by the results to which they lead"[92] prevented instrumental rationality and Technique from subverting law.

Rather than effectiveness, legal formalism maintained aesthetics at the heart of jurisprudence, investing law with an "inviolable, built-in principled integrity … to resist malign uses."[93] By reducing law to a means, legal instrumentalism makes it disposable. Since no legal instrument embodies inviolable principles or ideals, a legal instrument can only justify its existence on the basis of the effectiveness with which it pursues a chosen end. "Law," Pound celebrated indeed, "is no longer anything sacred or mysterious."[94]

It is one thing to say that law is not an end in itself, but another to say that law has no end of its own. While the decline of legal formalism increased the plasticity of law, the instrumental conception of law as an empty vessel came only later. For the early realists,

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[91] See Roger Berkowitz, "From Justice to Justification: An Alternative Genealogy of Positive Law" (2011) 1 UC Irvine L Rev 611 at 621-22; Reimann, *supra* note 64 at 871-74, 876-78, 880-81; Herget & Wallace, *supra* note 64 at 404-07.
[92] Pound, *supra* note 75 at 607-08. See also Tamanaha, *supra* note 59 at 215.
[93] Tamanaha, *supra* note 59 at 219.
[94] *Supra* note 80 at 610.

means alone could not define law; its substance resided in the means–ends relationship as a whole.[95] Jhering considered law a means to a specific end, namely "the *security of the conditions of social life*, procured by the power of the State,"[96] by opposition to a means to any end. He believed law invariably pursued this end even though it could fail to serve it.[97] Pound also believed law served a specific end: securing social interests.[98] Conceiving law as a fallible yet purposeful endeavour focused the attention of jurists on the effects law had on society. Like Jhering, Pound believed law had to "be valued by the extent to which it meets its end, not by the beauty of its logical processes or strictness with which rules proceed from the dogmas it takes for its foundations."[99] The early realists did not doubt that law's proper end was to pursue the public good.

The difficulty, of course, lies in determining what 'public good' stands for. Jhering did not precisely articulate what he meant by the "conditions for social life" and neither did Pound's theory of social interests leave a lasting impression.[100] Contrary to what many early legal realists had hoped, science failed to provide clear answers on the substance of the public good and how law should pursue it.[101]

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[95] See Dagan, *supra* note 63 at 631.
[96] *Law as Means*, *supra* note 66 at 330.
[97] *Ibid* at 334-35, 337.
[98] *Supra* note 76 at 16-17, 545-46; *supra* note 81 at 5 ("the subject matter of law is those manifestations of internal nature which, in the form of assertion of or seeking to realize individual expectations or claims or wants, require social control," at 7); "Legislation for Social", *supra* note 90 at 763; *supra* note 67 at 516; *supra* note 73 at 140-43.
[99] *Supra* note 75 at 605. See also Marin R Scordato, "Reflections on the Nature of Legal Scholarship in the Post-Realist Era" (2008) 48 Santa Clara L Rev 353 at 363, 406; Dagan, supra note 63 at 639.
[100] See Victoria Nourse & Gregory Shaffer, "Varieties of New Legal Realism: Can a New World Prompt a New Legal Theory" (2009) 95 Cornell L Rev 61 at 125-26; Tamanaha, *supra* note 59 at 72; Summers, *supra* note 71 at 915. See also Iredell Jenkins, "Rudolph von Jhering" (1960) 14 Vand L Rev 169 at 190 (the responsibility does not fall on them alone: "the different schools that built separately upon [Jhering's work] were at one in treating law in largely technical rather than philosophical terms. They looked for the meaning of the law in the uses to which it was actually put rather than in the ends that it should ideally serve," at 172).
[101] See Summers, *supra* note 71 at 880-81, 893-94, 902. See also Scordato, *supra* note 99 at 419. But see Dagan, supra note 63 at 640-42 (arguing that most Realists were appreciative yet sceptical of science in that regard).

Instead, value pluralism increasingly shed doubt on the possibility of formulating an objective and universal conception of the public good. The early realists had never embraced moral relativism, but in the second half of the twentieth century it became uncontroversial that heterogeneous societies share few normative commitments susceptible to guide lawmaking.[102] Concurrently, other legal scholars favoured an intellectual project that, without denying "the possibility of the validity of a system higher than the positive law,"[103] subtracted ends from the nature of law:

> The law is characterized not as an end but as a specific means … The law is a coercive apparatus having in and of itself no political or ethical value, a coercive apparatus whose value depends, rather, on ends that transcend the law *qua* means. This interpretation, too, of the material fact to be comprehended as law is free of every ideology. This material fact is recognized unequivocally as historically conditioned, which in turn offers insight into the intrinsic connection between the social technique of a coercive system and a societal state of affairs to be maintained by way of that technique. What this state of affairs comes to … is irrelevant from the standpoint of the Pure Theory of Law.[104]

Kelsen's so-called "radically realist legal theory"[105] insisted that what makes law special is not the ends it pursues, but the prescriptive means it employs to pursue them: "the linking of a human being's behaviour … with a coercive act lends itself to the pursuit of any social purpose whatever."[106] The early realists did not anticipate that defining 'public good' would become problematic or that many of their successors would dispense with it

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[102] See Dagan, *supra* note 59 at 649, 626, 630-34; Tamanaha *supra* note 59 at 116, 223-24; Summers, *supra* note 71 at 880, 944. See also generally Arthur A Leff, "Economic Analysis of Law: Some Realism about Nominalism" (1974) 60 Va L Rev 451 ["Economic Analysis"]; Arthur A Leff, "Law and Technology: On Shoring Up a Void" (1976) 8 Ottawa L Rev 536 ["Law"]; Arthur A Leff, "Unspeakable Ethics, Unnatural Law" [1979] Duke LJ 1229 (in the latter three articles Leff argued that it is impossible to base moral judgment on standard normative assertions, unless they invoke an all-knowing, unquestionable God because only a God can withstand critical and sceptical "says who?" and "so what?") ["Unspeakable"].

[103] Hans Kelsen, *Introduction to the Problems of Legal Theory: A Translation of the First Edition of the Reine Rechtslehre or Pure Theory of Law*, translated by Bonnie L Paulson & Stanley L Paulson (Oxford: Clarendon, 1996) at 35.

[104] *Ibid* at 31-32. See also HLA Hart, *The Concept of Law*, 3rd ed (Oxford: Oxford University Press, 2012) at 248-50.

[105] *Supra* note 103 at 18.

[106] *Ibid* at 31. See also Green, *supra* note 66 at 173.

altogether. Understanding law solely as rational, prescriptive means manifested "a clear technical intention"[107] to pursue an efficient order.

c. Efficient ordering

Ellul postulates that quantitative change can provoke qualitative change. [108] The multiplication of technologies in the eighteenth century led to Technique, which is more than the sum of its parts. Indeed, five attributes make Technique the defining social force of modern society: automatism, self-augmentation, universalism, autonomy and monism.[109] Technique automatically imposes itself as instrumental rationality leading us to seek efficiency in all human activities. Technique does not depend on human inventiveness for its augmentation. Each technology constitutes the basis for further development, which explains the accelerated rate at which technology changes today.

Moreover, as a universal phenomenon, no culture can resist nor change the influence of Technique. This imperviousness to change shows how Technique "is *autonomous* with respect to economics and politics… [It] has become a reality in itself, self-sufficient, with its special laws and its own determinations."[110] Because all technologies belong to a single monistic totality, they share the same traits. For example, they invariably cause unforeseen harm, only to be mitigated by other harmful techniques.[111] Thus we cannot separate good

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[107] Ellul, *Technological Society*, *supra* note 54 at 60.
[108] *Technological Society*, *supra* note 54 at 62.
[109] *Ibid* at 79-147 (Ellul believed that Technique, not capitalism, structured modern society, at 47-59). See also Jeffrey P Greenman, Read M Schuchardt & Noah J Toly, *Understanding Jacques Ellul* (Eugene: Cascade Books, 2012) at 24-29.
[110] *Ibid* at 133-34.
[111] *Ibid* at 105.

techniques from the bad ones: they all belong to a single phenomenon. Right and wrong uses are illusions: we use technologies effectively, or we do not.[112]

Rules provide the technological society with enough order to pursue efficiency.[113] To achieve efficiency, a technology relies on the coordinated operation of other technologies. Cars require roads, roads require asphalt, asphalt requires asphalt factories, asphalt factories require power, and so on. Organizational technologies — e.g. commerce, industry, transport, etc. — coordinate the development and implementation of other technologies. Because these organizational technologies are insufficient to manage the technological complex, the state becomes "the relational apparatus which enables the separate [technologies] to confront one another and to co-ordinate their movements."[114] With organizational technologies of its own — i.e. military, police, administration, and politics — the state exploits society's capital as the supreme technological organizer.[115]

Note that Ellul did not include law among the technologies of the state. Himself a jurist, he was convinced that, at its origins, law stems from religion before evolving into natural law. In this form, law, distinguished from religious power, spontaneously reflects a "social consensus about how to live together."[116] Natural law begins to erode once humans theorize about law. They become aware of its existence as a phenomenon distinct from themselves and as an object of speculation and interpretation.

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[112] *Ibid* at 96-98, 110-11.
[113] *Ibid* at 100-01, 110 ("[t]he more we mobilize the forces of nature, the more must we mobilize men and the more do we require order, which today represents the highest value," at 103).
[114] *Ibid* at 307.
[115] *Ibid* at 110-15, 243, 265. See also Feenberg, *supra* note 10 at 13.
[116] Goddard, *supra* note 53 at 200.

Next come the centralization of law within the state and the emergence of juridical technique. These forces progressively reduce law to the arbitrary and static instrument of the state implemented by juridical technique, which seeks to categorize, rationalize and coordinate legal rules. It is in that form that law inevitably loses all spontaneity and, therefore, continually lags behind society.[117] For Ellul, the maintenance of natural law as phenomenon depends on

> *1) un certain sentiment de justice, qui doit être approximativement le même chez tous à un moment donné, puisqu'il donne naissance à des institutions semblables dans leur fondement ; 2) un certain équilibre entre la technique juridique indispensable pour l'élaboration du droit, et le milieu humain et social, de façon que le droit n'est pas une création spontanée, irrationnelle du milieu, et pas davantage une création purement rationnelle, mathématique, étrangère au milieu ; 3) une certaine nécessité reconnue à la fois par l'État qui est subordonné au droit, et par les individus, et qui fait que le droit est efficace et obéi.*[118]

In this form, i.e. natural law as phenomenon,[119] the law remains effective without being a mere apparatus of efficient order. Indeed, the content of natural law — justice[120] — makes it unpredictable since it pursues variable ends. In its pursuit of justice, law does not submit to the whims of the state, and can even make judgement upon the latter.[121]

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[117] See Jacques Ellul, *Le fondement théologique du droit* (Paris: Dalloz, 2008) at 11-13, 18-24, 100 ("[*à*] *ce moment le droit se durcit, devient un monument abstrait, sans cesse en retard sur l'évolution sociale et politique et qu'il faut sans cesse remettre à jour par des créations arbitraires qui s'adaptent plus ou moins bien à la société. Le droit devient l'affaire des juristes, avec sa consécration et son autorité dans l'État*," at 12-13). See also Goddard, *supra* note 53 at 251-52, 291-92

[118] Ellul, *supra* note 117 at 26.

[119] *Ibid* at 53-54 (as opposed to natural law as doctrine).

[120] *Ibid* ("[*o*]*n pourra prendre comme critère de* cette *justice* [practical and human justice, as opposed to idealistic or divine] *le fait qu'une loi ou une disposition juridique est partie organique de la patience de Dieu. Ainsi une loi qui est ruineuse pour la société, qui entraîne le désordre et la mort, qui conduit à la désagrégation, est une loi injuste. Mais est également injuste la loi qui, maintenant un ordre formel, provoque par l'oppression et la rigidité l'impossibilité de vie spirituelle de l'homme ou des groupes, car cette stérilisation spirituelle par la loi conduit très rapidement aussi à la décadence de la société. Enfin, n'est pas juste une loi qui n'est pas partie organique de la patience de Dieu, c'est-à-dire qui chercherait à se placer en dehors du dilemme Vie ou Mort de la société et de l'homme*," at 69).

[121] *Ibid* at 23-24, 26, 54-55, 71, 95-99.

Law cannot co-exist with Technique. On the contrary, law hinders Technique by allowing justice to obstruct the coordination of technologies. But as juridical technique develops as the means of implementing justice, the form of law overwhelms its substance, and takes on a prescriptive and creative role instead of a strictly declaratory one. As such, juridical technique displaces the spontaneous lawmaking of natural law with the conscious lawmaking of jurists and public officials.[122] According to Ellul, without justice to balance juridical technique, law disappears in favour of efficient ordering:

> For the technician of the law, all law depends on efficiency. There is no law but in its application. A law which is not applied is not a law. Obedience to rule is the fundamental condition of its being. Legal abstraction is unreal. The whole technical apparatus (expression of legal norms, publication of laws, applications in jurisprudence or doctrine, voluntary or forced realization) has but one end: the application of the law. And this complex corresponds exactly to the notion of technique in general, that is, an artificial search for efficiency. In this definition, efficiency is taken in its pure state; we are forced to admit that law does not exist without it. The term *artificial* is used in the same way; law is no longer obeyed spontaneously, and the popular consciousness which originally created law does not adhere spontaneously and naturally to this system. Application of law no longer arises from popular adhesion to it but from the complex of mechanisms which, by means of artifice and reason, adjust behavior to rule.[123]

An illustrious realist once predicted: "the black-letter man may be the man of the present, but the man of the future is the man of statistics and the master of economics."[124] Neoclassical law and economics theory, as championed by Richard Posner, strongly resonates with Ellul's depiction of juridical technique. This legal theory aggrandizes efficiency. Posner argues that legal rules do and should pursue wealth maximization — i.e.

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[122] See Ellul, *Technological Society*, *supra* note 54 at 291-94. See also Goddard, *supra* note 53 at 201-05.
[123] Ellul, *Technological Society*, *supra* note 54 at 294. See also Ellul, *supra* note 117 at 22-25. Compare with Pound, *supra* note 75 ("[t]he life of the law is in its enforcement," at 619); Jhering, *Law as Means*, *supra* note 66 ("[t]he criterion of all legal norms is their realization through coercion by the *State authorities* appointed for the purpose," at 251). See also Summers, *supra* note 71 at 929. But see Dagan, *supra* note 63 at 628-30 (Realists considered force and reason equally important components of law).
[124] Oliver W Holmes, "The Path of Law" in Oliver W Holmes, *Collected Legal Papers* (New York: Harcourt, Brace & Co, 1920), quoted in Dagan, *supra* note 63 at 632.

the efficient allocation of resources[125] — by putting in place incentives that effectively orient the behaviour of legal subjects, portrayed as rational maximizers of personal satisfaction.[126] Neoclassical law and economics attracts criticism for proposing a new legal formalism that deduces legal prescriptions from a limited number of disputable assumptions promoting the single principle of efficiency.[127] While competing theories of law share its instrumentalism,[128] neoclassical law and economics owes its success to a mathematical, total and agnostic pursuit of efficient ordering.[129]

The *Technological Society* suggests a different interpretation of the jurisprudential debates of the turn of the century. Critics of legal formalism did not allow for legal instrumentalism to emerge by annihilating legal formalism. Instead, they distilled what Ellul called "juridical technique" out of legal formalism.

Tied to formalism, juridical technique appeared to Jhering and Pound as "mechanical" and "clockwork," but law became more technological in nature after they freed it to pursue efficiency. As such, juridical technique systematically favours technology: it is a "*machinery of coercion* organized and wielded by the State force"[130] to establish an order

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[125] See Richard A Posner, *Economic Analysis of Law*, 9th ed (New York: Wolters Kluwer Law & Business, 2014) at 3-17 (Posner uses the Kaldor-Hicks concept of efficiency, which considers a transaction efficient when the parties involved could compensate any harm done to a third party, whether or not they do so).
[126] See Richard A Posner, "The Economic Approach to Law" (1974) 53 Tex L Rev 757 at 761-64.
[127] Nourse & Shaffer, *supra* note 100 at 64-68, 96-97, 111. See also Tamanaha, *supra* note 59 at 119.
[128] See Tamanaha, *supra* note 59 at 121, 124 (for example, critical legal studies, and law and society).
[129] See Posner, *supra* note 125 ("[b]y showing how change in economic policy or arrangements would advance us toward [efficiency, economists] can make a normative statement without having to defend their fundamental premises," at 16); Posner, *supra* note 126 ("[t]he hallmark of the 'new' law and economics is the application of the theories and empirical methods of economics to the central institutions of the legal system," at 759; "[s]o long as there remain important areas of the legal system that are not organized in accordance with the requirements of efficiency, the economist can play an important role in suggesting changes designed to increase the efficiency of the system. Of course, it is not for the economist, *qua* economist, to say whether efficiency should override other values in the event of a conflict," at 765).
[130] Jhering, *Law as Means*, *supra* note 66 at 251.

that mobilizes human capital in support of technological augmentation. Wherever legal formalism subsists in the technological society, it is not by virtue of the non-instrumental value of law, but rather because formalist traits such as internal logic and formal adherence to rules make law more effective.[131]

3. Legal materials

Martin Heidegger investigated how the essence of technology interferes with how the world reveals itself to human beings.[132] His ontological approach corresponded to the central theme of philosophical project, namely the question of 'Being': the conditions in which entities reveal their existence prior to any way of knowing, religious or scientific.[133] Heidegger's answer to the "Question Concerning Technology" has three constitutive parts: bringing-forth, challenging-forth, and Enframing.[134] Heidegger believed that all entities have essences of their own: an enduring presence in time.[135]

"Bringing-forth" refers to how entities reveal themselves through *techne*, or craftsmanship. *Techne* solicits four causes of existence: the matter that constitutes the object (material cause), the shape or structure of the object (formal cause), the end of the object (final cause), and the change that brings about the finished object (efficient cause).[136] Heidegger emphasizes that in the context of *techne*, human intervention constitutes only one (efficient) cause among others: the carpenter does not create a table, rather the four causes

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[131] See Tamanaha, *supra* note at 59 at 70-71. See also Green, *supra* note 59 at 180.
[132] Martin Heidegger, "The Turning" in Martin Heidegger, *The Question Concerning Technology and Other Essays*, translated by William Lovitt (New York: Garland Publishing, 1977) 36 at 36 n1.
[133] Martin Heidegger, *On Time and Being*, translated by Joan Stambaugh (New York: Harper & Row, 1972) at 12.
[134] Martin Heidegger, "The Question Concerning Technology" in Martin Heidegger, *supra* note 132, 3 at 12.
[135] *Ibid* at 36, n1.
[136] See Aristotle, *Physics*, translated by Robin Waterfield (Oxford: Oxford University Press, 1996) at 29-30.

concurrently reveal, or 'bring', the table. Through bringing-forth and despite human intervention, entities revealed through *techne* stand on their own and preserve their ontological essence and inherent dignity.[137]

In contrast to bringing forth entities, modern technology challenges them forth.[138] Like a predator sets upon its prey, "challenging-forth" sets human's needs and desires upon an entity. Technology users order the world as a standing reserve of disposable energy, and reduce entities to mere functions and resources.[139] Heidegger illustrates challenging-forth with the example of a hydroelectric dam set on the Rhine. The hydroelectric dam robs the Rhine of its dignity and potentiality, cancelling its revelation to satisfy human needs:

> In the context of the interlocking processes pertaining to the orderly disposition of electrical energy, even the Rhine itself appears as something at our command. … *the river is dammed up into the power plant. What the river is now, namely, a water power supplier, derives from out of the essence of the power station*. In order that we may even remotely consider the monstrousness that reigns here, let us ponder for a moment the contrast that speaks out of the two titles, "The Rhine", as dammed up into the *power* works, and "The Rhine", as uttered out of the *art* work, in Hölderlin hymn by that name. But, it will be replied, the Rhine is still a river in the landscape, is it not? Perhaps. But how? In no other way than as an object on call for inspection by a tour group ordered there by the vacation industry.[140]

The dam transforms the river into a standing reserve of disposable electric power and photographic shots. The ontological damage remains unavoidable despite increased standards of living and even in the absence of environmental damage. Technology does not simply extend our capacities; it conditions our engagement with the world by negating

[137] Heidegger, *supra* note 134 at 6.
[138] *Ibid* at 16-17.
[139] *Ibid* at 17 ("a tract of land is challenged into putting out of coal and ore. The earth now reveals itself as a coal mining district, the soil as a mineral deposit," at 14).
[140] *Ibid* at 16 (emphasis added, "[e]verywhere everything is ordered to stand by, to be immediately at hand, indeed to stand there just so that it may be on call for a further ordering … Whatever stands by in the sense of standing-reserve no longer stands over against us as object," at 17).

its authenticity. As a result, humans perceive themselves as the sole cause of the world and see none but themselves.[141]

Humans challenge forth the world because of "Enframing," the essence of technology. Indeed, Enframing challenges forth humans into challenging forth the world. Heidegger thus exculpates technology users: technology is a way of revealing the real and Enframing is the primary way the real reveals itself in the technological age. Technology as a whole endangers human dignity, authenticity and life by preventing humans from seeing other ways of revealing the world.[142] Enframing reveals an entity-less world where humans themselves are standing reserves: the Rhine is standing reserve for vacationers, vacationers are standing reserves for the tourist industry, which is itself reserve to larger industries and so on. In this world, humans also risk objectification and expendability.[143]

Modern technology thus does not merely serve users' ends, but reduces all entities to standing reserves. Because Enframing constitutes the ontological nature of technology, we neither master nor overcome it.[144] Controlling technology through law is futile because Enframing conditions how law reveals itself to legal agents. Despite the criticism it attracts,[145] Heidegger's philosophy invites us to recognize the inherent dignity of the world before modern technology obscures and annihilates it for good.

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[141] *Ibid* at 26-27. See also Louis E Wolcher, "The End of Technology: A Polemic" (2004) 79 Wash L Rev 331 at 346-49 (for numerous illustrations of challenging forth).
[142] See Heidegger, *supra* note 134 at 13, 18-20, 24-28 ("[t]he fact that the real has been showing itself in the light of Ideas ever since the time of Plato, Plato did not bring about. The thinker only responded to what addressed itself to him," at 18).
[143] See *ibid* at 16. See also David I Waddington, "A Field Guide to Heidegger: Understanding 'The Question Concerning Technology'" (2005) 37 *Educational Philosophy and Theory* 567 at 577 (Heidegger went so far as comparing the manufacture of food by modern agricultural techniques to the manufacture of corpses by gas chambers and extermination camps to underline the ontological threat of technology).
[144] See *ibid* at 18 ("[h|uman activity can never directly counter this danger. Human achievement alone can never banish it," at 33); Heidegger, *supra* note 132 at 38.
[145] See for example Waddington, *supra* note 143 at 578.

Consider the impact of information technology on legal research. I was initiated to legal research in the early 2000s, a few years after LexisNexis® began to provide access to legal materials via Internet.[146] As it was a relatively new service, my law school taught my cohort to use traditional print-based technologies such as encyclopaedias, indexes and abridgments alongside electronic-based technologies such as digital databases.

As one scholar argues, "changes in the means used to communicate information are important to law because law has come to rely on transmission of information in a particular form."[147] Digital databases like Quicklaw® store vast amounts of easily reproducible information, and can transmit, modify and revise it faster than their print counterpart. As such, they are

> changing more than just the way legal scholars research and write. These technologies are changing how they think. … To use an encyclopaedia, whether in print or electronic form, one reconstructs knowledge relationships, usually on the basis of taxonomies. When my son clicks on the desired datum, the material is delivered by a search protocol that stays hidden from view. In our day, research meant starting with a question and using it to identify a bit of information and a refinement of the question. The mechanisms of discovering knowledge relationships were the tools of research.[148]

Using databases does not involve refining a research question, but a trial-and-error process in which the user types in keywords that will yield usable data. The utility of the keywords derives from the results they yield, not from whether they allow the researcher to critically reflect about her question. The relevance of the results derives from how closely they relate to her question, not from the insight they provide about the answers. The value of the

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[146] LexisNexis®, "About Us", lexisnexis.com, 2015, available online at http://www.lexisnexis.com/en-us/about-us/about-us.page (consulted on 9 October 2015).
[147] See M Ethan Katsh, *The Electronic Media and the Transformation of Law* (New York: Oxford University Press, 1989) at 8.
[148] Roderick A Macdonald, "Who's Afraid of the Cyber-Law-Journal?" (2011) 36 Queen's LJ 345 at 364.

question derives from how it generates keywords that yield relevant results, not from how it engages professional practice and intellectual traditions.

Digital technology does not simply provide more efficient ways to do the same sort of work that my professional forefathers did. Instead, they change the very substance of the law. Using paper abridgments and indexes demanded that I familiarize myself with how legal professionals and publishers organized knowledge. Research involved not only discovery, but also and more importantly, socialization. In 1989, Ethan Katsh doubted that socialization through legal research would survive electronic media:

> The change in the means of access to legal materials will ultimately affect how law is perceived by lawyers and by others who may have an interest in such materials. Print supported a standardized set of categories, and every case was placed into one or more categories. The internal organization of legal materials need no longer conform to such a system. Yet it is this system that, at least in part, unites lawyers by influencing how they think about law. *As new techniques for finding electronic data replace the habits encouraged by print, the organization of data will begin to reflect individual users' varied views of law rather than some structure that was developed in order to use material in printed form.* This new and less-standardized structure will not require labels be placed on data or that there be any limit to how a user wishes to organize data. How a person perceives the body of data will depend more on what that person's needs are and less on what the needs of a publisher are.[149]

The same author raises the concern that electronic media might also overturn the external limits of law. Print technology helped law distinguish itself from other fields and disciplines, such as politics and philosophy, by physically transporting legal materials to libraries or bookshelves dedicated to the preservation and study of law, where they would be maintained and consulted by legal professionals and scholars.[150] The encyclopaedic form of research Roderick Macdonald described above transposes itself in the three-dimensional, physical space of libraries as a researcher consults bookshelves dedicated to

[149] Katsh, *supra* note 147 at 223.
[150] *Ibid* at 223-24.

specific categories of law in a special room or building, the law library, physically separated from bookshelves reserved for other topics.

The use of digital technology for legal research brings the law back into these disciplines as shown in increased interdisciplinary research. When my fore-supervisors did research, they would first identify the bookshelves dedicated to their topic in law libraries within their physical reach. The consultation of materials would begin with the volume standing at the upper left of these bookshelves, and end with the one standing at the bottom right. Their work would epistemically remain in the field of law as long as they physically remained in law libraries. Print, library management and architecture physically limited interdisciplinary endeavours; "foreign" materials would come to attention of the legal researcher if already endorsed within her discipline — i.e. located alongside or referenced in materials deposited in the law library — introduced by a helpful expert or already familiar to a researcher formally trained in a foreign discipline.

By comparison, while I can specifically restrict it, searching on a library's online catalogue yields results not on the basis of discipline, but relevance: law books and articles, but also policy documents along with materials from philosophy, engineering, history, sociology, etc. When materials are available on the basis of relevance rather than discipline, the nature of legal research and disciplinary distinctions become unstable.

If doing legal research does not depend on the consultation of legal materials in law libraries, what does it depend on? How much 'legal' material should a researcher include in her bibliography to label her labour as 'legal' research? Is it only a matter of working the words 'law' or 'legal' in her research question or title? Of privileging legal texts in

block quotes? Or does it depend on her professional status as a certified member of the 'legal' community — i.e. registered student, tenured scholar, accredited lawyer, etc.? Is the publisher the determinative factor: would an article published by the *McGill Law Journal* lose its 'legal-ness' if it had been published in the *McGill Dental Review*? Would the *McGill Journal of Political Sciences* work? Is it because the discipline of political sciences shares more with law than dentistry does? What if the article in question discusses the politics of dental law? Or is it about the audience: should a paper intended to justiciables be less of a legal work than one written for justices? What about a paper celebrated by many as the best legal analysis ever put into words, but reviled by all jurists as 'not real legal work'?

If the boundaries of legal research are socially constructed,[151] the means of accessing research materials likely play a significant part in drawing these boundaries. The physical limitations of print-based technologies support specific boundaries between the legal and the non-legal: for example, the law library being the location where legal materials are deposited and where legal research takes place. At a time when digital technology circumvents these physical boundaries and provides access to an overabundant amount of information across disciplines, many dividing lines that until now determined the legal status of research are no longer useful and therefore need to be re-established.

If I were to make an educated guess, I would say that maintaining the disciplinary status of legal research despite the inclusion of foreign materials depends on instrumentalising these materials. Foreign materials must be means serving the ends of legal research, rather than

[151] See generally Thomas F Gieryn, "Boundaries of Science" in Sheila Jasanoff, Gerald E. Markle, James C. Petersen, and Trevor Pinch (eds), *supra* note 25, 393 (especially at 407-11).

being left to transform these ends. Indeed, suspicion against the 'law and …' approaches come from the concern that they would reduce legal scholarship to 'law, *but really* …'. As means and not end, foreign materials retain their authority as long as they serve legal analysis. The instrumentalisation of foreign materials, in turn, makes reviewers more comfortable in judging the work of their peers: if they cannot assess the validity of foreign materials, they can at least assess the adequacy of their use. We tolerate the interdisciplinary only as far as it submits to the supradisciplinary.

Moreover, electronic research tools accelerate the process of referential inflation:

> Everyone thinks it is necessary to find, read and cite everything that has ever been written on a topic before publishing. There are many reasons for this, though. One is that the stuff is easy to find. Electronic databases with key word searches can generate a hundred sources on almost any topic. Another is that increasingly, governments, funding agencies, universities and scholarly organizations that hand out baubles are relying on citation indexes to measure scholarly merit and productivity. For many authors, footnotes are a form of intellectual exhibitionism. Law reviews themselves seem to be in competition to show how erudite they are. …
>
> I suspect that what we are running up against here is the twin effect of resources limitations and the pressure to publish. If you have spent 50 hours on data collection, you want to get the article out. Since most journals won't take an article not loaded down with footnotes, there is no incentive for spending 50 hours thinking and analyzing if you still have to spend an equal amount of time digging up comprehensive references.[152]

When a single database holds tens of thousands of sources, it is easy to believe that at least one of them will make or break your argument. Maybe you find the perfect source; maybe you only find approximate ones. You may be tempted to think that omitting to cite only one of these sources might reduce the chances to see your paper published, or that your opponent found these sources and will wield them against you. You may be tempted to think that justifying a difficult or contentious decision depends on rallying as many sources as possible to your opinion. Better safe than sorry; better add them all.

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[152] Macdonald, *supra* note 148 at 363-64.

While the result looks impressive, quality references providing evidence and guidance are lost in a flood of titles. The overabundance of references is just as impractical as a want of it, especially when legal practice rests upon recorded authorities, such as precedents. The overabundance of precedents makes each of them less authoritative and more uncertain: the "more building blocks … are accessible, the greater the flexibility in the creation of legal argument and the more tenuous the link to any one prior case."[153]

Finally, digital technology does not only influence how we access authorities, but also how we consult them. Consider only CTRL+F (or CMD+F). This convenient browser function allows locating any word or phrase in a digital document. CTRL+F can save hours of work searching through an article, a case or a book for a specific comment about a particular issue. It is only one more ancillary technology facilitating the consultation of text, with its predecessors including abstracts, indexes, tables of contents, page numbers, paragraph numbers, titles, chapters, sections, paragraphs, etc. Without them, long texts would be impractical: picture having to scroll down the *Code civil du Québec*.

To say that the ancillary technologies of reading only enable one to read more effectively misses an important point: their widespread presence in academic works signals a specific attitude towards reading and authorship. Indeed,

> [i]n the sixteenth and seventeenth centuries every intellectual had perforce to be a universalist. He had to have complete knowledge, and when he wrote on a given subject he felt constrained to put everything he knew, pertinent or not. This was by no means a sign of muddleheadedness but rather of the prevailing search for a synthesized, universal system of knowledge. *Every author sought to put his whole self into his work, even in the case of a technical book. Not the subject but the author dominated the work …*
>
> *This explains another characteristic of the books written after the century of humanism: their lack of convenience*. We find few tables of contents, no references, no divisions into sections, no indices, no chronology, sometimes not even pagination.

[153] Katsh, *supra* note 147 at 46.

> The apparatus standard for scientific works today is not found even rudimentarily in the most perfect works of the period … The books of the time were not written to be used, along with hundreds of others, to locate a piece of information accurately and quickly, or to validate or invalidate an experiment, or to furnish a formula. *They were not written to be consulted. They were written to be read patiently in their entirety and to be meditated upon*. …
>
> The presentation of a book as an author's entire self, as a personal expression of his very being, supposes that *the reader sought in it not the solution of a given difficulty or the answer to a given problem, but rather to make personal contact with the author*. It was more a question of a personal exchange than of taking an objective position.[154]

Operating together, the ancillary reading technologies partition text to isolate information and facilitate its location. Focusing on a single chapter in a book shrinks the task of reading it from hundreds to tens of pages. Tables of contents do so in only few pages, indexes more efficiently in even fewer pages. The CTRL+F function shrinks a volume to only a few words. Textual fragments can be quickly located, read, copied and re-purposed without paying attention to the work as a whole. Research materials lose in integrity as the reader contemplates stored information. Concurrent pressures further encourage the use of ancillary technologies when patiently reading a text and mining it for citations only provide the analyst the same reward as the quick use of CRTL+F: one more footnote.

Digital technology challenges forth research materials into a standing reserve of citations and references. As standing reserves, these materials cease to act as textual ambassadors of the authors, disciplines, traditions and institutions from which they originate. Instead, they indiscriminately serve the purposes of a data aggregator–manager ordering them into a pool of footnotes. The limping publication that results from this ordering stands itself as

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[154] Ellul, *Technological Society*, *supra* note 54 at 40-41 (my emphasis). But see Henri-Jean Martin, *The History and Power of Writing*, translated by Lydia G Cochrane (Chicago: University of Chicago Press: 1994) ("[t]oward the mid sixteenth century the printed book had acquired what continued to be its basic elements: title page, preliminary matter (increasingly often set in italic), text (set in roman), table of contents, index, and pagination," at 308).

a reserve for citation indexes and ranking statistics that, in turn, stand reserve for universities, which stand reserve for industry and administration, and so on.

Digital technology increases the plasticity of law as research materials becomes mere matter to be assembled, disassembled and re-assembled on the basis of individual need. This is alarming when these materials define law: the more we consider law as specific *things* rather than as a specific *endeavour* involving these things, the easier it is to transform law through the manipulation of its materials. As the example of precedents shows, an overabundance of materials facilitates a modular approach to legal argumentation and lawmaking where law can be partitioned into instruments isolated from their institutional context and thus applied to whatever end.

For those who maintain such an instrumentalist conception of law, this prospect provides more advantages than inconveniences.[155] But for those who, like Lon Fuller,[156] believe law functions as a system animated by an end of its own and operates on the basis of interconnected attributes, flooding it with data could threaten its integrity: it makes law increasingly harder to understand as a coherent whole, if easier to picture as a toolbox.

Heidegger argued humans could save the world from modern technology by using their ontological faculty to adopt other ways of revealing the world.[157] The first, most important step is to recognize the essence of modern technology by reducing our investment in everyday life.[158] By questioning Enframing, we witness other ways of revealing the world.

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[155] See Summers, *supra* note 71 at 916-21.
[156] Fuller, *supra* note 59 at 33-94, 155-57, 162-77.
[157] Heidegger, *supra* note 134 ("man's essence belongs to the essence of Being and is needed by Being to keep safe the coming presence of Being into its truth," at 40).
[158] *Ibid* at 32.

Heidegger specifically advocated art: art reveals the world through bringing forth, and in doing so does not order nor reduce it to a standing reserve.[159]

For our purposes, it could mean re-adopting a craftsmanship approach to legal research and lawmaking: forming arguments from first principles and a limited number of sources in a manner that not only considers present needs and circumstances, but also protects the integrity of the materials used as an end in itself. We might want to do things *à l'ancienne*: dust off paper abridgments, indexes and other print-based technologies, and try not to get engrossed with the everyday life of the information flood: articles, studies, posts, news, clicks, swipes, likes, tweets, beeps and bits. This may, however, prove difficult to pull off when publishers refuse a book without an index, when editors ask for more references, or when employers and clients do not share a Luddite approach to legal research.

B. Jeopardy

With the first Part of the thesis coming to a close, I would take the time to reflect on the matter it covered, discuss what its chapters tell us about obsolescence and justify the orientation of its second Part, which may for some readers seem an abrupt change. I began by identifying the assumptions driving much of law and technology practice:

1. Law and technology are separate, but related;
2. The creation and development of technology occurs outside the reach of law;
3. Legal agents can understand the spheres of law and technology through markers;

[159] *Ibid* 34-35. See also Hubert L Dreyfus & Charles Spinoza, "Further Reflections on Heidegger, Technology, and the Everyday" (2003) 23 *Bulletin of Science, Technology & Society* 339 at 343-44; Feenberg, *supra* note 10 at 198.

4. Only new technology merits attention;
5. Law ought to assist society in coping with technological change;
6. Lawmakers should intervene before technological change materializes;
7. If and when law addresses technological change, it does so without overcoming obsolescence.

I have gathered these assumptions under the 'obsolescence stereotype', and proceeded to show its ubiquity in the law and technology practice, particularly its literature.

Obsolescence leads to law lag. When the rate of constant technological change outpaces that of legal change, the gap between new technologies and old rules gives rise to undesirable maladjustments, for example — and most dramatically — by creating a 'void' in which the terms of a legal rule fails to apply to a new and problematic practice. I have introduced a number of 'standard cases' to illustrate law lag. The standard cases revealed how the literature examines the object of its study on the functional level of rules and technologies, where distinctions between law and technology are apparent, most notably in temporal terms. I have argued that such a focus on this functional level derives from a formalist tendency derived from modern legal positivist ideology.

Law lag derives from American sociologist William Ogburn's theory of cultural lag. A staunch positivist, Ogburn's cultural lag theory uses empirical markers to measure change through time. Specific technologies are the most useful empirical markers to represent the otherwise elusive concept of technology. As for law, legal positivism, one of the "key definitional truths in conventional understandings of Western law,"[160] leads legal scholars

[160] Roderick R. Macdonald, "Unitary Law Re-Form, Pluralistic Law Re-Substance: Illuminating Legal Change" (2007) 67 Louisiana LR 1113 at 1117.

to turn to specific legal rules as representative of law. The tenet of centralism invariably makes the state the protagonist of lawmaking, hence the emphasis on state law as a solution to law lag.

I next proposed technological deviancy as an alternate model to law lag. Drawing from the French sociologist Émile Durkheim, I argued that the 'newness' of a technology derives from interpretation rather than objective properties. Legal agents attribute newness to a technology as a label of deviancy, taking legal prescriptions as the standard of normalcy. A technology is not "new" because its developers created it at one time rather than another, but because it deviates from legal prescriptions. This means that a technology may remain 'new' long after its invention and diffusion in society. Deviancy justifies applying exceptional legal treatment to a technology, leading to law reform.

Legal agents use a variety of rhetorical strategies to establish and deny the newness of a technology, as I have demonstrated with examples from case law, legal scholarship, and legislation. The most important contribution of technological deviancy is not to provide an alternate model that will determine whether a technology deserve exceptional legal treatment or not. Instead, it emphasizes the 'interpretive dimension' of the obsolescence trope: the transposition of the concerns, norms and prejudices of legal agents into the inherent attributes of technology.

To pursue my examination of obsolescence, I adopted an interpretive approach to law and technology. Taking inspiration from literary theory and the social studies of technology, I took the radically social constructivist position that the meaning of technology and technologies, what they are and what they can do, derives from interpretation. Social life,

through interpretive communities, tacitly conditions the strategies 'readers' use to interpret technology. Technologies have no properties and capabilities of their own, only the meaning members of different interpretive communities ascribe to them. These interpretive communities enable both change and stability in interpretation, because they are themselves capable of change and stability.

The objective of an interpretive approach to law and technology is not to figure out which interpretations of technology or technologies are 'true', let alone lawful, but to determine how legal agents interpret technological meaning, and why they would consider some interpretations more persuasive than others. Adopting such an approach can demystify the assumptions behind the obsolescence trope without labelling legal agents who hold them as essentially mistaken. More importantly, it can explain why the law and technology literature has such a thing as an obsolescence trope, and offers a distinct perspective into its object of study: the legal interpretation of technology.

Using this approach, I argued that privileging the instrumental theory of technology allows legal agents to adopt metaphysics according to which technology does not interfere with human agency. Because legal agents tend not to interpret technology as having the capacity to interfere with agency, technology cannot short circuit legal prescriptivism — the third key definitional truth of Western law. As shown with the principle of technological neutrality, the instrumental theory constitutes a persuasive interpretation of technology because it provides legal agents with a convenient, operational basis — determinacy and neutrality — upon which they can project their conventional understanding of lawmaking. Technology proves accommodating because legal agents can tailor its metaphysics to their ideology.

However, the compatibility of instrumental theory with legal prescriptivism comes with its own Achilles' heel: the possibility that a technology grants to its user the capacity to remove oneself from the rule of law. This possibility forces legal agents to confront the spectre of indeterminate technological change — as opposed to new technologies. Rather than taking after legal prescriptivism, technological change takes after its sinister relative: unreasonable force. The fear of the futility of law in the face of unreasonable force is re-written as the fear of the futility of law in the face of technological indeterminacy.

In this Chapter I have presented three substantive theories of technology. I have discussed these theories in tandem with issues relevant to the field: determinism and techno-regulation, Technique and legal instrumentalism, Enframing and legal research. Each tandem questions the boundary between law and technology. Law lag, technological deviancy, instrumental theory–legal prescriptivism and the Anti-Law all share the assumption that *law and technology are separate, but related*. I believe this assumption is obsolescence's most foundational. It seems to be of little common sense that law and technology would be two different constructs: they can affect each other, but they cannot transform each other.[161] While most of law and technology scholarship takes this boundary for granted, an interpretive approach takes it as an object worthy of analysis. Substantive theories offer a good perspective on the matter since they themselves question the boundary between society and technology.

[161] But see for example Wolcher, *supra* note 141 ("[*t*]*he grip that technological thinking exercises on our imagination must be broken, and technology must return to the status of a means to the* ultimate *end of universal human emancipation*," at 386); Margaret Thornton, "Technocentrism in the Law School: Why the Gender and Colour of Law Remain the Same" (1998) 36 Osgoode Hall L J 369 ("rules rationality exercises a centripetal pull within legality so as to disqualify other forms of knowledge," at 370).

Technological determinism holds that technology autonomously develops in a direction of its own and orders societal change. Despite its rhetorical and intuitive appeal, and as in other disciplines, many legal scholars have explicitly rejected technological determinism. In addition to its weakness as a theory of technological and societal change, the literature also presents strong objections against technological determinism on policy grounds: law and politics should direct societal change, not technology. The appeal to law and politics re-interprets the supremacy of individual agency over technologies as the supremacy of collective agency over technological change.

The desire for control calls on legal institutions to take charge of technological development and legal prescriptivism channels the interpretation of technology towards the instrumental theory of technology. Lawrence Lessig's *Code* illustrates the sequence. But as legal prescriptivism re-introduces the instrumental theory, it also admits determinacy: an irreducible technological sphere immune to external influences. Because it tolerates and even requires the maintenance of that impenetrable sphere, legal prescriptivism reduces the realm of technological determinism without weakening it. Technology, therefore, solely determines the power law has over it.

My contention is that the limits to which law can determine what technology is and what it can do are themselves matters of interpretation. While some "versions of cyberspace do resist effective regulation,"[162] Lessig holds that other versions of cyberspace do not. We are left to believe that some versions of cyberspace have the inherent property to resist effective regulation: when it comes to regulation, some technologies are malleable, while

[162] Lessig, "Law of the Horse", *supra* note 38 at 506.

others are not. The determinacy of technology settles the power law has over it: Lessig's *Code* empowers legal agents to influence technological development, but only within the window of opportunity technology provides.

As they sketch the prescriptive power of the law in painstaking detail, legal agents draw a negative picture of an irreducible technological sphere. If we understand law as "externally-imposed rules and analogous normative statements"[163] and focus "on how institutions shape subjects,"[164] its power will only extend as far as how rules, officials and sanctions shape legal subjects. If our assumptions about law change, we might interpret some versions of cyberspace differently as we contemplate other ways for law to act upon them. Until then, by constructing an irreducible technological sphere, legal agents place a tacit and insurmountable limit to the action of law. As a result, they will consider any proposition to transgress that limit a futile endeavour, unworthy of consideration.[165]

Following Ellul, legal instrumentalism takes part in a sociological movement reducing freedom and diversity for the sake of efficiency. All technological advances are expected to have unintended (and undesirable) consequences. Ellul's Technique transposes the narrative of unintended consequences to jurisprudence. Scholars like Jhering and Pound criticized legal formalism's commitment to aesthetics and tradition by depicting it as an insensible, mechanical jurisprudence. They hoped legal instrumentalism would humanize

[163] Roderick A Macdonald, "Here, There, Everywhere … Theorizing Legal Pluralism; Theorizing Jacques Vanderlinden", in Nicholas Kasirer (ed), *Mélanges Jacques Vanderlinden* (Cowansville: Éditions Yvon Blais, 2006) 381 at 390.
[164] *Ibid* at 407.
[165] See Albert O Hirschman, *The Rhetoric of Reaction: Perversity, Futility, Jeopardy* (Cambridge: Belknap Press of Harvard University Press, 1991) at 73-79 ("[t]he problem with the argument is that futility is proclaimed too soon … There is a rush to judgment and no allowance is made for social learning or for incremental, corrective policy-making," at 78).

legal practice by subjugating law to external ends. Instead, legal instrumentalism increased the plasticity of law and further surrenders humanity to Technique.

Contrary to the expectations of classic legal instrumentalists, formulating the end of law proved controversial. Once Kelsen persuasively defined law on the sole basis of its prescriptive capabilities, those that followed could discharge themselves from formulating the end of law. Free from any other consideration, they could focus on increasing the efficiency of law as a discipline wholly consumed by instrumental rationality. Critics of legal instrumentalism fear that emptying law of its substance prevents it from stopping immoral uses of legal institutions; Ellul considers the supremacy of juridical technique the demise of justice and law.

It is not my aim to assess the extent of legal instrumentalism in contemporary legal practice, but I admit to feeling hopeful on the matter. The metaphorical origins of legal instrumentalism may hold the key to its rehabilitation. Metaphors construct meaning without annihilating alternatives, but the best metaphors are difficult to dismiss. When we speak of law as a tool, we picture a hammer. The hammer is not only a familiar and seemingly innocuous tool, it also joins aesthetics to legal ideology: it is a carpenter's tool (evolutionary functionalism), but also a weapon of war (coercion). It builds and protects the home. The analogy of the hammer focuses attention on the wielder, her purposes and her ability to fulfill them. Metaphors of instrumentalism entrench themselves in legal agents and, like a self-fulfilling prophecy, legal practice depicts law as a mechanical and neutral tool. There is no letting go of the 'law as an instrument' metaphor, but as a metaphor

it remains malleable. If we envision a different kind of instrument, say a violin, the analogy could shed a new light on the instrument and its user.[166]

That being said, Kieran Tranter rightly observes that law and technology practice overwhelmingly adopts an instrumental approach that may support the critics of legal instrumentalism.[167] In addition to its current popularity,[168] the bias in favour of new technologies accounts for the prevalence of legal instrumentalism. Because law and technology practice has little interest for past technologies beyond how they compare to new ones, we have limited knowledge of how waning, minor or defunct non-instrumental schools of legal thought would identify, apprehend and resolve technological problems. In addition to reducing opportunities for critical analysis, the fetish of newness reinforces the hold of legal instrumentalism on legal agents as the default perspective on law.

The passage from legal formalism and legal instrumentalism provides an important insight about the legal interpretation of technology. Technology changing autonomously and at an accelerated rate does not suffice for law to lag. Law being wholly reduced to positive rules and entirely contained in static text does not suffice for law to lag. For law to lag, legal agents must themselves become concerned with the gap problem. Nineteenth-century formalists considered law a complete, self-sustaining system. Jurists did not adapt law to new circumstances, but sought to maintain its integrity despite changing circumstances.

[166] See also Gordon, *supra* note 6 at 466-67("as it tends to romanticize legal professions as agents of the Rule of Law, the view of law as technology and of lawyers and judges as its technicians also tends to overlook some of lawyers' most valuable contributions to the building of liberal societies, which take the form of political and cultural expression," at 466).
[167] See generally Tranter, *supra* note 6. See also Tranter, *supra* note 2.
[168] See Scordato, *supra* note 99 at 361-67; Tamanaha, *supra* note 59 at 121ff. See also Margaret Thornton, "Technocentrism in the Law School: Why the Gender and Colour of Law Remain the Same" (1998) 36 Osgoode Hall L J 369.

Law did not need to pay attention to external pressures, since it already contained "the building blocks needed to deduce the rules not already spelled out."[169] If legal agents could not deduce a rule applicable to an unprecedented situation from these building blocks, then no legal rule was meant to apply to that situation. Law being inherently gapless, 'lagging' was not an available condition.

As legal instrumentalism gained in popularity at the turn of century, Western legal theory became increasingly concerned with the practical effects of law. Legal theorists became quite sceptical that an immutable law could effectively govern every situation imaginable without paying attention to ever-changing circumstances. As François Gény put it:

> Legal institutions are designed to govern incessantly changing social relations, and they spring up from the very conditions and foundations of the society, which is always in a state of complex movement. They can progressively evolve only through ever deeper and more intimate penetration into this living substance. How then can one try to abstract them from this medium which is their vital atmosphere and change them into pure ideas without making them lose the whole basis of their practical efficiency, which allows them to serve satisfactorily the interests they are supposed to?[170]

Law lag stems from changes in legal theory, not from technological change. Law lags behind technology because legal agents prefer it so. But whether or not they are right to do so, legal agents cannot blame technology for a jurisprudence of obsolescence.

Martin Heidegger believed technology essentially changed the ontological nature of entities by reducing them to standing reserves of function and energy. Humans perceive themselves as the sole cause of the world, but soon become themselves standing reserves serving the purposes of others. I have illustrated Heidegger's treatment of technology with

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[169] Reimann, *supra* note 64 at 881.

[170] *Méthode d'interprétation et sources en droit privé positif; critical essay*, translated by Jaro Mayda (St Paul: West Pub, 1954), cited in Herget & Wallace, *supra* note 64 at 440-41.

my experience of digital technology in legal research. I have felt on many occasions that increased and easier access to research materials led me to diminish their individual importance and instrumentalise them for my own purposes.[171]

Scholarly disciplines socialize and regulate their members with *règles de l'art* that deter, to a point, the instrumentalisation of legal materials. They must however respond to the same standards of productivity, turning their members into a standing reserve of publications, performance statistics and future citations. The instrumentalisation of legal research also breaks down disciplinary traditions by privileging efficiency over socialization. Resistance, if any, should be one of artful inefficiency. Heidegger's Enframing illuminates the dual character of the legal interpretation of technology. Without defending a position as radical as technological determinism, Technique or Enframing, the instrumental theory of technology fails to meet concerns that technology affects patterns of human thought and activity. Instrumental and substantive theories of technology both have to respond to critiques of reductionism, but only the former finds salvation in practicality.[172]

The reliance of legal agents on information and communication technologies — from writing and reading implements to databases and smartphones — leads legal communities to confer upon these technologies the capacity to deeply transform legal practice. The legal interpretation of technology is not a strictly instrumental process through which legal communities construct technological meaning. It is also a constitutive process, one that

[171] See Olivier H Lowry, Nira J Rosenbrough, A Lewis Farr & RJ Randall, "Protein Measurement with the Folin Phenol Reagent" (1951) 193 *Journal of Biological Chemistry* 265 (or not).
[172] See also Winner, *supra* note 12 at 67-68, 175-76.

defines and refines legal practice in relation to technology.[173] Because of the place information technologies occupy in legal practice, they provide a unique opportunity to understand the intertextuality of law and technology.

It is easier to imagine the new destroying the old than it is to imagine them transforming each other.[174] All three substantive theories reflect a zero-sum mentality: by way of determinism, Technique or Enframing, technology inevitably takes away an essential part of humanity — respectively, agency, freedom or dignity. The instrumental theory ensures law's triumph over technology by accommodating agency (from which stems freedom and dignity) into determinacy through neutrality. The obsolescence stereotype satisfies expectations of its audience by keeping law and technology separate from each other, while a literature of speculation and contingency maintains anxiety. It will not teach us anything new about law and technology beyond more instances of law lag. A stereotype, after all, means to comfort the expectations of its audience, but not to challenge them. Not that there is no room for this sort of work, only that there should be room for more.[175]

We could use a change of scenery. I will pursue with the legal interpretation of one technology, the book. The next Part contains three case studies on the history of the book in France and England. They show, each in their own manner, how censorship and early copyright law provided opportunities for legal agents to interpret what books are and what

[173] See Laurence H Tribe, "Technology Assessment and the Fourth Discontinuity: The Limits of Instrumental Rationality" (1972) 46 S Cal L Rev 617 ("every human action … is at once both operational (or "instrumental") and self-forming (or "constitutive"). What I have in mind, therefore, is not a division of conduct into two distinct categories but a recognition of the dual character of all conduct and a realization that only part of any action's character can ever be illuminated by the methods of instrumental rationality," at 635). See also section II.B.1 (interpretive communities constantly change through interpretation).
[174] See Hirschman, *supra* note 165 at 122-23.
[175] See for example Chandler, *supra* note 13; Harris, *supra* note 28; Joseph Pugliese, "Prosthetics and the Anomic Violence of Drones" (2011) 20 Griffith L Rev 931; Bert-Jaap Koops, "Technology and the Crime Society: Rethinking Legal Protection" (2009) 1 LIT 93; Tranter, *supra* note 28; Tribe, *supra* note 173.

they do. Because books are so central to legal practice, they will also touch upon the intertextuality of law and technology. When I first deconstructed obsolescence into a set of assumptions, I aimed not only to understand it, but also to know what I should avoid in my own work. While the present Part results from a critical appreciation of functionalism, prescriptivism, instrumentalism, anxiety, speculation and the fetish of newness, the second one results from an analytical aversion to these same elements. This aversion will produce, I hope, a non-obsolete legal history of technology.

PART II – BOOKBINDING

In resorting to history, I seek to escape the assumptions permeating current law and technology practice. While more recent technologies could offer opportunities to discuss the legal interpretation of technology, the history of the book presents advantages of its own. Here, focusing on an ancient technology instead of a new one helps me avoid the speculative and anticipatory approaches that characterize much of the field. As I have already mentioned in Chapter III, the reliance of legal practice on legal publishing points to a rich interaction with books, one I have tentatively designated as the intertextuality of law and technology. Moreover, because the invention of books chronologically precedes the introduction of censorship and copyright regimes, studying the book in relation to law subverts the classic narrative of law lag. Indeed, while we may argue that the advent of the printing press prompted the emergence of censorship and copyright regimes in early modern times, refocusing the analysis on the book considers not only how print impacted law, but also how law impacted print.

Like any other technology, books do not speak for themselves. They have to be spoken for. Speaking of the book as a technology may seem counter-intuitive. Indeed, we ordinarily reserve the word ‘technology’ for complex apparatuses derived from the application of advanced science and engineering. And yet, a history of the book could still reveal it to be an amalgam of multiple inventions brought together by specialized knowledge. This ‘material’ history of the book, one that focuses on how the material components of this technology came together, would begin with the early means of recording and transmitting text, the development of the main components of the book (e.g. from papyrus, to parchment

and finally paper) and the transition from scrolls to codices. Between the codex and the information age, this history would linger over the invention of the printing press in 1455 and its spread throughout Europe during the second-half of the fifteenth century. In fact, the printing press is often treated as most important protagonist in the history of the book.[1]

Few historians have discussed the revolutionary character of the printing press as extensively and insightfully as the American historian Elizabeth Eisenstein. Eisenstein did not take the impact of the printing press for granted. Instead, she sought to identify these changes and examine them in a systematic manner.[2] According to her, the crux of the printing revolution was in the shift from scribal to print culture. In a scribal culture, the production of books depended on the hand copying of original texts. Copying a manuscript was not only a lengthy process, but also an extremely difficult task. This was especially the case for technical works filled with unfamiliar terms, intricate drawings and complex charts.[3] No matter how skilful the scribes, over time texts copied and re-copied accumulated errors that threatened their integrity. "In view of the proliferation of 'unique' texts and of the accumulation of variants," Eisenstein found "doubtful whether one should refer to 'identical copies' being 'multiplied' before print."[4]

In a scribal culture, because books were so difficult to produce and reproduce, readers had to choose between preserving text and disseminating it:

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[1] See for example Nicole Howard, *The Book: The Life Story of a Technology* (Baltimore: John Hopkins University Press, 2009); Simon Eliot & Jonathan Rose (eds), *A Companion to the History of the Book* (Oxford: Blackwell Publishing Ltd, 2007); Henri-Jean Martin, *The History and Power of Writing*, translated by Lydia G Cochrane (Chicago: Chicago of University Press, 1994).
[2] Elizabeth Eisenstein, *The Printing Press as an Agent of Change: Communications and Cultural Transformations in Early Modern Europe*, vol 1 (Cambridge: Cambridge University Press, 1979) at 3-7.
[3] *Ibid* at 45-47.
[4] *Ibid* at 46, quoting John H Harrington, *The Production and Distribution of Books in Western Europe to the year 1500*, DLS Thesis, Columbia University, 1956 at 3.

> No manuscript, however useful as a reference guide, could be preserved for long without undergoing corruption by copyists, and even this sort of 'preservation' rested precariously on the shifting demands of a local elites and a fluctuating incidence of trained scribal labor. Insofar as records were seen and used, they were vulnerable to wear and tear. Stored documents were vulnerable to moisture and vermin, theft and fire. However, they might be collected or guarded within some great messenger center, their ultimate dispersal and loss were inevitable. To be transmitted by writing from one generation to the next, information had to be conveyed by drifting texts and vanishing manuscripts.
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> … A single manuscript record, even on parchment, was fairly impermanent, however, unless it was stored away and not used. More than one record required copying, which led to textual drift. Durable records called for durable materials.[5]

The true revolutionary character of the printing press, Eisenstein argued, resides in how it brought an unprecedented level of fixity to text. She described fixity as "a basic requisite for the rapid advancement of learning."[6] Printing houses could produce numerous copies of a work in a fraction of the time the scribe took to produce a single one. The preservation of text ceased to depend on durable and costly writing materials, such as parchment. Instead, it depended on the multiplication of copies made of less durable but cheaper materials, such as paper. The more copies of a work circulated in the public, instead of stored and hidden in vaults, the better the chances the work would survive. Print shifted the management of knowledge from preservation to dissemination.[7]

Print also standardized the representation of text and image, as improved editions routinely replaced corrupted copies.[8] While early printing techniques had yet to produce completely identical copies of a work, printed copies "were sufficiently uniform in different regions to correspond with each other about the same citation and for the same emendations and errors to be spotted by many eyes."[9] Whereas reproducing a text led to textual drift in scribal

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[5] Eisenstein, *supra* note 2 at 114.
[6] *Ibid* at 113.
[7] *Ibid* at 113-16.
[8] *Ibid* at 111-12.
[9] *Ibid* at 81.

culture, reproduction in print culture securely anchored the copy to its original. The uniformity of printed text, Eisenstein argued, made it easier to spot deviations from standards. In doing so, printing technology also favoured diversity:

> A fuller recognition of diversity was indeed a concomitant of standardization. Sixteenth-century publications not only spread identical fashions but also encouraged the collection of diverse ones. Books illustrating diverse costumes, worn throughout the world, were studied by artists and engravers and duplicated in so many contexts that stereotypes of regional dress styles were developed. They acquired a paper life for all eternity and may be recognized even now on dolls, in operas, or at costume balls.[10]

The standardisation and fixity of text had far-reaching consequences as customs, languages, law and identities simultaneously grew more stable and diverse. Print also helped establish precedent and novelty: any innovation in the realms of science or technology could only be acknowledged and credited with any degree of certainty with reliable knowledge of what preceded it.[11] In sum, not only did the printing press dramatically increase the quantity of works available to the reading public, the determinacy of print would serve as the epistemic foundation for the scientific revolution that began in the sixteenth century.

More recently, American historian Adrian Johns challenged Eisenstein's account of the printing press.[12] In his detailed study of printing and reading in early modern England, Johns "contends that what we often regard as essential elements and necessary concomitants of print are in fact rather more contingent than generally acknowledged."[13] For him, Eisenstein's print culture is too disconnected from human experience to offer an

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[10] *Ibid* at 84.
[11] *Ibid* at 117-25.
[12] See also Nicholas Hudson, "Challenging Eisenstein: Recent Studies in Print Culture" (2002) 26 *Eighteenth-Century Life* 83.
[13] Adrian Johns, *The Nature of the Book: Print and Knowledge in the Making* (Chicago: University of Chicago Press, 1998) at 2.

accurate account of print. By refocusing attention on the book, out of the shadow of the printing press, Johns emphasizes that print culture did not begin and end with the press, but instead with laborious social practice. He considers fixity not as an inherent quality of print, but one that "exists only inasmuch as it is recognized and acted upon by people — and not otherwise."[14] As a result,

> print culture itself is immediately opened to analysis. It becomes a *result* of manifold representations, practices and conflicts, rather than just the monolithic *cause* with which we are often presented. In contrast to talk of a "print logic" imposed on humanity, this approach allows us to recover the construction of different print cultures in particular historical circumstances. It recognizes that texts, printed or not, cannot compel readers to react in specific ways, but that they must be interpreted in cultural spaces the character of which helps decide what counts as proper reading. In short, this recasting has the advantage of positioning the cultural and the social where they should be: at the centre of our attention.[15]

Instead of standardization and fixity, Johns emphasizes the importance of credit and trust as the determinants of what print was and what it could do.[16] While the printing press promised, left unchecked, to increase the quantity of books, it did so indiscriminately: readers faced increased risks of encountering a corrupted text. As Johns sums up, "[t]he defining character of the printing revolution was initially not order or regularity, but disruptive proliferation."[17] An untrustworthy book, printed or not, would not be considered reliable, and would therefore be devoid of authority. What made a book trustworthy — worth reproducing and disseminating — depended on the circumstances of its production and its use and not solely the printing press.[18] The actors of the book trade did manufacture, exchange, and use books, but they also imparted trust onto print. Johns draws our attention

[14] *Ibid* at 19.
[15] *Ibid* at 19-20 (underscore added).
[16] *Ibid* at 28-34.
[17] Adrian Johns, "The Coming of Print to Europe" in Leslie Howsam (ed), *The Cambridge Companion to the History of the Book* (Cambridge: Cambridge University Press, 2015) 107 at 120.
[18] Johns, *supra* note 13 at 3.

to other dimensions of the book beyond that of a material object, framing it as a cultural transaction, and as an intellectual and emotional experience.[19]

I present in this Part three tales of books, censorship and intellectual property in England and France spanning the seventeenth, eighteenth and nineteenth centuries. In Chapter IV, I re-examine a judicial conflict central to the history of 'Crown copyright', a staple of the British tradition of copyright law. Enlisting the philosophy of Thomas Hobbes, I portray the legislator as a sovereign linguistic authority imposing political solutions to epistemological problems via arational commands. Chapter V retraces the history of the famous *Encyclopédie* as Diderot and his allies attempt to evade censorship in the *Ancien régime*. I draw inspiration from the struggle opposing the encyclopædists to *anti-philosophes* to inject an anti-prescriptivist perspective into the theory developed in Chapter IV. Finally, Chapter VI examines the evolution of the 'work' in English copyright law from the material evidence of authorial labour into an intangible object with a substance of its own. The transformation of the work further illustrates the legal interpretation of technology by examining the representational power of the law.

Historians will not find an original contribution to their field in the present Part. My objective is not to produce new historical knowledge, but to pursue such knowledge in order to gain a critical perspective on law and technology, challenge prevalent legal scholarship and suggest new directions of inquiry. To facilitate this task, I focus on well-documented episodes in the history of copyright and censorship. I have however striven to conduct myself with the same rigour I found in the historical literature I consulted. I have

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[19] See Leslie Howsam, "The Study of Book History" in Leslie Howsam (ed), *supra* note 17, 1 at 4-6.

adapted extracts originally written in Early Modern English and classical French into their modern counterparts to ease their consultation. For the same reason, with the exception of block quotes, I have translated French quotes into English so as to not disrupt the flow of the text. Translations are mine absent an indication to the contrary.

IV. THE AUTHORITY OF PRINT

This Chapter tells a story of Colonel Richard Atkyns' *Original and Growth of Printing.*[20] In 1660, Atkyns' thirty-five-page pamphlet pleaded in favour of handing over all legal publishing to privileged agents of the English Crown under a system of printing patents. The *Original* served as propaganda in anticipation of a judicial dispute pitting Atkyns against powerful members of the English book trade. This fifteen-year dispute settled by the House of Lords raised the fundamental issue of who should be entrusted with printing legal texts. Resolving this issue led to the doctrine of Crown copyright, now a staple of the British copyright law. Atkyns' judicial troubles tend only to figure as a footnote in the history of Crown copyright.[21] But enriching this standard account with contributions from the history of the book and the philosophy of Thomas Hobbes provides a valuable insight into law and technology.

The *Original* appeared when England was recovering from one of the most volatile periods in its history. Following a ten-year civil war culminating in the execution of Charles I,

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[20] Richard Atkyns, *The Original and Growth of Printing: Collected Out of History, and the Records of this Kingdome* (London: John Streater, 1664).

[21] See for example Elizabeth F Judge, "Crown Copyright and Copyright Reform in Canada" in Michael Geist (ed), *In the Public Interest: The Future of Canadian Copyright Law* (Toronto: Irwin Law, 2005) 550 at 553-56; Ann Monotti, "Nature and Basis of Crown Copyright in Official Publications" (1992) 9 EIPR 305 at 306-07; Olivia Mitchell, "Crown Copyright in Legislation" (1991) Victoria U Wellington L Rev 351 at 357-59.

England was governed as a republic until the restoration of Charles II onto the throne of England in 1660. A complete history of the Civil War, the Interregnum and the Restoration cannot be recounted here. That being said, I should mention that Charles I had inherited from his predecessors a heavily indebted treasury and, to increase its revenues, asked Parliament to levy additional taxes. Parliament, hostile to members of Charles' entourage, sought to limit royal prerogatives in counterpart. The King, unwilling to concede, resorted to forceful extra-parliamentary measures to increase the Crown's revenues. These measures further infuriated parliamentarians and encouraged them to demand further limitations of royal powers.

Charles temporarily avoided direct conflict with Parliament by refusing to gather its members for eleven years. In 1641, when he could no longer afford to do so, a hostile Parliament forced the King to abolish key royal institutions. However, this measure did not appease Parliament. Political conflict escalated to threats, aggressions and finally civil war.[22] The Civil War culminated with the trial and execution of the King in 1649, and the establishment of a Commonwealth. Parliament governed the country until 1653, after which Oliver Cromwell ruled his countrymen as Lord Protector. The Protectorate lasted until the Restoration of Charles II to the throne in 1660.

These turbulent times showed all English men and women the power of print. Indeed, the printing press bore much of the blame for the Civil War and the instauration of the

[22] On the Civil War, and the Interregnum, see generally Roger Lockyer, *Tudor and Stuart Britain, 1485-1714*, 3rd ed (Oxon: Routledge, 2013) at 321-78; Ann Lyon, *Constitutional History of the United Kingdom* (London: Cavendish Publishing, 2003) at 197-34; Barry Coward (ed), *A Companion to Stuart Britain* (Oxford: Blackwell, 2003), online: Blackwell Reference online, www.blackwellreference.com.

Commonwealth.[23] A Parliament filled with supporters of the Charles II blamed "the growth and increase of the late troubles and disorders" on "a multitude of seditious sermons, pamphlets and speeches, daily preached, printed and published, with a transcendent boldness, defaming the person and government"[24] of the King and his predecessor. These sermons, pamphlets and speeches had allegedly brought the otherwise peaceful and loyal subjects of the King into civic disorder.

For example, when the private belongings of Charles I fell into rebel hands after the battle of Naseby (1645), the publication of the King's correspondence proved instrumental to discredit the royal family and turn public opinion against the Crown.[25] English polity then rested on an 'ancient constitution', a political ideal according to which monarchy and Parliament evolved in natural support each other. The Crown was trusted to respect the Parliament's role and the spirit of the law, rather than legally constrained to do so. Propaganda demonstrating that the King was no longer worthy of that trust was essential to justify an uprising when no mechanism could arbitrate between the demands of Parliament and the prerogatives of the Crown.[26]

Understandably, the restored King and his supporters made reinstating royal authority over print a priority. Government attempted to keep the press under tight control, fearing that

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[23] See Harold Weber, *Paper Bullets: Print and Kingship under Charles II* (Lexington: University Press of Kentucky, 1996) at 133-34.

[24] *An Act for Safety and Preservation of His Majesty's Person and Government against Treasonable and Seditious Practices and Attempts*, 1660 (Eng), 13 Car 2, c 1.

[25] See Ann B Coiro & Thomas Fulton, *Rethinking Historicism from Shakespeare to Milton* (Cambridge: Cambridge University Press, 2012) at 239-43 ("*The Kings Cabinet Opened* reshaped the royal letters, framing the king as uxorious and untrustworthy and the queen as domineering, threatening, and martial," at 240). See also Steven N Zwicker, "Habits of Reading and Early Modern Literary Literature" in David Loewenstein & Janel Mueller (eds), *The Cambridge History of Early Modern Literature* (Cambridge: Cambridge University Press, 2003) 170 at 192.

[26] See John Miller, "Politics in Restoration Britain" in Coward (ed), *supra* note 22, 399.

supporters of the now-defunct Commonwealth could still instigate rebellion.[27] Legislation would go as far as regulating the very vocabulary used by the subjects of Charles II, in writing or in speech.[28] To regulate not only the production of books, but also who read them and in which company,[29] Charles II even attempted to close all of London's coffeehouses, "the Restoration's most notorious center for conspiracy and communal reading alike."[30]

In the fall of 1662, late at night and acting on intelligence provided by an informant, the King's men descended upon John Twyn's house. They caught the Stationer in the act of printing *A Treatise of the Execution of Justice*, a pamphlet justifying the execution of Charles I. Twyn was charged with high treason and tried at the Old Bailey. The accused failed to persuade a jury half-composed of printers and booksellers that he ignored the content of the pamphlet, and the court sentenced him to death. When Twyn begged the Lord Chief Justice Hyde to intercede with the King in his favour, Justice Hyde responded: "I would not intercede for my own father in this case, if he were alive."[31]

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[27] See Joad Raymond, *Pamphlets and Pamphleteering in Early Modern Britain* (Cambridge: Cambridge University Press, 2003) at 157; James G Turner, "From Revolution to Restoration in English Literary Culture" in Loewenstein & Mueller (eds), *supra* note 25, 790 at 794-95. See also J Walker, "The Censorship of the Press during the Reign of Charles II" (1950) 35 *History* 219 ("[t]he state papers for the first seven years of the reign contain numerous reports from spies to treasonable activities on the part of the late masters of England," at 219).
[28] See Turner, *supra* note 27 ("[u]nder the Act of Oblivion it was actually illegal to use 'any name or names, or other words of reproach tending to revive the memory of the late differences or the occasions thereof ', though a newly drafted Treason Act equally forbade 'all, writing, printing, or malicious and advised speaking' that envisages 'restraint of the Sovereign' or tends to 'deprive him of his style'," at 794).
[29] See Weber, *supra* note 23 at 158-62. See also Kevin Sharpe, *Reading Revolutions: The Politics of Reading in Early Modern England* (New Haven: Yale University Press, 2000) at 43.
[30] Adrian Johns, *The Nature of the Book: Print and Knowledge in the Making* (Chicago: University of Chicago Press, 1998) at 112 (the King settled instead to regulate them through a licensing regime).
[31] *R v Twyn*, (1663) 6 St Tr 513 (OB) at 536. See also Dorothy Auchter, *Dictionary of Literary and Dramatic Censorship in Tudor and Stuart England* (Westport: Greenwood, 2001) at 341-42.

Atkyns' legal dispute arose from the same political circumstances that inspired Hobbes' *Leviathan*. Before the Civil War, Atkyns had acquired a royal monopoly over the printing of common law books, but the fall of the monarchy and rise of the Commonwealth removed all bases for his privilege. The ascent of Charles II onto the throne of England had in principle restored Atkyns' claim, but the booksellers that had taken control of this lucrative market in the meantime refused to let go of their interests. Sensing his title alone might not suffice to secure victory against his rivals, Atkyns published the *Original* to reformulate his privilege as a matter of public interest: only the royal authority could guarantee the authenticity and integrity of printed legal materials at a time when none could take these qualities for granted.

As for Hobbes, he wrote his magnum opus during a self-imposed exile to France. The civil disorder that reigned in England partly inspired his vision of an anarchic state of nature to which only an arbitrary ruler — the sovereign — could bring order and security.[32] *Leviathan* built upon Hobbes' philosophy of language to present the sovereign as a linguistic authority. Invested with supreme authority by way of a social contract, the sovereign could impose political solutions to epistemological disputes arising from equivocal words, such as 'good' and 'evil'. While I do not have evidence that Hobbes directly inspired passages from the *Original*, Atkyns would have shared affinities with his countryman's philosophy: if the sovereign could settle the meaning of good and evil, she could also command the meaning of authenticity and integrity.

[32] See RER Bunce, *Thomas Hobbes* (New York: Continuum, 2009) at 8-14; Paul Raffield, *Images and Cultures of Law in Early Modern England: Justice and Political Power* (Cambridge: Cambridge University Press, 2004) at 237.

Atkyns' story forms an essential anecdote in the history of Crown copyright. More importantly, illuminated by Hobbes' philosophy, it provides a perspective into the politics and epistemology of law, technology and authority. We must first acquaint ourselves with the circumstances surrounding reading and publishing in early modern England, more specifically what censorship and licensing rules tell us about the power books held over the reading public. Drawing out this context is necessary to understand the conflict between Atkyns and his rivals, the solution he proposed in the *Original*, the resolution of their legal dispute and the origins of Crown copyright. From there I will reflect on what Hobbes philosophy tells us about the legal interpretation of technology.

A. Reading and publishing in early modern England

"The defining character of the printing revolution," historian of the book Adrian Johns argues, "was initially not order or regularity, but disruptive proliferation."[33] The printing press flooded the English market with unreliable books threatening to fool readers, or to corrupt them by inciting dissent and revolt. Readers and officials displaced much of the anxiety provoked by the press onto print. Some eighty years after its introduction, following the prohibition of specific and objectionable titles, the Crown's regulation of the press evolved into a blanket censorship and licensing regime applicable to all printed books. While members of the book trade would not outright ignore the royal prescriptions, they often proved ineffective to suppress the production and dissemination of piratical and seditious writings. But legal rules still proved instrumental for printers, booksellers and readers alike to evaluate the reliability, authenticity and integrity of print.

[33] Adrian Johns, "The Coming of Print to Europe" in Leslie Howsam (ed), *The Cambridge Companion to the History of the Book* (Cambridge: Cambridge University Press, 2015) 107 at 120.

1. License, copy, patent

England began to regulate the printing trade a little over fifty years after William Caxton brought the press into the kingdom in 1476.[34] Henry VIII established the first licensing system for new and imported publications in the midst of his break from Rome. After the Crown prohibited a list of titles in 1529,[35] it became clear to him that controlling the press would require a more comprehensive approach. Four years after the *Act of Supremacy*, which established the Crown as the supreme head of the Church of England,[36] Henry forbade the printing and importation of all books written in the vernacular, unless they were first examined and licensed by the King himself, a member of his Privy Council or one of the bishops of England.[37]

Henry's daughter, Queen Mary, improved upon her father's licensing regime in 1557. She granted a Royal Charter to a London-based company of printers, bookbinders and other skilled workers of the book trade. This Royal Charter provided the Company of Stationers the nearly exclusive privilege to print and trade in books. In exchange, the Company would abide to and enforce the Crown's censorship rules. The Stationers were thus authorized to

[34] See generally David S Kastan, "Print, Literary Culture and the Book Trade" in Loewenstein & Mueller (eds), *supra* note 25, 81 (on the introduction of printed books and the printing press in England, and the formation of the book trade).
[35] See "Enforcing Statutes against Heresy; Prohibiting Unlicensed Preaching, Heretical Books" in Paul L Hugues & James F Larkin (eds), *Tudor Royal Proclamations*, vol 1 (New Haven: Yale University Press, 1964-69) 181 at 185-86.
[36] See *Act of Supremacy*, 1534 (Eng), 26 Hen VIII, c 1.
[37] See "Prohibiting Unlicensed Printing of Scripture, Exiling Anabaptists, Depriving Married Clergy, Removing St Thomas à Becket from Calendar" in Paul L Hugues & James F Larkin (eds), *supra* note 35, 270 at 271-72. Ever wary of how books could instigate social unrest in a nation divided by his religious policies, Henry also had the Parliament enact an *Act for the Advancement of True Religion* (see 1543 (Eng), 34 & 35 Hen VIII, c 1), which prevented most women and members of the working class from reading the English Bible.

print and distribute a book, but only with the assent of royal censors, having examined and authorized its manuscript beforehand.

To facilitate law enforcement, the Crown granted the officers of the Company powers to search printing houses, and to seize and destroy books printed against royal directives:

> it shall be lawful for [the officers of the Company] … *to make search whenever it shall please them in any place, shop, house, chamber, or building of any printer, binder, or bookseller whatever within our kingdom of England ... for any books or things printed, or to be printed, and to seize, take, hold, burn or turn to the proper use of the foresaid community, all and several those books and things* which are or shall be printed contrary to the form of any statute, act, or proclamation, made or to be made.[38]

Queen Elizabeth confirmed the Charter in 1559, and progressively expanded the powers of the officers of the Company. The fact that very few other professional groups enjoyed similar powers shows the import the Crown gave to the matter.[39] The Tudors' licensing regime would endure until the mid-seventeenth century.[40]

The Royal Charter left to the Company of Stationers the task of organizing their industry. The Company regulated every aspect of the book trade, including the maximum number of printing houses, the distribution of work and the pricing of books.[41] 'Copy right', a creation of the Stationers, was meant to distribute the benefits of the printing monopoly within the Company. The Company shared the spoils of the printing and publishing trade through the dispensation of copies. The term 'copy' designated an exclusive license to print a given

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[38] "Stationers' Charter", London (1557) in Lionel Bently & Martin Kretschmer (eds), *Primary Sources on Copyright (1450-1900)*, online: Copyright History, http://www.copyrighthistory.org (emphasis added).
[39] See Weber, *supra* note 23 at 141.
[40] See Oren Bracha, *Owning Ideas: A History of Anglo-American Intellectual Property*, DJS Thesis, Harvard University Law School, 2005 at 129-38; *ibid* at 134-43. See generally Fredrick S Siebert, *Freedom of the Press in England, 1476-1776: The Rise and Decline of Government Control* (Urbana: University of Illinois Press, 1965) at 21-63, 107-65 (for a detailed account of the regulation of the printing trade under the Tudors and the early Stuarts); David M Loades, "The Theory and Practice of Censorship in Sixteenth-Century England" (1973) 24 *Transactions of the Royal Historical Society* 141.
[41] William St-Clair, *The Reading Nation in the Romantic Period* (Cambridge: Cambridge University Press, 2004) at 61-62.

title that a Stationer could oppose to other members of the Company. Once a Stationer acquired a manuscript from its author, usually for a lump sum, and obtained from a royal censor the license to print the manuscript, he requested the Clerk of the Company to inscribe the manuscript's title under his name in the Stationers' Register.

Initially, registering a copy did not procure 'property' of the given title, "but rather a [S]tationer's right to publish a work."[42] The named Stationer held this right in perpetuity; he could transfer it to another Stationer and it joined his estate upon death. Stationers resolved internal disputes regarding copies via the Company's 'Court of Assistants'. To enforce these private regulations, the officers of the Company relied on the search-and-seizure powers the Crown had granted them. Because of this close relationship between royal censorship and the Stationers' copyright, the commercial power of the Company stood only as strong as the political power of the Crown.[43]

Despite their control of the London book trade, the Company had to tolerate one significant intrusion into their commercial monopoly: printing patents. A printing patent granted its holder the exclusive privilege to print either a given title or a whole class of books. Stationers could not — in theory — print any title covered under a patent without the authorization of the patentee. As was the case for the Stationers' monopoly, printing patents had an important political dimension. The Crown usually attributed patents to its most loyal subjects, often as a reward, and to ensure the publication of works essential to the

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[42] Mark Rose, *Authors and Owners: The Invention of Copyright* (Cambridge: Harvard University Press, 1993) at 14. See also Bracha, *supra* note 40 at 129-33, 169-71, 176 (following the registration practices of the Stationers, copies gradually took on characteristics of property).

[43] See Bracha, *supra* note 40 at 129-33, 144-45, 169-70; L Ray Patterson, *Copyright in Historical Perspective* (Nashville: Vanderbilt University Press, 1968) at 42-77. See generally Cyprian Blagden, *The Stationers' Company: A History, 1403-1959* (Cambridge: Harvard University Press, 1960) (for a detailed history of the Company of Stationers).

governance and the wellbeing of England. Printing patents covered some of the most profitable products of the book trade well into the eighteenth century.[44]

While printing patents functioned as an exception of a sort to the Company's privileges, there were many points of contact between the two regimes. First, the Company held printing patents of its own, which it consolidated in the 'English Stock'. The English Stock included lucrative books such as almanacs, prognostications and psalms. The Stationers held these titles in common under the management of the Company's officers. Second, because many patentees did not belong to the printing trade, they would rent out their patent to one or more Stationers. Finally, Stationers could still hold copyright over a title covered by a printing patent, although such a title would be in principle useless if its holder did not obtain the authorization of the patentee to print the work.[45]

Despite the ingenuity of sixteenth- and seventeenth-century censorship and copyright regimes, I should not overstate their effectiveness. The Crown did not have enough manpower to police the printing trade; this is why it needed the Company in the first place. While sizeable, the licensing and registry system comprised only a portion of the Stationers' publications: the licensing process was costly and Stationers only registered books expected to achieve commercial success.[46] Publishing anonymously could help an author evade authorities. Authors wishing to disseminate controversial ideas could always

[44] See Bracha, *supra* note 40 at 121-29, 146-57.
[45] See John Feather, *A History of British Publishing*, 2nd ed (London: Routledge, 2006) at 33-37. See also Blagden, *supra* note 43 at 92ff; Cyprian Blagden, "The English Stock of the Stationers' Company in the Time of the Stuarts" (1957) vs5-XII *The Library* 167.
[46] See Raymond, *supra* note 27 at 67, 70-71 (arguing that the impact of licensing was exaggerated by those who opposed it, such as John Milton); Weber, *supra* note 23 at 157-58; Joyce Brodowski, *Literary Piracy in England from the Restoration to the Early Eighteenth Century*, DLS thesis, Columbia University, 1973 at 18; Walker, *supra* note 27 at 225-33.

find “marginal printers of questionable integrity”[47] willing to take the risk — and risk there was. If licensing did not prevent the publication of offending texts, it did provide deterrents. Violating censorship regulations could bring a swift and harsh punishment upon the culprit, from a heavy fine to the death penalty.[48] The wide search powers detained by the wardens of the Company enabled them to invade any printing house at any moment to seize and destroy illicit goods found therein. Printers engaged in dubious publishing were therefore highly vulnerable to denunciation.[49]

The Company’s copyright did not prove especially effective against piracy either. The term ‘piracy’ extended to multiple forms of illicit printing practices beyond the unauthorized reproduction of a protected copy. It included, for example, reprinting cheaper editions of a work, unauthorized collections and abridgments, literary fraud,[50] the importation of works protected by domestic copies, and the unauthorized publications of manuscripts.[51] Such piratical practices remained widespread well into the eighteenth century. They tempted and affected every printer, bookseller and reader, making trust a rare commodity within the book trade.[52]

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[47] Sabrina A Baron, “Licensing Readers, Licensing Authorities in Seventh-Century England” in Jennifer Andersen, Elizabeth Sauer & Stephen Orgel (eds), *Books and Readers in Early Modern England: Material Studies* (Philadelphia: University of Pennsylvania Press, 2011) 219 at 223-24.

[48] See William St-Clair, “Metaphors of Intellectual Property” in Ronan Deazley, Martin Kretshchmer & Lionel Bently (eds), *Privilege and Property: Essays on the History of Copyright* (Cambridge: OpenBook, 2010) 369 at 381-82.

[49] See Brodowski, *supra* note 46 at 29.

[50] For example, by making false attributions of authorship or by misrepresenting the content of a book by trafficking its title.

[51] See Brodowski, *supra* note 46 at 30-42.

[52] Johns, *supra* note 30 at 30-33,166-67; Brodowski, *supra* note 46 at 7-8,

2. Judging by the cover

Despite their relative ineffectiveness, licensing and copyright exercised a significant influence over the book trade by helping printers, booksellers and readers alike navigate the ambiguities of print. Rampant piracy was portrayed as deceptive and fraudulent, producing 'false' or 'counterfeited' text that threatened imprudent readers. Indeed, authors, printers and booksellers would often overstate, or in some cases understate, the authority and quality of a book by giving it an aesthetically pleasing or forgettable appearance.[53] As Johns explains, print was perceived as irregular and untrustworthy:

> With piracy regarded as an omnipresent hazard, no individual was automatically immune from the label of pirate, and no book too grand to be called a piracy. The consequences for both authorship and the reading of printed materials were substantial. To modern historians it often appears that the introduction of printing led to an augmentation of certainty, with uniform editions and standardized texts providing the sure fulcrum with which intellectual worlds could be overturned (or protected). *To contemporaries, the link between print and knowledge seemed far less secure. … In the realm of print, truths became falsehoods with dazzling rapidity, while ridiculous errors were the next day proclaimed as neglected profundities. … Far from fixing certainty and truth, print dissolved them.*[54]

Discriminating between credible and deceptive books depended on a reader's ability to interpret signs of authenticity, assess the integrity of print, and establish relationships of trust with fellow readers and members of the book trade. The former judged the latter on the basis of craftsmanship and civility. How the reading public perceived individual Stationers and the Company as a whole affected whether or not it trusted the books they printed and sold, and whether or not it treated their content as authoritative. Because the

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[53] See Cyndia S Clegg, "The Authority and Subversiveness of Print in Early-Modern Europe" in Leslie Howsam (ed), *The Cambridge Companion to the History of the Book* (Cambridge: Cambridge University Press, 2015) (Cambridge: Cambridge University Press, 2015) 125 at 134-35.

[54] Johns, *supra* note 30 at 171-72 (emphasis added).

credibility of print was constantly under the threat of piratical practices, maintaining it required continuing efforts from printers, booksellers, readers and state authorities.[55]

Civility contributed in large part to a Stationer's public reputation and, by extension, to the properties accorded to his goods. Piracy was not solely a matter of property, but also propriety and epistemology.[56] To that effect, the Company's Register counted among its most important symbols. It played an essential role as a record of assigned copies to distribute the benefits of the book trade and resolve commercial disputes among Stationers.[57] But the Register also represented the moral character of the Company as the repertoire of books licensed and approved by the royal censors, and as evidence of the spirit of consideration and fairness that animated their practices. The Registry symbolized the Company's civility, a trait justifying privilege and trust.[58]

The importance of censorship, civility and trust in early modern England's book trade highlights contemporary attitudes towards reading. Books were primarily understood through the effects they had on readers: "Reading, all were sure, shaped knowledge, the beliefs, the understanding, the opinions, the sense of identity, the loyalties, the moral values, the sensibility, the memories, the dreams, and therefore, ultimately, the actions, of men, women, and children."[59] By shaping the minds of readers, reading had vital consequences for a country's population.[60]

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[55] See St-Clair, *supra* note 48 at 384-85; Raymond, *supra* note 27 at 25; Brodowski, *supra* note 46 at 36-38.
[56] See Johns, *supra* note 30 at 60, 126-60, 162, 171-74, 188-90.
[57] See Feather, *supra* note 45 at 34, 39.
[58] Johns, *supra* note 30 at 213-22.
[59] St-Clair, *supra* note 41 at 1.
[60] See St-Clair, *supra* note 48 at 380; David Cressy, *Literacy and the Social Order: Reading and Writing in Tudor and Stuart England* (Cambridge: Cambridge University Press, 1980) at 8-9.

Censorship regularly emphasized the power of print. Henry VIII's proclamation of 1529 blamed social unrest on the printing press, and accused books of corrupting the hearts of his vulnerable subjects and pitting them against religion, law and the Crown:

> [D]iverse heresies and erroneous opinions have been late sown and spread among his subjects of this his said realm, by blasphemous and pestiferous English books, printed in other regions and sent into this realm, *to the intent as well to pervert and withdraw the people from the Catholic and true faith of Christ, as also to stir and incense them to sedition and disobedience against their princes, sovereigns, and heads, as also to cause them to condemn and neglect all good laws, customs, and virtuous manners*, to the final subversion and desolation of this noble realm.[61]

In the Company's Royal Charter, the King and Queen complained

> that certain seditious and heretical books, rhymes and treatises are daily published and printed by divers scandalous, malicious, schismatical and heretical persons, *not only moving our subjects and lieges to sedition and disobedience against us*, our crown and dignity, but also to renew and move very great and detestable heresies against the faith and sound catholic doctrine of Holy Mother Church.[62]

More than eighty years later, Parliament denounced "the great late abuses and frequent orders in printing many false, forged, scandalous, seditious, libellous and unlicensed papers, pamphlets, and books to the great defamation of religion and government."[63]

Conversely, legal texts celebrated reading good books, especially *the* good book:

> And they [the clergy] shall discourage no man from the reading of any part of the *Bible* either in Latin or English, but shall rather exhort every person to read the same, with great humility and reverence, as *the very lovely word of God, and the special food of man's soul, which all Christian persons are bound to embrace, believe, and follow, if they look to be saved.* Whereby they may the better know their duties to God, to their Sovereign Lady the Queen, and their neighbour.[64]

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[61] "Prohibiting Erroneous Books and Bible Translations", in Paul L Hugues & James F Larkin (eds), *supra* note 35, 194 at 194 (emphasis added).
[62] "Stationers' Charter", *supra* note 38 (emphasis added).
[63] "An Ordinance for the Regulating of Printing, 14 June 1643" in CH Firth & Robert S Rait (eds), *Acts and Ordinances of the Interregnum* (London: HM Stationary Off, 1911) 184 at 184.
[64] "Elizabethean Injunctions, London (1559)", in Lionel Bently & Martin Kretschmer (eds), *supra* note 38 (emphasis added).

Books could elevate the mind and soul as much as they could corrupt them. Unscrupulous booksellers could abuse misinformed and credulous readers, but the respectable, pious and honourable Stationer kept impressionable souls from harm.[65] Governmental powers characterised readers as vulnerable and easily fooled by the power of books, and therefore necessitating state protection.[66] Since books were construed as the product of collective labour — a "union of words, ink and paper"[67] — all participants of the book trade shared the responsibility of protecting the reading public from the potential evils of print, including royal licensors and Company officers.[68]

Legal printing raised concerns of its own. In the sixteenth century, humanists such as John Rastell supported the dissemination of legal information in English (as opposed to law–French).[69] For this printer, barrister and Member of Parliament, Rastell believed knowledge of the law went hand in hand with obedience to the law:

> [L]ack of law causes many wrongs to be committed willingly. *And lack of knowledge of the law causes divers wrongs to be done by negligence;* therefore since law is necessary to be had and a virtuous and good thing, ergo to have law is necessary to be had and a virtuous and good thing: and that that is virtuous and good, is food for every man to use; *ergo it follows, it is a good thing for every man to have the knowledge of the law. And since that it is necessary for every realm to have a law reasonable and sufficient to govern the great multitude of the people, ergo it is necessary that the great multitude of the people have the knowledge of the same law to the which they be bound*. *Ergo it follows that the law in every realm should be so published, declared, and written in such* [*manner*] *that the people so bound to the same might soon and shortly come to the knowledge thereof*, or else such a law so kept secretly in the knowledge of a few persons and from the knowledge of the great multitude may rather be called

[65] See St-Clair, *supra* note 48 at 380; Raymond, *supra* note 27 at 92-93.
[66] See Weber, *supra* note 23 at 137-40
[67] See Raymond, *supra* note 27 at 53.
[68] See St-Clair, *supra* note 41 at 47.
[69] See Baker, *supra* note 77 at 496. See generally John H Baker, "John Rastell and the Terms of the Law" in John H Baker, *Collected Papers on English Legal History* (Cambridge: Cambridge University Press, 2013) 719.

> a trap and a net to bring people to vexation and trouble than a good order to bring them peace and quietness.[70]

To many other humanists, printing legal texts in the vernacular and for a wide readership would enable popular understanding of the law, which in turn would promote peace and unity.[71] More radically, Rastell put the printer "alongside the legislator, magistrate, and lawyer as legal educators serving the commonwealth."[72]

But while there was no outright opposition to law printing, it could still attract criticism, especially from the legal profession. Most English lawyers felt a strong sense of ownership towards the common law, believing that beneath a seemingly incoherent mass of particular decisions laid infallible principles specific to the English way of life. Legal printing, some lawyers feared, made the common law vulnerable to the criticism of readers lacking the training to discern its value.[73] Naysayers even warned that public knowledge of the law would only increase litigiousness and disobedience.[74] Like many government officials, they did not trust lay readers with sensitive matters put into print.

Crucially, print threatened to undermine the professional authority of common lawyers.[75] Prior to the profound disruptions caused by the English Civil War and the Interregnum, the

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[70] John Rastell, "Expositions of the Terms of English Laws: Prologue" in Elizabeth M Nugent (ed), *The Thought Culture of the English Renaissance: An Anthology of Tudor Prose 1481-1555* (Cambridge: Cambridge University Press, 1956) 176 at 177 (*circa* 1525) (emphasis added).
[71] See Prabha Quark, "English law and the Renaissance" in John Baker (ed), *The Oxford History of the Laws of England: Volume VI 1483-1558* (Oxford: Oxford University Press, 2003) 3 at 29-30; Richard J Ross, "The Commoning of the Common Law: The Renaissance Debate Over Printing English Law, 1520-1640" (1998) 146 U Pa L Rev 323 at 329-37.
[72] *Ibid* at 330.
[73] *Ibid* at 361, 373-74; Peter Goodrich, "Poor Illiterate Reason: History, Nationalism and Common Law" (1992) 1 Soc Leg Stud 7 at 10-13, 20 ("[p]rinting had led to the renewal of a call both for the rationalization and for the codification of English law, and the common lawyers were keenly aware of the threat represented by civilian models of legal system and the rational methods of written law," at 14). See also Michael Lobban, *A History of the Philosophy of Law in The Common Law World, 1600-1900* (Dordrecht: Springer, 2007) at 12-14, 26.
[74] See Ross, *supra* note 71 at 375-76, 378-79.
[75] See Ross, *supra* note 71 at 436-38.

four Inns of Court in London largely dominated English legal thought. Students of the law learned their trade from barristers and judges residing in the Inns. To Inn members, these learning practices constituted the essence of the law applied in the royal courts of Westminster Hall: they served as the primary means to make, organize and disseminate the common law.[76] In addition to oral and social traditions — such as lectures, moots and revels — the members of the Inns also produced much of the legal literature.

Even as common lawyers increasingly relied on print, the manuscript long remained the principal means of producing and disseminating legal information. While printed editions of the statutes had entirely displaced manuscript by 1500,[77] "Elizabethan and early Stuart lawyers … produced about six to twelve manuscript volumes of law reports for every printed one."[78] Manuscripts provided common lawyers with more direct means of control of legal information, and therefore reinforced their ownership of the common law.[79]

In contrast, the press displaced legal publishing from the Inns of the Court to the printing houses of the Stationers. Stationers did not obey the conventions that regulated the use of

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[76] See Lobban, *supra* note 73 at 7; John H. Baker, "Why the History of English Law Has not Been Finished" (2000) 59 CLJ 62 at 82-83.

[77] See John H Baker, "Law Books and Publishing" in John Baker (ed), *supra* note 71, 492 at 506; Ross, *supra* note 71 at 361-62.

[78] *Ibid* at 432.

[79] *Ibid* ("owners of manuscripts had to decide whether to lend, and to whom, and on what terms, for they were not freely available to all. Borrowers had to decide what to retain, what to cut, and what to re-shape. A number of consequences followed. First, outsiders to the Inns did not enjoy guaranteed access to manuscripts, which were not "public." Although there was some leakage, lawyers tended to confine manuscripts within legal and governmental circles. Indeed, within the Inns, manuscripts circulated within restricted networks of friends, kinsmen, and senior lawyers. … Second, the power to shape the collective manuscript record of the law was dispersed within the profession. Each human link in the chain of borrowing and transcription enjoyed relatively little control over the aggregate body of circulating manuscripts, but each could exercise some incremental power in his decisions about whether to lend, borrow, or copy, and in his choices about what to include, exclude, or change. Third, the profession, as a collectively, inculcated conventions of reading and interpretation in its members that guided the amendment of texts and found their way into the manuscript record as queries, notes cross-references, and marginalia," at 434-35). See also Goodrich, *supra* note 73 at 12.

legal information among professionals. Consequently, many common lawyers did not trust Stationers with legal publishing, their fears of inaccuracies confirmed by the frequent textual adulteration of print. Concerned that print would introduce errors in the law, many in the legal profession supported the regulation and censorship of the press.[80]

Lawyers did not disavow print altogether. The sixteenth and seventeenth centuries saw the publication of many law reports in print, along with more theoretical (if less authoritative) works meant for students.[81] But the legal profession did not take the authority of print for granted. Members of the Inns routinely amended printed law books with additions and corrections of their own. They disputed the authority of printed books that did not bear similar inscriptions and addendums.[82] Adding script to print enabled common lawyers to re-introduce their conventions in print. And so, the manuscript remained the norm for the dissemination of legal information in England during the sixteenth and seventeenth century.[83]

3. Time of tumult

Compared to the position it enjoyed under the Tudors and the early Stuarts, the seventeenth century proved disastrous for the Company of Stationers. The Company derived its extensive search-and-seizure powers from two rotal institutions: the Star Chamber and the

[80] See Ross, *supra* note 71 at 353-54. See also John H Baker, "The Dark Age of English Legal History, 1500-1700" in John H Baker, *The Legal Profession and the Common Law: Historical Essays* (London: Hambledon Press, 1986) 435 at 439-43.
[81] See Lobban, *supra* note 73 at 30-33.
[82] See Ross, *supra* note 71 at 435-36, 438.
[83] See Baker, *supra* note 80 at 443-57. See also Zwicker, *supra* note 25 at 176-78 (lawyers were not alone in this practice, as "writing was among the most widespread habits of early modern reading," at 176). See generally Harold Love & Arthur F Marotti, "Manuscript Transmission and Circulation" in Loewenstein & Mueller (eds), *supra* note 25, 55.

Royal Commission. Charles I abolished both in 1642 to appease Parliament. Their abolition deprived the Company's officers of the legal basis on which they policed piracy under the banner of censorship.[84] English printers, for the first time in almost a hundred years, could publish whatever they wanted.

Copies became highly vulnerable to piracy, leading the Company to lobby Parliament and obtain in 1643 an ordinance that would restore its regulatory power over the book trade. The would-be republican government felt the need to control the press as much as the monarchs before them.[85] But for others, such as Leveller John Lilburne,[86] the new arrangement only showed Stationers to be nothing but lowly turncoats who unfairly benefited from an "insufferable, unjust, and tyrannical monopoly of printing."[87] The privileges of the Company remained in spite of wide opposition against monopolies.

Indeed, ever since the days of Henry VIII, the Crown had granted similar privileges to favoured subjects on the basis of royal prerogative. Elizabeth and the early Stuarts had made extensive use of this prerogative to raise income, obtain political advantages and for policy purposes. The use and abuse of monopolies grew especially contentious in the first half of the seventeenth century amid growing discontent with increased prices and support for free trade.[88] Controversy over monopolies reached an important milestone with the enactment of a *Statute of Monopolies* in 1624. The *Statute* prohibited all monopolies unless

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[84] See Siebert, *supra* note 40 at 166; Walker, *supra* note 27 at 221.

[85] See "An Ordinance for the Regulating of Printing", *supra* note 63; Patterson, *supra* note 43 at 126-34; Siebert, *supra* note 40 at 173-201, 219-33 (for an account of the regulation of the press during the years of the Commonwealth and the Protectorate)

[86] See generally Rachel Foxley, *The Levellers: Radical Political Thought in the English Revolution* (Manchester: Manchester University Press, 2013) (a political faction at its strongest at the end of the 1640s, the Levellers advocated in favour of reforms supporting popular sovereignty, equality before the law, and religious tolerance).

[87] John Lilburne, *England's Birthright Justified* (London: sn, 1645) at 10.

[88] See *Darcy v Allen* (1688), Moo KB 671, 72 ER 830 (KB).

a common law court decided otherwise, with two notable exceptions: patents for inventions and printing privileges.[89] The exception clearly applied to both the privileges of the Company and to printing patents, but the Stationers nonetheless bore the brunt of the antagonism towards monopolies.[90]

The Company also suffered from infighting in the same period. Since its beginnings as "a cohesive organization of master printers, journeymen, and apprentices," the Company had evolved into "an autocratic oligarchy principally engaged in pursuing the pecuniary advantage of its officers."[91] The Register and the English Stock contributed to internal discontent and inequalities. A few Stationers, primarily booksellers rather than printers, came to own the most valuable copies, prevented others from entering new copies in the Register and controlled the English Stock. The dominance of Company affairs by powerful booksellers frustrated less-fortunate Stationers who thus resorted to piracy to secure a livelihood.[92] Revolt within the ranks of the Company tarnished its public image as aggrieved printers established new printing houses to increase their independence. The number of printing houses reportedly increased from twenty-two in 1637 to sixty in 1663.[93] This increase may have been too much for the officers of the Company to handle, making it difficult to effectively protect copyrights and enforce licensing requirements.

[89] *An Act Concerning Monopolies and Dispensations with Penal Laws and Forfeitures Thereof*, 1624 (Eng), 21 Jac I, c 3 s II, VI, X.
[90] See Johns, *supra* note 30 at 248-49; Ronan Deazley, "Commentary on: Statute of Monopolies (1624)" in Lionel Bently & Martin Kretschmer (eds), *supra* note 38.
[91] Siebert, *supra* note 40 at 141.
[92] See Feather, *supra* note 45 at 40; Brodowski, *supra* note 46 at 22.
[93] See Raymond, *supra* note 27 at 68-69. But see DF McKenzie, "Printing and Publishing 1557-1700: Constraints on the London Book trades" in John Barnard, DF McKenzie & Maureen Bell (eds), *The Cambridge History of the Book in Britain*, vol 4 (Cambridge: Cambridge University Press, 2002) 553 at 557 (McKenzie presents different numbers, from twenty-three printing houses in 1583 to thirty-three in 1668).

The situation of the Company would improve after the Restoration, but the Stationers still faced challenges. In 1662 Charles II had enacted a new *Licensing Act* that restored the condition of the book trade under his predecessors, but made Parliament the functional authority of the licensing regime.[94] The appointment of Sir Roger L'Estrange as Licensor and Surveyor of the Press, charged with enforcing censorship regulation, signalled government had lost faith in the Company as law enforcers.[95] L'Estrange often quarrelled with the officers of the Company who resented his encroachment upon their duties. These conflicts reinforced L'Estrange's conviction that government could not trust the Stationers to self-regulate:

> [Stationers] have not only the *temptation* of *profit*, to divert them from their duty (a fair part of their stock lying in seditious ware) but the *means of transgressing* with great *privacy*, and *safety*: for, make *them overseers* of the press, and the *printers* become totally at *their devotion*; so that the whole trade passes through the fingers of their own creatures, which, upon the matter, concludes rather in a *combination*, than a *remedy*.[96]

Similar criticism arose from within the Company. In the early 1660s, eleven printers petitioned the King for an independent corporation. They claimed that the officials of the Company only conducted searches to prevent copyright infringement, whereas only "printers had enough technical knowledge to make effective searchers of printers' premises for seditious and heretical books, papers, and pamphlets."[97] The petitioners joined craftsmanship and civility to claim authority over the press: they denounced booksellers as

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[94] *An Act for preventing the frequent Abuses in printing seditious treasonable and unlicensed Bookes and Pamphlets and for regulating of Printing and Printing Presses*, 1662 (Eng), 14 Car II c 33 [*Licensing Act*]. See Siebert, *supra* note 40 at 237-44.
[95] See Siebert, *supra* note 40 at 252-57.
[96] Roger L'Estrange, *Considerations and Proposals in Order to the Regulation of the Press* (London: Printed by AC, 1663) at 25.
[97] Cyprian Blagden, "The 'Company' of Printers" (1960) 13 *Studies in Bibliography* 3 at 8-9. See also *A Brief Discourse concerning Printing and Printers* (London: Printed for a Society of Printers, 1663) at 10-11 (published to expose and support the printers' grievance against the booksellers).

ignorant and greedy parasites, overly concerned with the defense of their copies rather than with the suppression of seditious and treasonable books.[98] While the petition failed, Atkyns would repurpose the printers' arguments in the coming struggle to defend his privilege to print common law books.

B. Restoring the common law patent

The Crown governed the printing of legal materials with two printing patents. The office of King's Printer held the exclusive privilege to print legislation and religious texts, including "all statute books, acts of Parliament, proclamations, Bibles, and New Testaments."[99] Other legal materials fell under the 'common law patent', which included "conveyance and land law; practice and pleading; ecclesiastical law; local government and legal history; student books; and many special branches of the common law."[100]

The Crown first granted the common law patent to Richard Tottel in 1553, who kept it for forty years. Upon his death, the patent changed hands a few times until the Company of Stationers bought it in 1605, and integrated it to its English Stock.[101] The Company's title expired in 1629, and the patent reversed to John Moore for forty years. John Moore was no printer, so he promptly leased the patent to a trio of Stationers led by Miles Flesher.[102]

[98] See Blagden, *supra* note 97 at 7-8; Brodowski, *supra* note 46 at 209.
[99] Siebert, *supra* note 40 at 128.
[100] *Ibid* at 202.
[101] See John H Baker, *An Introduction to English Legal History*, 4th ed (London: Butterworths LexisNexis, 2002) at 189-90 (the Stationers notably published the first edition of *Coke Upon Littleton*, a seminal work on property law, during the term of the patent)
[102] John H Baker, "English Law Books and Legal Publishing" in John Barnard, DF McKenzie, Maureen Bell (eds), *supra* note 93, 474 at 479- 83.

Flesher would become one of the most important members and officers of the Company, thanks notably to his interest in the common law patent.[103]

Moore died in 1638, after which the common law patent passed to his daughter Lady Martha Acheson, wife to Colonel Richard Atkyns. Like all royal privileges, the common law patent became unenforceable during the Civil War, and lost its legal basis during the Interregnum. As a result, early in the 1640s, Moore's lessees ceased to pay their annual rent to Moore's estate. Most of the profits went to Flesher who, by 1644, had outlived all of Moore's lessees and obtained their share in the lease.[104]

Flesher aggressively defended his interest in the publication of law books, using his influence as an officer of the Company and his power within the trade.[105] Atkyns initiated proceedings against Flesher to recover the sums he was owed, but suspended his suit in order to fight for the royalist army during the Civil War.[106] After Flesher enjoyed all benefits of the common law patent until the Restoration, he learned Atkyns planned to resume his proceedings and strip him off his lease. Anticipating defeat and looking to profit once more from the common law patent, Flesher sold his lease to the Company.[107]

Upon Restoration, a Parliament composed of Charles II's sympathisers sought to erase two decades of lawmaking under the Commonwealth. This endeavour required new law books. But at a time when supporters of the monarchy suspected their enemies still conspired

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[103] See Johns, *supra* note 30 at 299-300; Blagden, *supra* note 43 at 138-45.
[104] See Baker, *supra* note 102 at 484; Brodowski, *supra* note 46 at 207-08.
[105] See Johns, *supra* note 30 at 299-304.
[106] See Brodowski, *supra* note 46 at 208.
[107] See Blagden, *supra* note 43 at 144; *ibid* ("[t]he Company paid Flesher £200, but Miles avoided signing the papers to seal the contract, probably because he knew that he had forfeited his own interest because of his failure to pay the annual rent to the Moore estate," at 208).

against the Crown, the question of who they could trust with the printing of law books became critical. The reigning paranoia extended to legal publishing: in 1666 one Stationer was fined over £300 and thrown in prison for printing law books published during the years of the Commonwealth.[108] Attributing a printing patent also gave Charles II the opportunity to reward subjects that had remained loyal to the monarchy during the Interregnum. And so, in 1660, the King reversed the common law patent to the benefit of Atkyns and extended it for forty years after its coming expiration, in 1669.[109]

Like Moore before him, Atkyns assigned the exploitation of the patent to a trio of Stationers. Despite Atkyns' claims, the Company did not renounce its interest in the patent and instead opposed the lease it acquired from Flesher against Atkyns' assigns. Atkyns led a public campaign against the Company, a conflict that would persist for years and require the intervention of the House of Lords not once, but twice. To help wage war against the Company, Atkyns would rely heavily on the help of one of his assigns, a "notorious intruder to mischievous printing"[110] named John Streater.

1. Streater and **the Original** *argument*

Streater had served as a soldier under Cromwell, but publicly opposed the Lord Protector. The persecution and imprisonment he suffered under the Protectorate may explain why

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[108] Henry R Plomer, "Speed, (Samuel)" in Henry R. Plomer, *A Dictionary of the Booksellers and Printers Who Were at Work in England, Scotland, and Ireland from 1641 to 1667* (London: Bibliographical Society, 1968) 169 at 170 (John Streater denounced him).
[109] See *De Term Sanct Mich Anno Regis 33 Car II* (1681), 2 Chan Cas 66, 22 ER 849 (Ch) at 849 [*De Term Sanct*]; *The Stationers v the Patentees about the Printing of Roll's Abridgment* (1666). Carter 89, 124 ER 842 (HL) at 842 [*Stationers v Patentees*].
[110] Blagden, *supra* note 97 at 17 (quoting Roger L'Estrange on John Streater).

Streater supported the Restoration despite his republican ideals.[111] Streater believed the diffusion of information was of crucial importance to the wellbeing of England, since a well-informed populace would be in a better position to resist oppression. Like Rastell, he thought that achieving and maintaining the rule of law required that his fellow-countrymen be familiar with the law that governed them,[112] which necessitated a wide dissemination of law books. He thus made the printing of law books an important part of his operation, doing so on behalf of the English Stock before joining Atkyns.[113]

Of all Atkyns' assigns, the officers of the Company distrusted Streater the most. The printer benefited from a unique position, being explicitly exempted from the requirements of the *Licensing Act*, which allowed Streater to "follow the art and mystery of printing, as if this Act had never been made."[114] He became one of London's most important and influential printers after taking advantage of the Company's weakness during the Interregnum to expand his operations.[115] Streater despised the more powerful members of the Company, having taken part in the petition to incorporate printers separately.

The officers of the Company had no intention to let Atkyns and his assigns (the patentees) profit from the common law patent. Company wardens soon stormed their printing houses to seize manuscripts and disrupt their operations.[116] Atkyns countered with an injunction

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[111] See Joad Raymond, "John Streater and *The Grand Politick Informer*" (1998) 41 *The Historic Journal* 567. See also Brodowski, *supra* note 46 at 209.
[112] John Streater, *A Glympse of that Jewel, Judicial, Just, Preserving Libertie* (London: Printed for Giles Calvert, 1653) at A3^{r}-A3^{v}, 5.
[113] See Johns, *supra* note 30 at 304-05.
[114] *Licensing Act*, *supra* note 94 s XXIII. But see Brodowski, *supra* note 46 ("[a]lthough [the exception] was never honored, he was still a favored and influential individual," at 209).
[115] See Johns, *supra* note 30 at 299 (by 1668, with five presses, Streater controlled the second largest printing house in London).
[116] See Baker, *supra* note 102 at 485; *ibid* at 304-05.

preventing Stationers from printing common law books without his authorization,[117] but the Company persisted. Rather than answering Atkyns' bill in Chancery, the Company kept on printing common law books for its own profit. Its officers may have hoped to exhaust the patentees in further legal proceedings or to make the most of the acquired lease until the expiration of Moore's original title in 1669.[118] Obstructed by their rivals, who would go as far as instigating the imprisonment of Atkyns' assigns,[119] the patentees turned to Streater's weapon of choice: pamphleteering.

The charge against the Stationers began with Atkyns' *Original and Growth of Printing*, printed by Streater.[120] The pamphlet re-imagined the history of printing to portray Stationers as usurpers of the Crown. Atkyns denied therein that William Caxton had brought the printing press to England in 1471. He instead endorsed a tale of industrial espionage in which Henry VI would have arranged to seize the art of printing from Holland.[121] The King had charged an agent to execute the plan, who enlisted the help of Caxton before conspiring to bring a Hollander in England to practice and teach the art of printing in Oxford. Given that Henry VI had brought the art of printing to England at his expense ten years before Caxton set up a press of his own in Westminster, Atkyns argued that the Crown held a prerogative over all printing, making all printers its servants.[122]

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[117] See *Stationers v Patentees*, *supra* note 109 at 842.
[118] See Brodowski, *supra* note 46 at 215-20.
[119] *Ibid*; Plomer, *supra* note 108 at 173.
[120] See also [Richard Atkyns], *The Original and Growth of Printing* (London: np, 1660-61) (an earlier, single-sheet version).
[121] See Weber, *supra* note 23 at 148 (Atkyns' account is now wholly discredited).
[122] Atkyns, *supra* note 20 at 4-7. Atkyns allegedly based his alternate history of printing on a book printed at Oxford in 1468, providing evidence that printing occurred therein years before Caxton set his operations in Westminster, and a manuscript relating the conspiracy. Atkyns was not the first neither the last to claim that printing occurred first in Oxford. While the story persisted well into the 18th century, it was "a complete fabrication. The … manuscript did not exist and the '1468' imprint was almost certainly a misprint for 1478." (Ian A Gadd, "Introduction" in Ian A Gadd (ed), *The History of Oxford University Printing: Volume I, Beginnings to 1780* (Oxford: Oxford University Press, 2014) 3 at 7-8.

But not all served the Crown equally well. Atkyns made the merits of print contingent on those of the printer. Practiced by gentlemen, printing benefited the kingdom by making

> a thousand years but as yesterday, by presenting to our view things done so long before; and so spiritual withal, that it flies into all parts parts [*sic*] of the world without weariness. Finally, this is so great a friend to the scholar, that he may make himfelf master of any art or science that has been treated of for 2,000 years before, in less than two years time.[123]

Less virtuous practitioners, however, could not realise the potential of print. Indeed, profit-obsessed Stationers had reduced printing to "a Mechanick trade"[124] devoid of quality and nobility. As such, Stationers were no better than "common fiddlers:" though they may be as talented as any gentleman, to earn a living they had to please the widest audiences and therefore aim for the lowest (and basest) denominator. As a result, Stationers "filled the Kingdom with so many books, and the brains of the people with so many contrary opinions, that these paper-pellets became as dangerous as bullets."[125]

Worst among Stationers were booksellers. Atkyns caricatured the real targets of his critique as ignorant drones.[126] He quoted from *A Brief Discourse concerning Printing and Printers*, a pamphlet detailing the claims Streater and others made against booksellers when they petitioned the King to incorporate separately from the Company.[127] Printers complained therein that wicked booksellers, controlling almost all copies, dared question "whether a printer ought to have any copy or no: or if he have, they (keeping the Register) will hardly enter it; or if they do, they and their accomplices will use all means to disparage it, if not

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[123] Atkyns, *supra* note 20 at 2.
[124] *Ibid* at 7.
[125] *Ibid* at 7.
[126] *Ibid* (booksellers "are the *drones* that devour the honey, made by laborious printers," at 12). See also Johns, *supra* note 30 at 266-72, 280-83 (Streater may have provided inspiration, having special interest for bees).
[127] See also Blagden, *supra* note 98 at 9-10.

down-right counterfeit it."[128] Atkyns enlisted this passage to claim that Stationers defied the patentees and therefore the Crown by printing law books on the sole basis of their Register. He rallied with the mutinous printers in depicting the Company's "Hall-Book" as a symbol of greed and contempt, rather than civility.[129]

Atkyns and Streater did not stop at securing the privilege of printing common law books. They aimed to reform the book trade in its entirety. Booksellers dominated the trade by owning copies and holding key positions in the Company that ensured control over the Register. Neither Crown nor Parliament, however, could hope that the booksellers prevent and redress the abuses and defects of the press. These abuses and defects directly resulted from the booksellers' interests and ignorance.[130]

The solution lay in replacing booksellers with patentees. As a gentleman, the patentee shared none of the character weaknesses of printers and booksellers. Indeed, civility and loyalty to the Crown motivated their actions, as opposed to the desire to earn a living. A patentee could guarantee the good conduct of printing by supervising the work of printers working under his authority. Atkyns doubted printers could fool gentlemen, who after all benefited from the best education and keenest minds. With the term of the *Licensing Act* coming to an end, he proposed not to renew it and instead establish a new regulatory framework based upon the printing patent.[131] Streater and his allies undoubtedly knew that

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[128] *A Brief Discourse*, *supra* note 97 at 6-7 ("the Stationers having usurped [the printers'] calling, and encouraged, yes hired others so to do, and thereby increased [the printers'] number beyond measure, and consequently brought [the printers'] rates so low, as not afford good materials, or engage good workmen; hence comes printing to be at this pass. Which they regard not; for the most of them little regard how ill their work be done, so it be cheap done, at 14). Quoted in Atkyns, *supra* note 20 at 12.
[129] *Ibid* at 14. See Johns, *supra* note 30 at 307.
[130] Atkyns, *supra* note 20 at 16-17. See also *A Brief Discourse*, *supra* note 97 at 8-17.
[131] Atkyns, *supra* note 20 at B3^{r}, 9-11, 16-18.

by doing so, the officers of the Company would have no legal basis to conduct searches and seizures needed to protect the copies of booksellers.

Atkyns' proposal to simply trust gentlemen with print may seem naive. But in a heavily stratified society where one's birth and occupation determined standing and reputation, those with the power to implement his vision would have been amenable to trust into the inherent civility of the gentry.[132] Atkyns' thesis also reflected contemporary attitudes on trust and civility within the book trade. In addition to administering his exclusive privilege, the patentee would proofread the work of printers on the basis of the original manuscript. He attributed the infallibility of the manuscript and its utility for proofreading not on the basis of the materiality of print, but on authority, specifically the royal prerogative, property in the manuscript and approbation by licensors:

> [T]he King's *patentees*; who (if they be not *printers* themselves, nor have a *printer* of their own) agree with one to such a book, whereof they have the propriety, which *printer* gives him security to print the same perfect, and with a fair letter; it matters not whether the *patentee* can set the letters, or have skill in the manufacture himself; it is sufficient for him to examine it with his copy when it is done, (which copy cannot err, because it is under the public licence) and try whether it be as it was agreed; and if it be not as it ought to be in all respects, the *printer* loses his labour and charge: it is the printers' interest then as well as the patentees, to print it perfect and fair.[133]

Printing made "a thousand years but as yesterday, by presenting to our view things done so long before," but only when practiced under the supervision of a gentlemen. Thanks to the royal censors, the patentee's "copy cannot err."

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[132] See Johns, *supra* note 30 at 309 (Johns interprets concurrent developments in the politics of printing as evidence of Atkyns and Streater's success, at 311)

[133] Atkyns, *supra* note 20 at 12 (and in any case, "there is no magic in this art; jugglers they may be, but conjurers they are not," at 10).

In response, the Company fought fire with fire. Its officers repurposed Atkyns and Streater's arguments on their way to the House of Lords — where the case would be decided — by drawing authority from notions of authorship and property:

> It is humbly conceived, first, that the author of every *manuscript* or *copy* has (in all reason) as good right thereunto, as any man has to the estate wherein he has the most absolute property; and consequently the taking from him the one (without his own consent) will be equivalent to the bereaving him of the other, contrary to his will.
>
> Secondly, those who purchased such copies for [valid] considerations, having the author's right thereby transferred to them (and a due licence and entrance according to law) it will be as prejudicial to deprive them of the benefit of their purchase, as to disseize them of their freehold.[134]

The Company intended to depict Atkyns' patent as an illegal monopoly under common law, maintained only at the expense of booksellers, printers, their families and the public at large. If the Crown had once held a prerogative over all printing, the trade had since become a common one in which its subjects could hold interests in their own right.

The Company also argued that while the patentees held their privileges from the Crown, Stationers validly obtained their privileges from Parliament thanks to the *Licensing Act*. This *Act* required that Stationers sought the assent of "the Lord Chancellor, Lords chief Justices, and Lord chief Baron" before printing any law book. If patentees did not have to satisfy the same requirements, how could anyone entrust them with legal publishing?[135] After all, the Stationers could point to at least one "treasonable book… printed in the late Rebellion … by one of the farmers of this patent who used then to write and print books of that nature."[136] This latter jab was likely directed against John Streater.

[134] *The Case of the Booksellers and Printers Stated; with* Answers *to the* Objections *of the Patentee* (London: np, 1666) [*Case of the Booksellers*]. See also Rose, *supra* note 42 (the *Case* marks "the first time that the claim that an author has a property right in his work is asserted in an English court," at 24).
[135] And least of all Streater, specifically exempted from the *Act*. The patentees, however, had expressly stated that they would seek public licence for their publications.
[136] *Case of the Booksellers*, *supra* note 134. See also Johns, *supra* note 30 at 314.

2. Taking the patent to court

The conflict between the patentees and the Stationers spawned two lawsuits, both of which would reach the House of Lords. The first lawsuit followed the registration of Henry Rolle's *Abridgment* in 1666 by a number of Stationers, including one Abel Roper. Roper and his associates printed the book in violation of the Chancery's injunction when Atkyns and his assigns stopped their operation.[137] Atkyns again complained in Chancery, at which point the Lord Keeper solicited the opinion of the King's Bench. The justices agreed that the Stationers could continue to print the titles they had printed before the patent had reversed to Atkyns, but failed to agree on whether the patentee had priority over the Company's lease since the reversion.[138]

Unsatisfied, Atkyns appealed to the House of Lords, who sided with him in 1669. This victory would not end his troubles. In 1671, Roper — now warden of the Company — struck back against the patentees by seizing sheets of Justice Edward Coke's *Reports* from Streater's printing house. The Company denied any involvement or interest in Coke's *Reports*,[139] but its officers pressed piracy charges against Streater for printing another law book figuring in the Register, fined him and, since he could not pay the fine, had him imprisoned.[140] Streater took it upon himself to defend the patent against the Company, with the House of Lords deciding in his favour in 1675. This was the second of two lawsuits that would leave Atkyns and Streater in utter financial ruin.

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[137] *Stationers v Patentees, supra* note 109 at 842. See also Brodowski, *supra* note 46 at 221-22.
[138] *De Term Sanct*, *supra* note 109 at 849. See also Baker, *supra* note 102 at 485-86.
[139] Roper, having acquired the third part of Coke's *Reports* from his executors, likely used his powers as warden to protect his investment from the patentees. See *Roper v Streater* (1675), Bac Abr 6th ed, Vol.IV, 208 (HL) at 208.
[140] See Brodowski, *supra* note 46 at 222, 233. See also Lois Spencer, "The Printing of Sir George Coke's Reports" (1858) 11 *Studies in Bibliography* 231.

In the first lawsuit, the parties remained faithful to the arguments published before the proceedings. The Stationers, as defendants, submitted that the law patent was an unlawful and harmful monopoly. Atkyns, as plaintiff, responded that the law patent was no illegal monopoly, but rather derived from the royal prerogatives of the Crown. This prerogative preserved the integrity of law books, without which printing errors could corrupt the common law, and thus harm the lives and properties of the King's subjects.[141]

Atkyns' counsel, Francis North, presented three main arguments in defense of the law patent. First, North claimed like Atkyns that the Crown should control the printing press as its 'inventor', having originally brought it to England. Second, notwithstanding the invention of the press, the King rightfully owned all law books as the source of legislation and as the judges' employer.[142] Finally, "[the] King's prerogative over printing is necessary as to religion, conservation of the public peace, and necessary to preserve good understanding between King and people."[143]

Atkyns and Streater expanded upon North's arguments in another pamphlet, likely published in anticipation of their appeal to the House of Lords. They addressed therein the Company's arguments that their patent constituted a monopoly and responded that, like any other monopoly, the common law patent was a necessary evil meant to encourage industry and invention in the interest of the public.[144] The patentees further argued that the King's prerogative over law books derived from the duties of the Crown:

> [T]he King has an absolute power to prevent evils foreseen, as he has to reform them which happen unforeseen. And I conceive it clear, *as He may forbid the exercise of*

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[141] See Baker, *supra* note 102 at 485-86 (for the arguments submitted to the King's Bench).
[142] *Stationers v Patentees, supra* note 109 at 843.
[143] *Ibid*.
[144] [Richard Atkyns &/or John Streater], *The King's Grant of Privilege for Sole Printing of Common-Law Books, Defended* (London: Printed by John Streater, 1669) at 2.

> *any invention,* which upon the permission thereof shall prove or become a nuisance, or common mischief, *so he may qualify, or wholly prohibit the first use of it, out of a prospect of the mischief*. Watchfulness and carefulness are the duties required of a good Prince; to watch, is, that He may prevent and obviate dangers.[145]

Having established a royal duty to protect the public, Atkyns and Streater now warned that the dangers of a free press outweighed its benefits, thus justifying the limits imposed on the freedom of the press by the King's prerogative. They justified the common law patent on the basis of the well-known power of books:

> Now experience has discovered to us the dangers and mischiefs of the liberty of printing; and, though the excellency of the invention cannot be denied, yet, whoever will consider it, shall find, that factions and errors in matters of religion, and principles of treason and rebellions in matters of State have been more insinuated and fomented by the liberty of the press, than by any other single means. So it may seem a question (impartially considered) whether the *Use of Printing* recompenses the mischief by the *liberty and abuse* thereof. Therefore the *Father* observes excellently well, *The matter of Books seems to be a thing of small moment, because it treats of words; but through these words, come opinions into the World, which cause partialities, seditions, and wars: they are words, it is true, but such as in consequence, that after them hosts of armed men.*[146]

Less than ten years later, in another case testing the validity of a printing patent, one counsel would argue that "great mischiefs and disorder would ensue to the commonwealth, if [the press] were under no regulation."[147] Indeed, even some of the harshest critics of monopolies still looked favourably upon printing patents.[148]

Though there is no available record of the reasons why the House of Lords ruled in favour of Atkyns in the first lawsuit, we have limited records for the second. Roper, representing the Company, convinced the King's Bench to rule against the validity of the law patent on grounds of it constituting an excessively large and uncertain monopoly.[149] At this point,

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[145] *Ibid* at 8 (emphasis added).
[146] *Ibid* at 8-9.
[147] *The Company of Stationers v Seymour* (1677), 1 Mod 257, 86 ER 865 at 865.
[148] See Bracha, *supra* note 42 at 151.
[149] *Roper v Streater*, *supra* note 139 at 209.

Atkyns had given up on the fight: the Company still refused to settle the sums Flesher owed the patentee despite the judgments confirming his claim. That, and the inability of his assigns to exploit the law patent, had exhausted Atkyns' resources.[150]

Against Atkyns' wishes and despite his imprisonment, Streater appealed to the House of Lords on a writ of error.[151] He won the proceedings on the following grounds:

> [T]hat the invention of printing was new; that this privilege had been always allowed, which was a strong argument in its favour, although it could not be said to amount to a prescription, as printing was introduced within time of memory; that it concerned the State, and was a matter of public care; that it was in nature of a proclamation, which none but the King could make; that the King had the making of judges, sergeants and officers of the law.[152]

In these reasons we find many of the *Original*'s arguments: the King's involvement in bringing the printing press to England, the importance of law books to good governance and the claim of the Crown upon them on the basis of the administration of justice.

Once again, the patentees's victory would turn empty. When the House of Lords delivered the second decision in 1675, Atkyns was suing his assigns for unpaid rent. He had deserted Streater by entrusting the printing of law books to another trio of wealthy and powerful Stationers. The new assigns took over the exploitation of the law patent, but the new arrangement did not save Atkyns. Like Streater, this gentleman would die in prison before the end of the decade, defeated by debt.[153] The law patent remained in the hands of the Atkyns family until 1709, fifteen years after Parliament refused to renew the *Licensing Act* and protect the copies of the Stationers.

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[150] See Brodowski, *supra* note 46 at 220-40 (for a detailed account of Atkyns' efforts to reach an agreement with the Company, and profit from the law patent).
[151] See *ibid* at 210 (in 1670, Atkyns was suing his assigns for initiating legal action without his assent); *Journals of the House of Lords*, vol XIII at 13 (the Lords temporarily released Streater from prison so he could attend the prosecution of his writ).
[152] *Roper v Streater*, *supra* note 139 at 209. See also *Journals of the House of Lords*, vol XII at 704.
[153] See Brodowski, *supra* note 46 at 233; Plomer, *supra* note 108 at 9.

Booksellers and printers attempted but failed to reinstate the *Licensing Act* due to public hostility against monopolies and calls for the abolition of pre-publication censorship. By this point, Parliament favoured libel prosecution and propaganda over licensing as means to control the printing trade.[154] Their lobbying efforts would instead lead to the enactment of *An Act for the Encouragement of Learning*,[155] the world's first copyright legislation. They only managed to safeguard their copies once they petitioned Parliament under the pretence of protecting the interests of authors.[156] Remarkably, this was the very same argument the Stationers had made against Atkyns and Streater years before.[157]

3. Crown copyright

Printing privileges, in the form of patents or copyright, devolved from and reinforced authority. Jurists long continued to affirm how a state-supervised monopoly over the printing of at least some legal materials preserved their integrity and authenticity. In *Millar v Taylor*,[158] a landmark case on whether a common law copyright existed independently from the Statute of Anne,[159] the justices of the King's Bench debated the proper justification for the printing patent over certain printed materials, hesitating between property and prerogative. Lord Mansfield argued in favour of establishing the power of the Crown on the basis of literary property, "which is deduced, as in the case of an author,

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[154] See John Feather, "The English Book Trade and the Law, 1695-1799" (1982) 12 *Publishing History* 51 at 56-57, 58, 60-63; John Feather, "The Book Trade in Politics: The Making of the Copyright Act of 1710" (1980) 8 *Publishing History* 19 at 21, 25-28 [Feather, "The Book Trade in Politics"]; Siebert, *supra* note 40 at 260-63, 269-75.

[155] *An Act for the Encouragement of Learning, by Vesting the Copies of Printed Books in the Authors or Purchasers of such Copies, during the Times therein mentioned*, 1710 (Eng), 8 Anne c 19 [*Statute of Anne*].

[156] See also Rose, *supra* note 42 at 28-30, 32-41; Feather, "The Book Trade in Politics", *supra* note 154 at 21-25, 30-37 (on the legislative process leading to the *Act*, and the preceding versions of the final bill).

[157] *Case of the Booksellers*, *supra* note 134.

[158] *Millar v Taylor* (1769), 4 Burr 2303, 98 ER 201 (KB).

[159] See below, Section VI.B.

from the King's right of original publication."[160] The Crown could therefore grant privileges over the copies in which it had proprietary interests either as head of state or over those made and published at its expense, such as Year Books.[161]

However, in his dissenting opinion, Justice Yates argued that the printing patent derived not from authorship, but from royal prerogative, justified by reasons of state. As such the patent did not compare to the author's copyright, which derived instead "from labour, or composition."[162] Admittedly, the Crown only had authority over the copies that "have relation to the national religion, or government, or the political constitution."[163]

Most later commentators sided with Yates, believing the printing patent derived from "that special pre-eminence which the King has over and above all other persons, and out of the ordinary course of the common law, in right of his Royal dignity."[164] In a case that would reverse *Millar v Taylor* on common law copyright, Lord Camden refused to reduce the dignity of the Crown's prerogative to the level of a bookseller's copyright:

> *Ought not the promulgation of your venerable codes of religion and of law to be entrusted to the executive power, that they may bear the highest mark of authenticity, and neither be impaired, or altered, or mutilated?* These printed Acts are records themselves, as evidence in a court of law, without recurring to the original

[160] *Millar v Taylor*, *supra* note 158 at 254 (Mansfield L).
[161] *Ibid* at 215 (Willes J). While neither justices made these arguments, that the Crown would hold such powers by virtue of its involvement in the introduction of the press to England, or as the fruit of the salaries it paid to judges, could also be described as a proprietary claim. But see *ibid* (Lord Mansfield denied the Crown had any "property in the art of printing. The ridiculous conceit of Atkins was exploded at the time," at 254, referring to *Basket v University of Cambridge* (1758), 1 Black W 106, 96 ER 59 (KB) at 62.
[162] *Millar v Taylor*, *supra* note 158 at 243-44.
[163] *Ibid* at 243.
[164] Joseph Chitty, *The Law of the Prerogatives of the Crown* (London: Butterworth and Son, 1820) at 4 (more specifically, prerogative copyright exists "on grounds of political and public convenience … and its applicability must be restrained to the reasons of its existence," at 239). See also Robert Maugham, *Treatise on the Laws of Literary Property* (London: Longman, Rees, Orme, Brown, and Green, 1828) at 99-102, 103-06.

> parliamentary roll. Will you, then, give this honourable right to your sovereign as such? Or will you degrade him into a bookseller?[165]

Here again appears the distinction between patentee and bookseller. The need to maintain the integrity of printed law warranted the imposition of a monopoly not as a matter of intellectual property, but institutional propriety:

> [*f*]*or it is of manifest public utility to place in proper hands the right of such publication, as well upon account of the special care and superintendence which a trust of such importance necessarily requires,* as because the exclusive right of doing or authorizing any acts in which the public is interested implies an obligation to exercise that right in such manner as to answer the purposes for which it was given.[166]

The privileges of the printing patent were commensurate with the importance of assuring the integrity of law. The patentees' mark provided evidence of English law.[167]

While some form of state monopoly over legal publishing remained, its scope eventually changed. Printing patents steadily declined in the eighteenth and nineteenth centuries. They withdrew from certain categories of books, including texts once covered by the common law patent. The publication of law reports, for example, ceased to operate under the licensing of judges in the course of the eighteenth century, allowing anyone to print them. But while law reports proliferated, most were considered to be of poor quality.[168]

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[165] Quoted in John Wright, *The Parliamentary History of England,* vol 17 (London: Printed by TC Hansard, 1813) at 995 (emphasis added). See also *Donaldson v Beckett* (1774), 2 Bro PC 129, 1 ER 837 (HL) ("[p]rerogative copies … are left to the superintendence of the Crown, as the head and sovereign of the state, upon principles of public utility," at 842-43).
[166] *Eyre and Strahan v Carnan*, (1781) 6 Bac Abri, 7th ed, 509 (Ex) at 512 (emphasis added).
[167] See *Manners v Blair* (1828), 3 Bligh NS PC 391, 4 ER 1379 (CS) ("it is to be referred … to the character of the duty imposed upon the chief executive officer of the Government, to superintend the publication, of the Acts of the Legislature, and Acts of State of that description… that it is a duty imposed upon the first executive magistrate, carrying with it a corresponding prerogative," at 1383); *Universities of Oxford and Cambridge v Richardson* (1802), 6 Ves Jun 689, 31 ER 1260 (Ch) at 1263; *ibid* at 511. See also Monotti, *supra* note 21 at 306-07.
[168] See Baker, *supra* note 101 at 183-84 (even competent reporters left us unreliable reports up until the mid-nineteenth century, being first and foremost a private practice that had evolved in an amateur trade); Percy H Winfield, *The Chief Sources of English Legal History* (Cambridge: Cambridge University Press, 1925) at 184.

Take for example the reports from the Chancery written by Thomas Barnardiston and John Atkyns (not to be confused with Richard Atkyns) in the mid-eighteenth century. The latter's reports allegedly contained multiple inaccuracies and many readers considered them unintelligible,[169] and as such Lord Mansfield refused to consider them as authoritative evidence of the common law.[170] Neither did his Lordship appreciate Barnardiston's reports. Concerned that they would mislead the court, he forbade counsels from citing them. One of his colleagues did as much on account that Barnardiston notoriously slept through the hearings he reported.[171]

To ensure trustworthy reports that could support the legal practice, the Bar itself took over their production. Even if law reporting improved in the second half of the eighteenth century, the legal profession stepped in to ensure the quality and accuracy of the reports with the creation of the Council of Law Reporting in 1864. Its formation constituted

> *a deliberate and sustained effort of the Bar to discover and carry into effect a remedy for a very great evil, involving much of public mischief arising from the uncontrolled use of one of the important exclusive privileges of the Bar,* namely, the privilege of reporting decisions of our Superior Courts of Justice for citation as authority.[172]

Like the law patentees before it, the Council justified taking over the publication of law reports on the basis of authority over commerce:

> It is proposed that the Reports shall be placed under the management and control of the Council; that they shall be prepared by reporters, *under the supervision of editors, all being barristers of reputation and experience*; that they be published in monthly parts, with regularity and promptitude; and so that, as far as practicable, there be no arrears; and that the remuneration of the editors and reporters be by salaries, with

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[169] See John W Wallace, *The Reporters: Arranged and Characterized with Incidental Remarks*, 4th ed (Boston: Soule and Bugee, 1881) at 511; Steward Kyd, *A Treatise on the Law of Corporations* (London: Butterworth, 1794) at 188-89, note c).
[170] See John G Marvin, *Legal Bibliography, or a Thesaurus of American, English, Irish, and Scotch Law Books Together with some Continental Treatises* (Philadelphia: T&JW Johnson, 1847) at 77.
[171] See Winfield, *supra* note 168 at 184 (referring to Lord Lyndhurst).
[172] Fitz R Kelly "To the Right Honourable and Honourable the Lord High Chancellor and the several Judges of Her Majesty's Superior Courts of Law and Equity at Westminster" in William TS Daniel, *The History and Origins of the Law Reports* (London: William Cloves and Sons, 1884) at 277 (emphasis added).

> provision for future increase to an amount, as it is hoped, commensurate with the value of their professional services, *and so as to leave them no longer exposed to the risks, uncertainties, and exaction, which have been found to be inherent in every system which makes law reporting a commercial adventure, involving a trade profit*.[173]

The Bar took over the publication of law reports,[174] but the Crown retained "the exclusive right to publish … every ordinance by which the subject is to live and be governed. These always did belong, and from the very nature of civil government always ought to belong, to the sovereign, and hence have gained the title of 'prerogative copies'."[175]

Prerogative copies first derived from the executive prerogative of government, but by the end of the nineteenth century they would be protected and managed under copyright. In 1889, Queen Victoria made the Controller of Her Majesty's Stationery Office the official printer of the Acts of Parliament. On that occasion she also attributed the Controller the duty "to hold and exercise, during our pleasure, on behalf of us, our heirs, and successors, all rights and privileges in connection with such copyrights, our heirs and successors, as fully as if such copyrights were [his] property."[176]

Crown copyright evidently preceded its attribution to the Controller by the Queen.[177] As the commercial value of copyrighted works increased in relation to those published under printing patents, the practical importance of these printing patents declined in relation to

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[173] *Ibid* at 277-78. See also Patrick Polden, "The Legal Profession" in William Cornish, J Stuart Anderson, Ray Cocks, Michael Lobban, Patrick Polden & Keith Smith, *The Oxford History of the Laws of England, Volume XIII: 1820-1914 Fields of Development* (Oxford: Oxford University Press, 2010) at 1215-22 (emphasis added).
[174] But see Polden, *supra* note 173 at 1220-22 (while many judges preferred the *Law Reports* to other works, the new *Reports* did not eliminate rival reporters).
[175] Walter A Copinger, *The Law of Copyright in Works of Literature and Art* (London: Stevens and Haynes, 1870) at 130.
[176] "Letters Patent and Licence Granted to the Controller of Her Majesty's Stationery Office (Copyright of Acts of Parliament) in Lewis Hertslet, *Commercial Treaties*, vol 18 (London: Butterworth, 1893) at 529. See also DC Dashfield, "Her Majesty's Stationery Office" (1954) 8 *Parliamentary Affairs* 205 at 205-07
[177] See Copinger, *supra* note 175 at 129; Maugham, *supra* note 164 at 99 (on the "special copyright of the Crown").

copyright.[178] The state itself published not only legal materials, but also a host of parliamentary papers, official books, charts, maps, etc. When their infringement became widespread, the Controller warned

> that any one reprinting without due authority matter which has appeared in any government publication, renders himself liable to the same penalties as those which he might, under the like circumstances, have incurred had the copyright been in private hands.[179]

As was the case before, "matters of State, and things that concern Government, were never left to any man's liberty to print that would."[180] But here the claim took the legal form of copyright and extended to all government publications.

It seems that government policy reflected Lord Mansfield's reasoning, stating that the "law gives to the Crown, or the assignee of the Crown, the same right of copyright as to a private individual."[181] But as it was for law patents, Crown copyright came with special duties: its holder had to differentiate between works private publishers would exploit and works issued by government.[182] These latter works were to be widely disseminated, except for Acts of Parliament, which "should not, except when published under the authority of the Government, purport on the face of them to be published by authority."[183] Crown copyright was formally introduced to copyright law in 1911, when the new *Copyright Act* granted government copyright ownership over works "prepared or published under the direction or

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[178] See Bracha, *supra* note 42 at 156-57.
[179] "Notice" in *The London Gazette*, no 25647, November 23, 1886 at 5688.
[180] *The Company of Stationers v Seymour*, *supra* note 147 at 866.
[181] "Copyright. Copy of Treasury Minute Dealing with the Copyright in Government Publications", *House of Commons, Accounts and Papers*, vol XLIX, No 335, 13 September 1887, 223 at 224 ["Copyright. Treasury Minute"]. See also *Millar v Taylor*, *supra* note 158 at 254; *Basket v University of Cambridge*, *supra* note 161 at 65.
[182] See "Copyright. Treasury Minute", *supra* note 181 at 224.
[183] *Ibid* at 225.

control of His Majesty or any Government department, … subject to any agreement with the author."[184]

Crown copyright persists today.[185] Preserving the integrity of legal and government materials is widely considered one of its main justifications. Whether or not Crown copyright is the most appropriate mechanism to implement it, it appears like a matter of common sense that providing authentic legal materials necessitates the supervision of the state to at least some extent: a regime or organization in which trusted agents have authority to recognize and police the integrity of legal materials, and without which corrupted materials would obscure the law and interfere with its application.[186] But the appearance of common sense conceals preceding interpretive work. This interpretation depends not so much on the materiality of books and of the printing press, but on a successful rhetoric of civility, authenticity and authority.

Indeed, when the King's Bench invalidated the law patent in the early 1670s, the justices shared concerns similar to the patentees'. They doubted the law patent could guarantee the integrity of law books as it did not provide "redress in case of abuses by unskillfulness, selling dear, printing ill, etc,"[187] especially when many readers complained about the quality and cost of law books.[188] Atkyns and Streater's achievement was to represent the

[184] *Copyright Act*, 1911 (UK), 1&2 Geo 5 c 46, s 18.
[185] See *Copyright, Designs and Patents Act 1988* (UK), c 48, s 163-167.
[186] See John S Gilchrist, *The Government and Copyright: The Government as Proprietor, Preserver and User of Copyright Material Under the Copyright Act 1968* (Sydney: Sydney University Press, 2015) at 191-93; Anne M Fitzerald, "Crown Copyright" in Brian F Fitzerald & Benedict A Atkinson (eds), *Copyright Future, Copyright Freedom: Marking the 40th Anniversary of the Commencement of Australia's Copyright Act 1968* (Sydney: Sydney University Press, 2011) 162 at 168-70.
[187] *Roper v Streater*, *supra* note 139 at 209.
[188] See Johns, *supra* note 30 at 258. See also St-Clair, *supra* note 41 at 62-63.

patentees as a necessary component of the book trade. When the government and the legal profession did as well, they followed their predecessors' steps.

C. Atkyns and Hobbes

What historical significance should we concede to *The Original*? The pamphlet suggests that the effects of printing law are indissociable from its application. As such it might corroborate the claim that law has to some extent shaped the printing press, and more specifically the capacity of this technology to standardize text. However, we must not forget that *The Original* proposed a patently biased and inaccurate account of law, printing and legal publishing in England.[189] Accordingly, we should more safely limit its importance to that of a significant artefact in the archaeology of Crown copyright.

Even then, *The Original* does make insightful propositions. By vesting in patentees the sole privilege to print law books on account of their unique connection to the Crown, the pamphlet offers a political solution to the following question: what makes a (law) book good or bad? While simplistic in appearance, it is easy to realize how the answer to this question imports for legal practice, the administration of justice and the rule of law. If we reformulate the same question into 'What makes a technology good or bad?', we can suggest that the significance of the following discussion extends beyond (law) books. To expand upon these ideas, I turn to a contemporary of Atkyns.

[189] See generally Lobban, *supra* note 73 at 29-89 (Atkyns' legal centralism and depiction of the Crown as the source of all law does not at all reflect the complexities of England's legal culture, most notably the relationship between common law and legislation).

1. Names, marks, signs

Thomas Hobbes is largely remembered for his authoritarian political philosophy and, among legal philosophers, as a positivist.[190] In his *Leviathan*, published in 1651, Hobbes argued that to escape an anarchic and dangerous state of nature men partake into a social contract in which they surrender their liberty to a sovereign ruler. In the resulting "commonwealth," the absolute sovereign maintains order and protects its members against external threats:

> A commonwealth is said to be instituted, when a multitude of men do agree, and covenant, every one, with every one, that whatsoever man, or assembly of men, shall be given by the major part, the right to present the person of them all (that is to say, to be their representative;) every one, as well he that voted for it, as he that voted against it, shall authorize all the actions and judgments, of that man, or assembly of men, in the same manner, as if they were his own, to the end, to live peaceably among themselves, and be protected against other men.[191]

Without speculating on what inspired the *Original*, the patentees would have shared affinities with Hobbes. The philosopher disapproved of the Stationers' monopoly, calling it "a very great hindrance to the advancement of all human learning."[192] He also counted state censorship and licensing of the press for the purpose of maintaining peace and security among the rights constituting the essence of sovereignty.[193] Hobbes argued that all civil law — 'civil' as opposed to 'natural' law, but including the common law — originated

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[190] See Lobban, *supra* note 73 at 81-82; James B Murphy, *The Philosophy of Positive Law: Foundations of Jurisprudence* (New Haven: Yale University Press, 2005) at 156-57; Raffield, *supra* note 32 at 238. However, this account has been nuanced. See David Dyzenhaus, "Hobbes and the Legitimacy of Law" (2001) 20 *Law and Philosophy* 461 ("[t]he primary problem for [Hobbes] is not exit from the state of nature but the proper construction of political and legal order," at 464). See generally David Dyzenhaus & Thomas Poole (eds), *Hobbes and the Law* (Cambridge: Cambridge University Press, 2009) (presenting three accounts of Hobbes' political jurisprudence along the spectrum of positive and natural law).

[191] Thomas Hobbes, *Leviathan*, edited by JCA Gaskin (Oxford: Oxford University Press, 1998) at 18.1. My references to Hobbes' philosophical works pinpoint to, respectively, the relevant chapters and paragraphs. For example, "18.1" refers to the first paragraph of the eighteenth chapter of the *Leviathan*.

[192] Quoted in John Aubrey, *"Brief Lives" Chiefly of Contemporaries*, edited by Andre Clark, vol 1 (Oxford: at the Clarendon Press, 1898) at 342.

[193] Hobbes, *supra* note 191 at 18.9.

from the sovereign's will, manifested expressly or by inference, making the latter the sole legislator of a commonwealth.[194] Such a viewpoint would certainly support the *Original* claim that the Crown held prerogative over the printing of legal text.

Despite the importance of his political philosophy, I will primarily focus on Hobbes' linguistics. Modern commentators express mixed feelings about Hobbes' theory of language,[195] one of them describing it as "gravely underdeveloped" and "profoundly inadequate."[196] While his philosophy of language receives only a fraction of the attention directed to his work, a number of scholars argue that Hobbes' views on law and politics can only be understood in light of his theory of language.[197]

Hobbes hinted to the importance he attributed to the invention of language when, having compared it to writing and print, described "speech" as

> *the most noble and profitable invention of all other*, … whereby men register their thoughts; recall them when they are past; and also declare them one to another for mutual utility and conversation; without which, there had been amongst men, neither commonwealth, nor society, nor contract, nor peace, no more than amongst lions, bears, and wolves.[198]

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[194] *Ibid* at 26.5-11.

[195] See Anat Biletzki, *Talking Wolves: Thomas Hobbes on the Language of Politics and the Politics of Language* (Boston: Kluwer Academic Publishers, 1997) at 15.

[196] Murphy, *supra* note 190 at 121.

[197] See for example Philip Pettit, *Made With Words: Hobbes on Language, Mind, and Politics* (Princeton: Princeton University Press, 2009) at 2-4; Biletzki, *supra* note 195 at 15-18 ("Hobbes views speech as the essential characteristic of social, rational man," at 9). The fact that an accurate English translation of *De Corpore*, Hobbes' most definitive contribution to the philosophy of language, was only published in 1981 may partly explain why this aspect of his work received less attention. See Isabel C Hungerland & George R Vick, "Hobbe's Theory of Language, Speech, and Reasoning" in Thomas Hobbes, *Computatio, Sive, Logica: Logic*, translated by Aloysius Martinich (New York: Abaris Books: 1981) 7 at 22.

[198] Hobbes, *supra* note 191 at 4.1 (my emphasis).

Hobbes considered speech a distinctively human attribute.[199] He said little on how speech came to be,[200] possibly because he was primarily interested in how men use speech and how speech can support or hinder their activities, such as science and politics.[201]

For Hobbes, speech consists "of *names* … and their connexion."[202] He defined 'name' as

> *a human vocal sound employed by the decision of a man, so that there might be a mark by which a thought similar to a previous thought might be aroused in the mind, and which, ordered in speech and uttered to others, might be a sign to them that such a thought either previously occurred or did not occur in the speaker.*[203]

A name, not to be confused with the 'noun', can refer to a matter or body, to an accident or a quality, to the ways in which they present themselves to our senses, or even to other names or speeches. Names can be positive, to evoke the presence of a thing, or negative, to evoke its absence. Names can be common to many things, or proper to a single one. They can designate universal, particular, individual or indefinite things. Names are simple when composed of only one word and composite when composed of many.[204] Names do not derive from the world that surround us, but from human will:

> For names are not established by the essences of things but according to the will of men. For this reason it happens that whoever departs from the agreed appellations of things is deceived not by things, nor by sense-experience. (For he does not *see*, but *wills* that the thing that he sees is called "Sun.") But he utters a false opinion by his own negligence.[205]

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[199] *Ibid* at 3.11.
[200] See Hobbes, *supra* note 191 ("[t]he first author of speech was God himself, that instructed Adam how to name such creatures as he presented to his sight; for the Scripture goes no further in this matter. But this was sufficient to direct him to add more names, as the experience and use of the creatures should give him occasion; and to join them in such manner by degrees, as to make himself best understood; and so by succession of time, so much language might be gotten, as he had found use for," at 4.1; "words … have their signification by agreement, and constitution of men," at 31.38). See also Pettit, *supra* note 197 at 26.
[201] See Biletzki, *supra* note 195 at 2-9, 32-33, 193-98. But see Murphy, *supra* note 190 at 133.
[202] Hobbes, *supra* note 191 at 4.1. See also Hungerland & Vick, *supra* note 197 at 20-21.
[203] Thomas Hobbes, *Computatio, Sive, Logica: Logic*, translated by Aloysius Martinich (New York: Abaris Books: 1981) at 2.4 [*De Corpore*]. My references to Hobbes' works point to, respectively, the relevant chapter and paragraph. For example, "2.4" refers to the fourth paragraph of *De Corpore*'s second chapter.
[204] *Ibid* at 2.6-7, 2.9-11, 2.14.
[205] *Ibid* at 5.1. See also Hobbes, *supra* note 191 at 4.11.

Hobbes added a caveat to his definition of names: the speaker does not communicate the things his names refer to, but his conceptions about these things. And so,

> [*n*]*ames are not signs of things but of thoughts*. Since, as has been defined, names ordered in speech are signs of conceptions, it is obvious that they are not signs of things themselves; for in what sense can the sound of the vocal sound "stone" be understood to be a sign of a *stone*, other than that whoever might have heard this vocal sound will gather that the speaker has thought of a stone? Therefore the dispute over whether names signify matter, form, or a composite of them and other disputes of this kind are characteristic of erring metaphysicians who do not understand the words about which they are arguing.[206]

Paying attention to the uses of speech Hobbes referred to in both of the above extracts — marking and signifying — may help to understand this caveat. While marks serve as mnemonic devices, signs communicate conceptions:

> The general use of speech, is to transfer our mental discourse, into verbal; or the train of thoughts, into a train of words; and that for two commodities; whereof one is, the registering of the consequences of our thoughts; which being apt to slip out of our memory, and put us to a new labour, may again be recalled, by such words as they are marked by. So that the first use of names, is to serve for *marks* … of remembrance. Another is, when many use the same words, to signify (by their connexion and order), one to another, what they conceive, or think of each matter; and also what they desire, fear, or have any other passion for. And for this use they are called *signs*.[207]

Hobbes' reference to marks, signs and names requires a few clarifications. First, a name can be used both as a mark and as a sign,[208] the "difference between a mark and a sign [being] that the former is instituted for our own sake, the latter for the sake of others."[209]

Second, while we may use names as marks and signs, not all marks and signs are names.[210] A mark can be anything. Instead of a name, I could use as a mark the vivid mental image of a thing I encountered. Signs that are not vocal sounds can also communicate meaning. I

[206] *Ibid* at 2.5.
[207] Hobbes, *supra* note 191 at 4.3. See also *ibid* at 2.1-2.
[208] *Ibid* at 2.3 (first as a mark, then as a sign; for to signify a name, one must first use it as a mark).
[209] *Ibid* at 2.2.
[210] See Murphy, *supra* note 190 at 135.

can signify that I am open to chatting with you if I smile at you or the contrary if I look the other way. Third, signs are natural or conventional:

> For example, a dense cloud is a sign of consequent rain and rain a sign of antecedent cloud, for the reason that we know from experience that there is rarely a dense cloud without the consequent rain, and never rain without an antecedent cloud. … [Other signs] are conventional, namely, those which are applied by our own accord; of this type are: a bush hung for signifying that wine is for sale, a stone for signifying the boundaries of a field, and human vocal sounds connected in a certain way for signifying the thoughts and motions of the mind.[211]

Using names as signs rests on conventions.[212] Hobbes said little on the origins of these conventions, other than they would likely originate from custom and tacit consent, and that they would manifest through practice and mutual recognition within a linguistic community.[213] These conventions determine the meaning assigned to signs, and how to connect and order signs in a sentence in order to signify conceptions. The speaker speaks words he believes the listener will understand as the speaker's signified conception and the listener interprets words spoken as signs of the speaker's conception.[214]

Signs, once connected and ordered together, will form different uses of speech, such as propositions, syllogisms, commands and counsels.[215] In contrast with signifying, a relational process of communication, marking is a discretionary cognitive exercise.[216] While someone can choose to adopt a name used in the same community to mark a given thing, he could in principle elect to use a name to mark something most people would not

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[211] Hobbes, *supra* note 203 at 2.2.
[212] See Hobbes, *supra* note 191 at 4.22, 31.38.
[213] See Pettit, *supra* note 197 at 40-41. See also Murphy *supra* note 190 at 126-27; Biletzki, *supra* note 195 at 27-28, 63; Hungerland & Vick, *supra* note 197 at 24-25, 49.
[214] See Biletzki, *supra* note 195 at 27-28, 43-44. See also Pettit, *supra* note 197 at 38 (signification is not strictly interpersonal, since we routinely signify conceptions by, for, and within ourselves).
[215] See Hobbes, *supra* note 191 at 3.2, 4.1, 25.2-3.
[216] Hobbes, *supra* note 203 (Hobbes defines marks as "*sensible things employed by our own decision, so that at the sensation of these things, thoughts can be recalled to the mind, similar to those thoughts for the sake of which they were summoned*," at 2.1). See also Murphy *supra* note 190 at 126.

signify with another name, for example by marking a cat with the name 'dog'. In this case, the name 'dog' could still perform as a mark for cats within the confines of one's mind, but not as a conventional sign for cats.

2. Sovereign as linguistic authority

Speech is a mixed blessing. According to philosopher Philip Pettit, Hobbes believed that speech renders us capable of reasoning (i.e. thinking actively and in general terms), of deliberately communicating our conceptions and of representing others to speak in their name.[217] But if "the light of human minds is perspicuous words,"[218] speech also generates conflict by introducing equivocal names and by artificially extending our natural passions to their destructive conclusion. Hobbes considered establishing clear and enduring definitions of particular names to be the most vital step of reasoning: if "*truth* and *false* are the attributes of speech, not of things,"[219] then "a man that seeks the truth, had need to remember what every name he uses stands for; and to place it accordingly."[220]

Some names, however, are difficult if not impossible to define. Indeed, contrary to univocal names, which "always signify the same in the same series of reasoning, … *equivocal* names are understood first in one way and then in another."[221] Pettit reformulates the problem of equivocal names as one of "evaluative indexicality:"

> An indexical word is a term, like mine, here, or now, that has a different reference at different contexts or indexes or usage, even if it has the same character across those contexts. Thus, mine refers to me when I use it, and to you when you use it; here refers to Princeton when I am speaking in Princeton, and to Canberra when I am speaking in Canberra. Hobbes is not worried by indexicality in general, only by the sort of

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[217] *Supra* note 197 at 4, 84-86.
[218] See Hobbes, *supra* note 191 at 5.20.
[219] *Ibid* at 4.11.
[220] *Ibid* at 4.12. See also Pettit, *supra* note 197 at 47-52.
[221] See Hobbes, *supra* note 203 at 2.12.

> indexicality that, leading to a controversy, "must either come to blows or be undecided." And he suggests that the indexicality of evaluative terms such as good and bad is like this.
>
> These are thin evaluative terms that have no descriptive meaning, unlike their thicker counterparts, but only an evaluative or affective valence. The problem they raise is that while people use them to commend or condemn courses of action, and so may use them in a way that leads to controversy about what to do, they each use them according to a personal rule. I call good whatever raises warm feelings in me, and youcall good whatever raises warm feelings in you.222

Because Hobbes insisted on the absolute equality among men in the state of nature,[223] it is reasonable to deduct he would have believed that we experience the world in the same way, that our bodies react to the same stimuli in the same manner.[224] That does not mean, however, that we all share the same experiences at the same time: "because the same things may enter into account for divers accident; their names are (to show that diversity) diversely wrested, and diversified."[225] Our diverse experiences lead us to mark things in a correspondingly diverse manner, a diversity only tempered by conventional signs. But when these conventions cannot assign a single, common meaning to a name, as it is the case with evaluative and indexical names, their signification illustrates how each man personally reacts to the thing named when he encounters it.

Because things affect us differently and because names reflect our conceptions about things rather than the things themselves, men assign different names to the same things:

> The names of such things as affect us, that is, which please, and displeases us, because all men be not alike affected with the same thing, nor the same man at all times, are in

[222] Pettit, *supra* note 197 at 51-52 (quoting Hobbes, *supra* note 191 at 5.3). See also Biletzki, *supra* note 195 at 85-86.
[223] See Hobbes, *supra* note 191 at Introduction.3, 13.1 ("[a]nd as to the faculties of the mind, … I find yet a greater equality amongst men, than that of strength. For prudence, is but experience; which equal time, equally bestows on all men, in those things they equally apply themselves to," at 13.2). See also WP Grundy, "No Letters: Hobbes and 20th Century Philosophy of Language" (2008) 38 *Philosophy of the Social Sciences* 486 at 502-03.
[224] See Pettit, *supra* note 197 at 30, 40, 86.
[225] Hobbes, *supra* note 191 at 4.14 (and "because the constitution of a man's body is in continual mutation; it is impossible that all the same things should always cause in him the same appetites, and aversions," at 6.6). See also *ibid* at 9-18, 33-34.

> the common discourses of men, of inconstant signification. *For seeing all names are imposed to signify our conceptions; and all our affections are but conceptions; when we conceive the same things differently, we can hardly avoid different naming of them*. For though the nature of that we conceive, be the same; yet the diversity or our reception of it, in respect of different constitutions of body, and prejudices of opinion, gives every thing a tincture of our different passions. And therefore in reasoning, a man must take heed of words; which besides the signification of what we imagine of their nature, have a signification also of the nature, disposition, and interest of the speaker.[226]

This will be the case, for example, of virtue and vice, good and evil:

> But whatsoever is the object of any man's appetite or desire; that is it, which he for his part calls *good*: and the object of his hate, and aversion, *evil*; and of his contempt, *vile* and *inconsiderable*. For these words of good, evil, and contemptible, are ever used with relation to the person that uses them: there being nothing simply and absolutely so; nor any common rule of good and evil, to be taken from the nature of the objects themselves; but from the person of the man (where there is no commonwealth).[227]

Should I name 'good' a thing you named 'bad', we would oppose each other as we seek to foster and suppress it, respectively.[228]

Hobbes' philosophy of language, Pettit argues,[229] is connected with his political philosophy. Speech fosters destructive anarchy. Equivocation leads men to conflict with each other unless they settle their differences about the meaning of controversial evaluative and indexical names. The difficulty of evaluative indexicality is only made worse by the extension of their passions, one of the problematic consequences of speech. The cognitive abilities obtained from speech lead men to project their desires into the future and to worry about the satisfaction of such desires, whereas animals devoid of speech only concern themselves with the fulfilment of immediate needs. Moreover, conversant in evaluative terms and able to take note of how men differ from each other, they compare themselves

[226] Hobbes, *supra* note 191 at 4.24 (emphasis added).
[227] *Ibid* at 6.7 ("for one man calls *wisdom*, what another calls [*liar*]; and one *cruelty*, what *another justice*; one *prodigality*, what another *magnanimity*; and one *gravity*, what another *stupidity*, etc. And therefore such names can never be true grounds for any ratiocination," at 4.24).
[228] See Pettit, *supra* note 197 at 52. See also Murphy, *supra* note 190 at 140.
[229] See Pettit, *supra* note 197 at 91-97. See also generally Grundy, *supra* note 223.

to others and seek superiority through the acquisition of positional goods. From equivocation and the artificial extension of our passions and desires stem three principal sources of strife: competition, distrust and glory.

In the state of nature, universal equality reigns among men. From universal equality derives the absolute liberty of every man to pursue his own self-interest at the expense of others. Universal equality and absolute liberty drive men to feud and war with each other, since force and treachery constitute the only means to establish the priority of their claims and settle their differences.[230] Before the commonwealth, men lack the means to settle controversies arising from the inconsistent signification of evaluative and indexical names, "[f]or such is the nature of men, that howsoever they may acknowledge many others to be more witty, or more eloquent, or more learned; yet they will hardly believe there be many so wise as themselves, for they see their own wit at hand, and other men's at a distance."[231] The state of nature does not only subject men to violence and treachery, but also to circumstances in which individuals cannot agree on the signification of names and thus cannot take the cooperative actions such agreement could otherwise support.

To escape the state of nature, men must establish a commonwealth based upon a social contract instituting the sovereign, who will impose order and protect its subjects. Seen through the lens of Hobbes' philosophy of language, the primary role of the sovereign is not to keep everyone in line with swords, but with words. She is indeed capable of imposing definitive and common meanings to equivocal names:

[230] See Hobbes, *supra* note 191 at 13.1-14.
[231] Hobbes, *supra* note 191 at 13.2. See also Luciano Venezia, *Hobbes on Legal Authority and Political Obligation* (New York: Palgrave Macmillan, 2015) at 49; Grundy, *supra* note 223 ("[i]n Hobbes's philosophy, the problem of social disorder and the problem of semantic disorder stem from a common source, namely the radical equality of human actors and speakers in the state of nature," at 502).

> In the state of nature where every man is his own judge, and differs from other concerning the names and appellations of things, and from those differences arise quarrels and breach of peace, it was necessary there should be a common measure of all things, that might fall in controversy. As for example; of what is to be called right, what good, what virtue, what much, what little, what *meum* and *tuum*, what a pound, what a quart, etc. For in these things private judgments may differ, and beget controversy. This common measure, some say, is *right reason*, with whom I should consent, if there was any such thing to be found or known in *rerum natura*. But commonly they that call for *right reason* to decide any controversy, do mean their own. But this is certain, seeing *right reason* not existent, the reason of some man or men must supply the place thereof; and that man or men is he or they, that have the sovereign power, as has been already proved; and consequently the civil laws are to all subjects the measures of their actions, whereby to determine, whether they be right or wrong, profitable, or unprofitable, virtuous, or vicious; and by them the use and definition of all names not agreed upon, and tending to controversy, shall be established. As for example, when upon the occasion of some strange and deformed birth, it shall not be decided by *Aristotle*, or the philosophers, whether the same be a man, or no, but by the laws.[232]

Hobbes proposed a political solution to semantic problems. He saw in the sovereign the authority to set "a common measure of all things that might fall in controversy,"[233] as opposed to that of ordinary men: for "[t]he authority of writers, without the authority of the commonwealth, makes not their opinion law, be they never so true."[234]

The sovereign exercises this valuable and exclusive linguistic power by enacting the civil law of the commonwealth. Hobbes defined 'civil law' as "to every subject, those rules, which the commonwealth has commanded him, by word, writing, or other sufficient sign of the will, to make use of, for the distinction of right, and wrong; that is to say, of what is contrary, and what is not contrary to the rule."[235] The sovereign stands as the sole legislator

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[232] Thomas Hobbes, "De Corpore Politico" in *The Elements of Law, Natural and Politic*, edited by JCA Gaskin (Oxford: Oxford University Press, 1994) at 10.8. See also Hobbes, *supra* note 191 at 5.3 ("is annexed to the sovereignty, the right of judicature, which may arise concerning law, either civil, or natural; or concerning fact," at 18.11).

[233] See Grundy, *supra* note 223 at 501-05. See also Pettit, *supra* note 197 at 88-89, 115. Compare with Murphy, *supra* note 190 at 118, 122-23, 136-39.

[234] Hobbes, *supra* note 191 at 26.22.

[235] *Ibid* at 26.3 (the sovereign can legislate explicitly, by promulgating legal rules, or tacitly, by remaining silent *vis-à-vis* whatever circumstances the sovereign assents to, at 26.7). See also Lobban, *supra* note 126 (Hobbes did not develop a theory of legislation to accompany his positivist view of the sources of law,

of the commonwealth and, accessorily, she has the necessary authority to determine the definitive interpretation of the law.[236]

Hobbes emphasized the specific nature of the speech act involved in legislating — the command — by distinguishing it from the counsel. The authority of a command is not based on the command's inherent rationality, but on the authority of the commander:

> *is, where a man says, do this, or do not this, without expecting other reason than the will of him that says it*. From this it follows manifestly, that he that commands, pretends thereby his own benefit: for the reason of his command is his own will only, and the proper object of every man's will, is some good to himself.[237]

The obligation to obey precedes prescription or coercion, as only the commander's identity provides the reason to obey her command.[238] As for the sovereign, she holds the supreme, absolute and irrevocable power to formulate, enact and interpret the law thanks to the authority the authors of the commonwealth conferred upon her.[239]

When the sovereign legislates, she commands the meaning of controversial names.[240] Hobbes described laws as "artificial chains … fastened at one end, *to the lips of that man*, or assembly, to whom [the subjects of the commonwealth] have given the sovereign power, and at the other end to their own ears."[241] Legislating is, one might say, a public form of marking.[242] As Pettit puts it, "it establishes an order of public meanings in an area where

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whereby all law had to conform a codified positive law. Instead, much of law was left to the equity of the judge speaking for the sovereign," at 85).

[236] Hobbes, *supra* note 191 at 26.5, 26.20-22 ("[f]or, whosoever hath a lawfull power over any Writing, to make it Law, hath the power also to approve, or disapprove the interpretation of the same," 33.25).

[237] *Ibid* at 25.2 (emphasis added. In comparison, a counsel "is where a man says, do, or do not this, and deduces his reasons from the benefit that arrives by it to him to whom he says it. And from this it is evident, that he that gives counsel, pretends only (whatsoever he intends) the good of him, to whom he gives it," at 25.3).

[238] See Venezia, *supra* note 231 at 43-45, 54-55; Dyzenhaus, *supra* note 190 at 466, 484.

[239] Hobbes, *supra* note 191 at 16.4-7.

[240] See Murphy, *supra* note 190 at 139-40; Biletzki, *supra* note 195 at 86-88, 152.

[241] Hobbes, *supra* note 191 at 21.5 (emphasis added).

[242] See Murphy, *supra* note 190 at 122-23.

such an order is not spontaneously available, restoring the power of words to provide people with common bearing and shared reasons."[243] Hobbes famously observed that though "[t]heft, murder, adultery, and all injuries" may be forbidden "by the laws of nature; but what is to be called *theft*, what *murder*, what *adultery*, what *injury* in a citizen, this is not determined by the natural, but the civil law."[244]

The subjects of the commonwealth can disagree with the denotations of their sovereign's civil law. They can doubt the soundness of its substance and whatever benefit may come from obeying its commands, believing they themselves hold the right reasons to mark certain things as 'good' and others as 'evil'. But by the terms of the social contract at the basis of the commonwealth and the commanding nature of legislation, they are not at liberty to impose upon others their own marks as the law of the land. They must instead act as if the sovereign's own marks, should they be signified to them, were their own. By acting as a linguistic authority through the act of legislation, the sovereign generates the semantics of public order.[245]

3. Foundations of the Crown

Two parallel regulatory regimes governed the press in early modern England. Both these regimes sought to prevent the circulation of subversive texts, organize the publishing trade and distribute its benefits. The effectiveness of these regimes remained limited, as shown

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[243] Pettit, *supra* note 197 at 132. See also Grundy, *supra* note 223 ("The authority of the Sovereign is both political and hermeneutical. In relation to Scripture, for example, the Sovereign decides not only which linguistic artifacts are authoritative … but, more important, he decides how those linguistic artifacts should be understood," at 505).

[244] Thomas Hobbes, *De Cive, Or the Citizen*, edited by Sterling P Lamprecht (New York: Appleton-Century-Crofts, 1949) at 6.16.

[245] See Pettit, *supra* note 197 at 130-32.

by the prevalence of piracy and the publication of unlicensed texts. That being said, regulation still played an important role in establishing relationships of trust between members of the book trade and the reading public, and supported the making of representations regarding the authenticity, integrity and authority of print.

In the mid-seventeenth century, both regimes suffered heavily from the breakdown of royal authority and the deterioration of their primary enforcer, the Company of Stationers. The regimes faltered when the subversive power of print seemed stronger than ever, especially with respect to the publication of sensitive materials such as legal texts. The Restoration of the monarchy marked a period during which English rulers sought to re-establish royal power even as the past two decades had permanently undermined its foundations. State authorities needed to re-master the power of print, notably by entrusting the printing of legal texts to trusted subjects of the Crown.

Atkyns and Streater used the momentum of the Restoration to challenge the Company. They defended their interest in common law books by capitalizing on the animosity Stationers inspired. The patentees portrayed their ivals as untrustworthy men responsible for the destructive effects of print. Atkyns and Streater sought to reform the book trade by taking over the privileges and powers of the Company. Their proposal rested on a revised history of printing that attributed its origin in the Crown, along with favourably situating printing patents within a social hierarchy that determined loyalty and civility.

The conflict between the patentees and the Company led courts to formulate what would become the traditional justification for Crown copyright. Sensitive texts were entrusted to executive powers in order to preserve their authenticity and integrity, and maintain their

authority in print. The decline of printing patents in favour of copyright in the years that followed transformed the printing prerogatives of the Crown, but authority continued to be perceived as essential to the authenticity and integrity of legal materials, whether such authority was vested in governmental or professional institutions. Even when the Stationers defended themselves against the rhetoric of the patentees, they vested the authority of print in authorship maintained by literary property or copyright. Like their rivals, they appealed to legal authority in order to grant, maintain and deny the epistemic authority of print. They did so because print, like any other technology, does not speak for itself. Print, like any other technology, has to be spoken for.

To illustrate, consider the frontispiece of the *Original* (Figure 2). Seventeenth century printers and publishers attempted to shape readers into a receptive audience before they even read a single line of text. They did so with a plethora of signs, including inscriptions of authorship and origin, size and format of a book, the quality of its paper and binding, ostentatious colouring or lack thereof, and the mention of the royal license. All such signs provided information about the book, and built expectations about its content.[246] Frontispieces, notably, offered a visual gateway into the content of a work.[247]

[246] Sharpe, *supra* note 29 at 44-45; Henri-Jean Martin, *The History and Power of Writing*, translated by Lydia G Cochrane (Chicago: Chicago of University Press, 1994) at 308-15, 319-20.
[247] *Ibid* at 49.

Figure 2. Frontispiece to Atkyns' *The Original and Growth of Printing*[248]

The *Original*'s frontispiece summarizes the argument therein in its depiction of authority. It shows King Charles II sitting on a throne, flanked by two characters identified as Lord Chancellor Edward Hyde and Archbishop Gilbert Sheldon. Beneath the three characters, at the forefront of a cavalry regiment, appears George Monck. Monck effectively restored

[248] Reproduced from Weber, *supra* note 23 at 149.

Charles II to the throne after the death of Cromwell. The regiment evokes the civil wars as well as Atkyns' own service as a cavalryman and as member of the 'Cavaliers', a moniker reserved for those subjects who remained loyal to the monarchy throughout the Interregnum and supported Charles II in Parliament once he returned to England. The Archbishop and the Lord Chancellor hold a banderol on which we can read "Scripture and laws are the foundations of the Crown." The words "By my royal rule is justice established" reach the King from the heavens.[249]

The frontispiece shows another sign of Charles' divine grace in his interaction with the flanking characters. During most of his reign, the King applied his healing powers on a dozen subjects a day by laying hands on the sick and the crippled.[250] On the frontispiece, Charles similarly lays hands on law and religion personified. Framing the King between recent history and divine grace reflected the political circumstances of the *Original.* Charles II and his supporters re-established the foundations of the old regime despite the fact that the Civil War and the Interregnum had permanently undermined these foundations.[251] The deification of the King asserted his divine right to rule.

The *Original*'s frontispiece called upon the early hopes of the Restoration. Royal power would heal law and religion, corrupted by two decades of republicanism and puritanism. To help with this glorious endeavour, the patentees would make sure that "the gospel, the laws, and all other books for the advancement of learning, good manners, and education of

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[249] See Johns, *supra* note 30 at 306.
[250] See Johann P Sommerville, "Absolutism and Royalism" in JH Burns & Mark Goldie (eds), *The Cambridge History of Political Thought, 1450-1700* (Cambridge: Cambridge University Press, 1991) 347 at 373. See also Weber, *supra* note 23 at 50ff.
[251] See Miller, *supra* note 26.

the youth, be kept entire, without any mixture of heresy, scandal, or schism."[252] They would do so by using royal-based privileges to settle the authenticity of books. Much of the effects of print depended on claims and counter-claims of trust made by those involved in the production and the consumption of print.

On the one hand, these claims allowed vulnerable readers to evaluate the authenticity of books when multiple sources of textual corruption threatened the integrity and authority of print. On the other, how every reader assessed the authenticity of print varied upon context and individual experience. Indeed, the signs that, to one reader, signified the authenticity of a book might, to another reader, signify the contrary. All things being equal, a reader who trusted in the civility of Stationers, for example, would mark a book printed by one as authentic, whereas one who did not would either discard the book or establish its authenticity on the basis of other signs, such as the recommendation of a trusted friend. But whether the authenticity of sensitive printed texts should be left to each and every man's judgement and experience to decide was another matter entirely.

Therein laid the necessity for the intervention of Hobbes' sovereign, "[f]or the actions of men proceed from their opinions; and in the well-governing of opinions, consists the well-governing of men's actions, in order to their peace, and concord."[253] While the inconsistency of authenticity may not always lead to controversy and conflict, this was certainly not the case of books on sensitive matters, such as law books. Atkyns warned against letting unauthorized printers and booksellers publish "the wickedness of their own

[252] Atkyns, *supra* note 20 at 18.
[253] Hobbes, *supra* note 191 at 23.9.

imagination with authority."[254] If allowed to print law books, Stationers would "cast them into a new model of their own invention; that by degrees the state and truth of the good old laws by which men hold their lives and estates, should utterly be lost and forgotten, and new laws framed to fit the humours of a new invented *government*."[255] Doing so would amount to usurping the King's position as "Supreme of the Law."[256] Hobbes said as much of "private men, when they have, or think they have force enough to secure their unjust designs, and convoy them safely to their ambitious ends, may publish for laws what they please, without, or against the legislative authority."[257]

To protect against usurpers, the civil law of a commonwealth must be clearly identified and recognized by its subjects as such. It is not

> *enough that the law be written and published; but also that there be manifest signs, that it proceeds from the will of the sovereign.* … There is therefore requisite, not only a declaration of the law, but also sufficient signs of the author, and authority. The author, or legislator is supposed in every commonwealth to be evident, because he is the sovereign, who having been constituted by the consent of every one, is supposed by every one to be sufficiently known. … Therefore who is sovereign, no man, but by his own fault, (whatsoever evil men suggest), can make any doubt. T*he difficulty consists in the evidence of the authority derived from him*; the removing thereof, depends on the knowledge of the public registers, public counsels, public ministers, and public seals; by which all laws are sufficiently verified.[258]

If civil laws are commands of the sovereign, and if obedience to commands results from the identity of the commander, then the sovereign must ensure its subjects will attribute declarations of law to the sovereign. These formal means of verification include, for example, the public seal appearing on the commission of an officer.[259] When it comes to

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[254] Atkyns, *supra* note 20 at 8.
[255] *Ibid* at 15.
[256] *Ibid* at 9.
[257] Hobbes, *supra* note 191 at 26.16.
[258] *Ibid* (emphasis added).
[259] *Ibid* at 26.19. See generally Thomas Poole, "Hobbes on Law and Prerogative" in David Dyzenhaus & Thomas Poole (eds), *supra* note 190, 68 at 79-84 (on the publicity requirement in Hobbes' legal thought).

law books, to ensure peace and the good governance of the commonwealth, the sovereign must signify authenticity in its favour. Atkyns proposed to hold the printing patent as the sign that the content of a law book proceeds from the will of the sovereign.

Atkyns' solution presented some advantages, but the context in which he proposed it made it doubtful that they would fully materialize. As discussed, the early modern English book trade was fraught with piracy. Not even Atkyns' judicial victories against the Company prevented its members from publishing law books of their own. We may question, as did some members the King's Bench,[260] the effective capacity of the gentleman–patentee to monitor the integrity of print as thoroughly and flawlessly as Atkyns claimed he could. Finally, no one could police the mind of readers and force them to consider law books printed under patentees more authentic than those published by Stationers, especially if their own experience led them to do otherwise.

And yet, I would argue that it is precisely in such times of uncertainty and indeterminacy that the printing patent would be the most useful. Even if every printer, bookseller and reader disputed the authenticity and integrity of a printed law book *ad vitam æternam*, the English legal system depended on authoritative printed materials to operate effectively. No matter the trust readers were willing to attribute to a given law book, the linguistic authority of the sovereign could command the authority of print. Using the printing patent or other means, the sovereign could impose a political solution to an epistemological problem: she could command readers to treat books printed by a patentee as authentic and unadulterated, whether or not they agreed. All members of the book trade, from authors to readers, could

[260] *Roper v Streater*, *supra* note 139 at 209.

continue to doubt the authenticity of these books, but they had to act as if their contents were authentic and unadulterated, as sufficient evidence of English law.

My reading of Hobbes' philosophy suggests that the sovereign can command the interpretation of technology. Atkyns and Streater justified their privilege on the fact that print had no authority of its own. Instead, trust and authority had to be built into print on the basis of royal authority. The printing patent would introduce signs allowing readers to establish the authenticity of printed law, and reliably disseminate and standardize legal materials. The Crown could then regulate the use of these signs by attributing printing patents to trusted agents.

V. THE AMBIGUITY OF CENSORSHIP

In the previous Chapter, I aimed to accomplish two things. First, to show how law informed the interpretation of books — what books were and what they could do — in seventeenth-century England. Privileges, copies and piracy conditioned how actors of the book trade assessed — and made representations on — the authenticity and reliability of print. Second, to define the role of the legislator as, primarily, that of a sovereign linguistic authority ordaining the meaning of controversial names and the things they name. You may remember how, in Part I, I wrote of the legal interpretation of technology as an implicit affair: interpretive strategies compel legal agents to assign certain attributes and capabilities to technologies. We uncover the traces of those strategies in how interpretations of technology reflect and support prevalent understandings of law. While the first argument of the last Chapter remains within the notion of an implicit legal interpretation of technology, the second argument — portraying the legislator as a sovereign linguistic authority — does not. It instead evokes the express interpretation of technology for the purpose of regulation.

Moreover, I ended Part I confessing an analytical aversion for a handful of '-isms', including legal prescriptivism. Simply, prescriptivist accounts of law focus on how officials and institutions make subjects obey the legal rules promulgated by these officials and institutions. In such accounts, subjects play an essentially passive role, choosing or not to obey the rules of legal authorities, these latter rules assessed based on the effectiveness of their formulation, enactment and enforcement. In contrast, a non-prescriptive account of law pays attention to how subjects mobilize legal rules and institutions to achieve their

objectives. If I rested my case upon presenting the legislator as a sovereign linguistic authority dictating the meaning of names to passive subjects, I would not have avoided legal prescriptivism. And so, here, I pursue a legal history of technology in order to address the two previous points. To do so, I focus on censorship of the publication of Denis Diderot's *Encyclopédie* in eighteenth-century France.

The difference between the legal interpretation of technology and the legislator as sovereign linguistic authority concerns the differing functions of sociolegal theory and legal theory. Functionally, as a sociolegal theory, the legal interpretation of technology explains how legal agents attribute meaning to technology. But as a legal theory, portraying the legislator as sovereign linguistic authority re-examines legislating and adjudicating in light of that sociolegal theory. Because the legal theory draws its own explanatory power from the sociolegal theory, it includes non-prescriptive accounts of law. Indeed, by focusing on the interpreter rather than on the thing interpreted, the legal interpretation of technology refrains from portraying individuals as a passive audience. Instead, individuals actively assign meaning to things via interpretation: they are active formulators of meaning and hence designated as 'agents' rather than 'subjects'. The legislator does not provide meaning to meaning-less things, but settles meaning to counter the harmful consequences of an inevitable plurality of meanings.

I have portrayed the sovereign linguistic authority of the legislator as arational. The legislator can settle controversies that cannot be resolved through rational argument, but that still need to be resolved in the public interest. An important characteristic of this authority is its centralization: the legislator alone wields it. This is a crucial element of Hobbes' philosophy and the core proposition of Atkyns' *Original.* Legal centralism

maintains the arationality of the legislator's authority; shared authority would only result in an additional forum of rational argument between political elites, rather than arational commands. The arationality of the linguistic authority rests on its sovereign character, while other legal agents are merely rational.

The distinction is suspiciously neat. Even if the authority is arational, its linguistic character implies communication and, therefore, interpretation. Her sovereign linguistic authority may be arational, but interpreting the legislator's intervention is itself a rational exercise. And so, while the legislator's intervention may seek solely to resolve a rational argument through arational means, it lays the groundwork for a rational argument on the legislator's intervention. Legal agents wishing to pursue a course of action inconsistent with the legislator's intervention can disobey her edicts. Alternatively, they can circumnavigate her intervention by interpreting their actions out of the signs she employs, sometimes by seeking refuge in innocuous names. An alternation of arational and rational propositions structures the language of lawmaking.

Positing a hard distinction between legal rules and technological artefacts only gives the false impression that law can permit or prohibit technology in a straightforward and linear manner, and thus determine its trajectory. Instead, the act of regulating an artefact is transformative of both law and technology. What technology is and what it can do are not settled by the sole act of legislation. Rather, technological meaning keeps evolving as other legal agents not only interpret the legislator's intervention, but also reinterpret technology in order to attract, mitigate, evade or take advantage of her intervention, which may trigger further interventions. To develop this point, I will examine how Diderot's *Encyclopédie* evaded censorship with the very words uttered to suppress it.

You shall recall that John Streater, from the preceding chapter, died penniless in prison. His son Joseph took over the family's printing house, but dedicated most of its presses to piracy and pornography. In 1687, in-between a plethora of disreputable titles, Joseph printed the first edition of what may be "the most important single work ever published in the physical sciences:"[1] Isaac Newton's *Philosophiae Naturalis Principia Mathematica*.[2] With his *Principia*, Newton changed the rationality of the world by putting nature, rather than God, at the centre of knowledge. His predecessors considered nature to be rational as in purposeful: the result of God's will. Newton, in contrast, portrayed the world to be rational as in logical: proceeding from mathematical laws of physics. [3] Newton demonstrated the power of his experimental philosophy by inducing universal facts from sensorial observation and particular experiences:

> *We no other way know the extension of bodies than by our senses, nor do these reach it in all bodies; but because we perceive extension in all that are sensible, therefore we ascribe it universally to all others also*. That abundance of bodies are hard, we learn by experience; and because the hardness of the whole arises from the hardness of the parts, we therefore justly infer the hardness of the undivided particles not only of the bodies we feel but of all others. That all bodies are impenetrable, we gather not from reason, but from sensation. The bodies which we handle we find impenetrable, and thence conclude impenetrability to be a universal property of all bodies whatsoever … And this is the foundation of all philosophy.[4]

Newton originally wrote the *Principia* in Latin. He owed the subsequent dissemination of his ideas throughout Europe to numerous translators, abridgers and commentators. One of them was François-Marie Arouet, better known as Voltaire. A journalist and satirist, Voltaire learned of Newton and other English scholars during a three-year exile over the

[1] Stephen Hawking, *A Brief History of Time* (New York: Bantam Books Trade Paperbacks, 1996) at 4-5.
[2] See Adrian Johns, *The Nature of the Book: Print and Knowledge in the Making* (Chicago: University Press at Chicago, 1998) at 320.
[3] See Simone Goyard-Fabre, *La philosophie des Lumières en France* (Paris: Librairie C Klincksieck, 1972) at 133, 138-41.
[4] Isaac Newton, *The Mathematical Principles of Natural Philosophy* (New York: Geo P Putnam, 1850) at 384-85 (emphasis added).

Channel. In 1733 he popularized Newton's *Principia* in France along with many other English achievements in the areas of sciences, politics and the arts.[5] Decades later, the last *philosophe* Nicola de Condorcet pointed to Voltaire's *Lettres philosophiques sur les anglais* as the start of the French Enlightenment.[6]

Whereas Voltaire may have triggered the French Enlightenment, his colleague Denis Diderot concerned himself with its conservation. Diderot's seminal work, the *Encyclopédie ou dictionnaire raisonné des sciences, des arts et des métiers*, meant to encapsulate all the knowledge of his time for the benefit of future generations:

> [*L*]*e but d'une encyclopédie est de rassembler les connaissances éparses sur la surface de la terre ; d'en exposer le système général aux hommes avec qui nous vivons, et de le transmettre aux hommes qui viendront après nous ; afin que les travaux des siècles passés n'aient pas été des travaux inutiles pour les siècles qui succéderont ; que nos neveux, devenant plus instruits, deviennent en même temps plus vertueux et plus heureux, et que nous ne mourions pas sans avoir bien mérité du genre humain.*[7]

Diderot hoped for the twenty-eight volumes of the *Encyclopédie* to serve as a monument to the French Enlightenment.[8] But in his time, the publication of the *Encyclopédie* attracted multiple accusations of impiety, corruption and sedition, was suppressed twice, and was ultimately completed in secret.

The story of the *Encyclopédie* does not pit the enlightened few against reactionary tyrants. It stages a confrontation between political and intellectual elites transpiring in censorship. Censorship in eighteenth-century France was both a covert and overt affair. Covert,

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[5] See Gerhardt Stenger, *Diderot : le combattant de la liberté* (Paris: Perrin, 2013) at 139-40; JH Brumfitt, *The French Enlightenment* (London: Macmillan, 1972) at 69-72; Goyard-Fabre, *supra* note 3 at 147-48.

[6] Nicolas de Condorcet, *Vie de Voltaire* (Genève, 1787) cited in John B. Shank, *The Newton Wars and the Beginning of the French Enlightenment* (Chicago: Chicago University Press, 2008) at 18.

[7] Denis Diderot, "Encyclopédie" in Jean le Rond d'Alembert & Denis Diderot (eds), *Encyclopédie ou Dictionnaire raisonné des sciences, des arts et des métiers, par une Société de gens de lettres*, vol 5 (Paris: chez Brisasson, David, Le Breton & Durand, 1755) 635 at 635. See also Ronan Chalmin, *Lumières et corruption* (Paris: Honoré Champion, 2010) at 119.

[8] Diderot, *supra* note 7; *ibid* at 123-27.

because (in principle) literary works could only be published under the supervision of royal censors hidden from public scrutiny. Overt, because the intervention of a royal censor did not protect a work from suffering public, often ostentatious condemnations from intellectual, religious and legal institutions.

All published works were thus produced and interpreted in light of omnipresent censorship. Authors and readers knew that a work could circumvent censors by, for example, hiding and recovering subversive content from beneath the inoffensive surface of a text. Critics and officials could likewise interpret subversive content into a text, even one written or read innocently.[9] As the same was true of the *Encyclopédie*, censors competed among themselves and with encyclopædists to settle its meaning. Not because they ended up saying radically different things about Diderot's lifework, but rather because whoever got the last word on the *Encyclopédie* would decide its fate.

If the preceding Chapter examined justifications for a legal intervention into the book trade, the present one examines the implications of such an intervention. It begins with presenting the context in which the encyclopaedists — i.e. Diderot, d'Alembert, their collaborators and the associated publishers of the *Encyclopédie* — operated, with special attention to state pre-publication censorship practices. The *Encyclopédie* was truly a national affair: regulating a work as economically significant, prestigious and controversial could not be dissociated from contemporary crises opposing the Crown to its *parlements*, some of the most powerful judicial courts of the *Ancien régime*. The Chapter concludes with an analysis

[9] See Colas Duflo, "Diderot and the Publicizing of Censorship" in Mogens Lærke (ed), *The Use of Censorship in the Enlightenment* (Leiden: Brill, 2009) 121 at 122-29; John Lough, *The* Encyclopédie (New York: David McKay Company, 1971) at 94. See also Barbara de Negroni, *Lectures interdites : le travail des censeurs au XVIIIe siècle, 1723-1774* (Paris: Albin Michel, 1995) at 237-48.

of rulings made against the *Encyclopédie*, and the literary strategies the encyclopaedists used to resist them.

A. Letters

When the publishers of the *Encyclopédie* secured a printing privilege in 1748, France's literary culture was in the midst of important changes.[10] Paris, the centre of the French book trade and print industry, saw its inhabitants increase from 500,000 to 650,000 between the reigns of Louis XIV to Louis XVI (from 1643 to 1792) just as urban literacy rates rose from 51% to 60% between 1689 and 1770, thanks to increased access to primary school education.[11]

Higher education institutions also improved in quality, thanks to the support of royal authorities, which sought to recruit qualified civil servants and channel progress in arts and sciences to the benefit of government.[12] A significant reduction in the number of new publications devoted to religion in favour of works on the sciences, the arts and current affairs also reveals a shift in the tastes of French readers.[13] Together, these changes favoured the emergence of intellectuals capable of earning a living as authors and gaining renown and political influence as social commentators and critics: the *philosophes*.

[10] See Daniel Roche, "Encyclopedias and the Diffusion of Knowledge" in Mark Goldie & Robert Wokler (eds), *The Cambridge History of Eighteenth-Century Political Thought* (Cambridge: Cambridge University Press, 2006) 172 at 172.
[11] See Jean-Louis Harouel, Jean Barbey, Eric Bournazel & Jacqueline Thibault-Payen, *Histoire des institutions de l'époque franque à la Révolution*, 11th ed (Paris: Presses Universitaires de France, 2006) at 542; Daniel Roche, *France in the Enlightenment*, trans by Arthur Goldhammer (Cambridge: Harvard University Press, 1998) at 424; Emmanuel Le Roy Ladurie, *L'Ancien Régime de Louis XIII à Louis XV, 1610-1770* (Paris: Hachette, 1991) at 246, 264-66; Roger Chartier, *Les origines de la Révolution française* (Paris: Le Seuil, 1990) at 101-03.
[12] See Roche, *supra* note 11 at 35-40, 438-48, 512-18; Maurice Pellisson, *Les hommes de lettres au XVIIIe siècle* (Genève: Slatkine Reprints, 1970) at 40-45.
[13] See Roche, *supra* note 11 at 587; *ibid* at 104-07, 149.

While the Collège de Sorbonne and the Church originally held the power to approve the publication of manuscripts, by the mid-seventeenth century the Crown had fully appropriated this power under its *Code de la librairie et imprimerie de Paris*[14] (the *Code*).[15] The *Code* aimed "to bring the art of printing to greater perfection [and] to prevent abuses committed in the printing or trade of books."[16] It contained all royal regulations pertaining to the book trade, from the qualifications and numbers of printers and publishers to the production standards they had to meet.[17] Most notably, the *Code* forbade anyone to print a book in France without the permission of the Chancellor, and only after he was given the opportunity to inspect a copy of the work:

> *Aucuns libraires, ou autres ne pourront faire imprimer ou réimprimer, dans toute l'étendue du Royaume, aucuns livres, sans avoir préalablement obtenu de la permission par lettres scellés du grand sceau; lesquelles ne pourront être demandées ni expédiées, qu'après qu'il aura été remis à M. le Chancelier, ou Garde des Sceaux de France, une copie manuscrite ou imprimée du livre, pour l'impression duquel lesdites lettres seront demandées.*[18]

The Chancellor relied on the police and the *Bureau de la Librairie* (the Librairie) to enforce the *Code*. While the police monitored members of the book trade, and led searches and arrests,[19] the Librairie administrated the pre-publication censorship regime.

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[14] See *Code de la librairie et imprimerie de Paris, ou Conférence du Règlement arrêté au Conseil du Roi le 28 février 1723*, BNF Fonds Le Senne 4.623 [*Code de la librairie*] (originally limited to Paris, the *Conseil du Roi* extended its application to all of France in 1744).

[15] See Éric Gasparini & Éric Gojosso, *Introduction historique au droit et histoire des institutions*, 5th ed (Paris: Gualino, 2013) at 234-35 (the Chancellor was the head of the judiciary and of the Librairie).

[16] Marie-Claude Dock, *Étude sur le droit d'auteur* (Paris: R Pichon & R Durand-Auzias, 1963) at xxiii (translation mine).

[17] See Robert Darnton, "Reading, Writing, and Publishing in Eighteenth-Century France" (1971) 100 *Daedelus* 214 at 229-30.

[18] See *Code de la librairie*, *supra* note 14, art CI. See also art CIV (forbidding printers to modify the copy of the book before its impression, after the Chancellor's inspection); art CV (for the sanctions taken against anyone who would violate the Code's regulations in such matters); Negroni, *supra* note 9 at 31-32 (the rule counted many exceptions, but with stricter requirements).

[19] See generally Daniel Roche, "La police du livre" in Henri-Jean Martin, Roger Chartier & Jean-Pierre Vivet (eds), *Histoire de l'édition française, Tome 2: Le livre triomphant, 1660-1830* (Paris: Fayard/Cercle de la Librairie, 1990) 99.

The Librairie had never dealt with a work on a scale similar to that of the *Encyclopédie*. Considering the capital it required, the 140-some authors that contributed to the work's seventy-two thousand articles, the number of printers involved, the number of copies printed and sold and the profits it generated, the *Encyclopédie* was one of the biggest private business ventures of the eighteenth century.[20] Its first success came by way of subscriptions: by April 1751 the associated publishers counted 1,000 of them and twice as many in January 1752.[21] By 1771, the associated publishers had sold some 4,500 copies of the work yielding over 2,400,000 livres in profit,[22] while Diderot's stipend as its chief editor amounted to hundred forty-four livres a month.[23]

1. The **philosophes**

While Condorcet overstated Voltaire's contribution to French Newtonian scholarship,[24] he was right to designate the author of the *Lettres* as France's premier '*philosophe*'. The *philosophes* were public intellectuals who personified Enlightenment values in eighteenth-century France. They counted among them the likes of Montesquieu, Jean-Jacques Rousseau, Jean le Rond d'Alembert, Anne Robert Jacques Turgot, François Quesnay, Diderot and many others. Numerous *philosophes* hailed from French elite institutions as academicians, ministers, magistrates, civil servants, nobles and clergymen. But as *philosophes* they sought legitimacy through a self-proclaimed dedication to the public. It

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[20] See generally Jacques Proust, *Diderot et l'*Encyclopédie (Paris: Armand Colin, 1962) at 45-58.
[21] See Stenger, *supra* note 5 at 134; Lough, *supra* note 9 at 20, 59; Proust, *supra* note 20 at 51; Philippe May, "Histoire et sources de l'Encyclopédie: d'après le registre de délibérations et de comptes des éditeurs et un mémoire inédit" (1938) 15 *Revue de synthèse* 7 at 25.
[22] See Roche, *supra* note 10 at 182; Proust, *supra* note 20 at 58.
[23] See Arthur M Wilson, *Diderot: The Testing Years, 1713-1759* (New York: Oxford University Press, 1957) at 97.
[24] See generally Shank, *supra* note 6 at 165ff.

is in service of their compatriots that the *philosophes* defended civil liberties, promoted religious freedom, and undermined the hold of tradition and ecclesiastic authority over intellectual and cultural life, mores and public discourse. Systematically rejecting the conventions of the past, the *philosophes* sought to apply the Newtonian method to human society and use its insights to reform French institutions.[25]

Despite the political ambitions of some *philosophes*, including Voltaire, and the official positions a few of them held, print remained their weapon of choice. Indeed, French intellectuals assumed a role in politics not so much due to their political acumen, but thanks to the resources of French publishers, the precision of the French language and the efforts of individual writers:

> First, the substantial resources of several Parisian publishing houses brought power to their format of the printed word as nowhere else in Europe. Secondly, the universalist pretensions of the French language, with its precise vocabulary, controlled grammar, and enriched lexicon, served to enhance the imperial status of a regime politically characterised as an absolutist monarchy. And, thirdly, *the especially animating roles of d'Alembert and above all Diderot, in particular, whose zeal, competence, and network of chosen collaborators enabled them to edit their work as they saw fit, made it possible for them to assert their freedom and autonomy as intellectuals.*[26]

As writers, they believed their most important role was to educate — and liberate — the general public and, especially, government officials.[27]

Luckily for *philosophes*, the elites of eighteenth-century France had largely adopted moderate pro-Enlightenment views. While the royal court and government counted many conservatives and traditionalists, including members of the *parti dévôt* who opposed the

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[25] See Harouel et al, *supra* note 11 at 566-68; Roche, *supra* note 10 at 173; Goyard-Fabre, *supra* note 3 at 159-60.
[26] Roche, *supra* note 10 at 176 (emphasis added).
[27] See Roche, *supra* note 11 at 425; Proust, *supra* note 20 at 444-47; John Lough, *An Introduction to Eighteenth Century France* (London: Longmans, 1960) at 269.

Enlightenment at every turn, the King also surrounded himself with progressive and liberal minds — including his close friend Madame de Pompadour.[28] Furthermore, the *philosophes* were no revolutionaries, at least not the kind France would know by the end of the eighteenth century.[29] They primarily targeted Catholicism and religious fanaticism, a fanaticism that persecuted religious minorities and had provoked bloody wars in previous centuries. The *philosophes* thus directed their struggle primarily against the Church, which sought to impose its philosophy and history along with morality and rites, and discouraged attempts to understand the world through reason and science.[30]

And yet, just as we should not overstate the censure under which the *philosophes* lived and wrote, neither should we minimize it. Writers had no right to express their ideas freely and publicly, all public expression being disseminated under the tolerance of political, intellectual and religious authorities armed with multiple means of censorship. Even if an author published a text anonymously, his compatriots could still denounce him.[31] Diderot himself suffered the wrath of the King. Described as "a witty, but extremely dangerous young man"[32] by the Parisian police, Diderot felt a near-compulsive desire to share his ideas with others. One of these ideas was materialism: Diderot radically rejected the existence of anything beyond what human senses can perceive. An atheist, he thought

[28] See Jonathan I Israel, "French Royal Censorship and the Battle to Suppress the *Encyclopédie*" in Lærke, *supra* note 9, 61 at 62-63.
[29] See Pellisson, *supra* note 12 ("*la révolution qu'ils appelaient, c'était une révolution dans les mœurs, les idées, les croyances, non pas dans l'État*," at 39). See also Proust, *supra* note 20 at 38.
[30] See Lough, *supra* note 9 at 301-03. See also Anne Sauvy, "Livres contrefaits et livres interdits" in Martin, Chartier & Vivet (eds), *supra* note 19, 128 at 135-36; Proust, *supra* note 20 at 302-03.
[31] *Ibid* at 308-09.
[32] Cited in Robert Darnton, "Les encyclopédists et la police" (1986) 1 *Recherches sur Diderot et sur l'Encyclopédie* 94 at 103 (translation mine).

reality to be wholly material in nature and therefore believed it possible to fully understand humans through only their physicality.[33]

To Diderot and his fellow materialists, the future of humanity was entirely in the hands of individuals and nations willing to harness human intelligence, and let go of outdated (religious) beliefs.[34] Louis XV was not so willing. The King genuinely believed in the divine foundation of his authority and thus staunchly supported the Catholic Church.[35] In 1749, Diderot argued in his *Lettres pour les aveugles* that our senses do not provide an objective representation of reality, but rather a subjective one tainted by prejudice — including religious doctrine.[36] The publication exceeded the King's patience and he issued a *lettre de cachet* against Diderot.

Among the means the state could muster to censor a text, members of the book trade feared the *lettres de cachet* the most. A *lettre de cachet* was an order signed by the King and instructing police to arrest and detain someone in, usually, the Forteresse de la Bastille or at the Château de Vincennes. Powerful officials had reserves of blank *lettres de cachet* to use as they saw fit, sometimes against troublesome 'conspirators' who dared criticize them in print.[37] While arrests for bookselling affairs amounted to only 17% of all incarcerations at the Bastille between 1659 and 1789, the proportion increased to 40% in the 1750s. During the publishing of the first seven volumes of the *Encyclopédie*, police action against

[33] See Goyard-Fabre, *supra* note 3 at 159-60.
[34] See Roche, *supra* note 11 at 379-81, 487.
[35] See François Olivier-Martin, *Histoire du droit français des origines à la Révolution* (Paris: CNRS Édition, 2010) at 239; Michel Antoine, *Le Conseil du Roi sous le règne de Louis XV* (Genève: Librairie Droz, 1970) at 603-06; Roche, *supra* note 11 at 259-63; Lough, *supra* note 27 at 302-03, 313-14.
[36] See Gerhardt Stenger, "La théorie de la connaissance dans la *Lettre sur les aveugles*" (1999) 26 *Recherches sur Diderot et sur l'Encyclopédie* 99 at 110-11; Brumfitt, *supra* note 5 at 128.
[37] See Olivier-Martin, *supra* note 35 at 575.

members of the book trade reached an all-time high, a record not even the years before the Revolution would break.[38]

As for Diderot, police held him at the Chateau de Vincennes for over three months. His incarceration interrupted the production of the *Encyclopédie*, although the prestige of the endeavour and the central role he played therein may have helped him avoid longer imprisonment.[39] Diderot's jailers treated him harshly until he confessed, after which they moved him to more comfortable quarters. The *philosophe* suffered much from the isolation of his incarceration, even though he was allowed visitors.[40] While imprisonment did not dampen his spirit, Diderot took to heart the need to communicate his ideas more cautiously in the future.[41] For Diderot and his colleagues to discuss sensitive topics in the *Encyclopédie*, they had to smuggle its most provocative passages past the royal censors.

2. The **Code de la Librairie**

The bureaucracy of censorship operated simply and elegantly, in principle. Anyone wishing to publish a new book would address a manuscript (or a printed copy, for a new edition) to the Directeur de la Librairie (the Director). The Director would assign it to a royal censor with expertise corresponding to the topic of the work: theology, jurisprudence, natural history, agriculture, medicine, surgery, chemistry, mathematics and physics, liberal

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[38] See Roche, *supra* note 19, 99 at 105-06. See also *ibid* at 575; Chartier, *supra* note 11 at 95-96.
[39] See Stenger, *supra* note 5 at 121-29; Lough, *supra* note 9 at 18-19; Wilson, *supra* note 23 at 103-06, 115.
[40] See Pellisson, *supra* note 12 at 20-27 (doing so, he evaded the harsher treatment less fortunate authors and many of printers, publishers, and peddlers suffered at the hand of their jailers in the Ancien régime); Paul Bonnefaçon, "Diderot prisonnier à Vincennes" (1899) 6 *Revue de l'Histoire littéraire de la France* 200 at 215-24.
[41] See Joseph Le Gras, *Diderot et l'*Encyclopédie (Paris: Éditions Edgar Malfère, 1928) at 65-66. See also Lough, *supra* note 27 at 309-312.

arts, geography, engraving, etc.[42] Being themselves scholars, jurists or journalists, royal censors came from the very trades the Librairie regulated. Even a few encyclopaedists performed these duties.[43] A censor would peruse the manuscript, suggest edits to its author, and report in writing to the Director to recommend whether or not to approve publication. The Director would then decide whether or not approve the publication in the name of the Chancellor or under his instructions, if any. The censor initialled the pages of an approved manuscript to signify to readers that he had examined each of them, and to prevent their modification prior to printing.[44]

In addition to obtaining the simple permission to publish a work, the applicant could seek a printing privilege. Granted as a political favour, an economic reward for publication and for the public good, the privilege was a form of legislation that took its normative power in the King's will, as expressed by letters bearing the Great Seal. The privilege conferred upon its holder the exclusive right to print and commercially exploit a given title, ordinarily for a period of six years, reinforcing this right by imposing sanctions on anyone else seeking to do the same. More onerous than the simple permission to print,[45] the printing privilege was the sole legislative protection against piracy.[46] Because of their official

[42] See Madeleine Cerf, "La Censure Royale à la fin du dix-huitème siècle" (1967) 9 *Communications* 2 at 6, 8-9; Perrin, *Manuel de l'auteur et du libraire* (Paris: Chez la Veuve Duchesne, 1777) at 10.
[43] See Raymond Birn, *La censure royale des livres dans la France des Lumières* (Paris: Odile Jacob, 2007) at 104-07.
[44] See Negroni, *supra* note 9 at 28-29, 39-51; Anne Goldar, "The Absolutism of Taste: Journalists as Censors in 18th-century Paris" in Robin Myers & Michael Harris (eds), *Censorship & the Control of Print in England and France, 1600-1910* (Winchester: St Paul's Bibliographies, 1992) 87 at 98-103; Cerf, *supra* note 42 at 8-15; Perrin, *supra* note 42 at 17-19.
[45] See François Furet, "La 'librairie' du royaume de France au 18e siècle" in Geneviève Bollème, Jean Herard, François Furet, Daniel Roche & Jacques Roger (eds), *Livre et société dans la France du XVIIIe siècle* (Paris: Mouton & Co, 1965) 3 at 5 (fees for privileges were more onerous than for the simple permission); *ibid* at 20 (on the sealed or 'simple' permission).
[46] See Negroni, *supra* note 9 at 29-30; Dock, *supra* note 16 at 66-75; *ibid* at 19-20.

nature, the simple permission and the privilege also signified a royal recognition of the authenticity, propriety and utility of the book bearing them:

> *Il faut bien entendre que, lorsque le gouvernement donnait ces permissions,* cela ne signifiait pas seulement qu'il ne défendait pas la publication d'un livre, mais qu'il l'approuvait, — qu'il l'approuvait non seulement dans son esprit général, mais dans toute ses parties, dans tous ses détails. *Il le recommandait en somme, il s'en portait garant de façon expresse et authentique, puisque dans tout livre ainsi permis on devait imprimer l'approbation de l'examinateur et la patente du roi.*[47]

Between 1700 and 1788, the Librairie received an annual average of three hundred sixty-nine requests for printing privileges, a third of which were refused.[48]

Relying on simple permissions and privileges to regulate the book trade had its advantages. Similarly to what prevailed across the English Channel,[49] authors, printers and publishers had an economic interest in disclosing manuscripts.[50] Disclosure allowed the Librairie to take appropriate measures to censor sensitive matters, notably by approving the publication of a manuscript under the condition that its author modify or remove some of its content.[51] The copy of the permission or privilege a publication bore, along with the initials of its censor, made it easy to distinguish legal printed works from illegal ones.[52] In principle, enforcing the regime was a straigthforward affair: the *Code* prohibited the publication of any work that had not obtained a permission or privilege, and prescribed harsh sanctions against offenders.

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[47] Pellisson, *supra* note 12 at 5 (emphasis added). See also *Code de la librairie*, *supra* note 14 art CIII; Henri-Jean Martin, *The History and Power of Writing*, trans by Lydia G Cochrane (Chicago: The University of Chicago Press, 1994) at 314-16.
[48] See Robert Estivals, *La statistique bibliographique de la France sous la monarchie au XVIIIe siècle* (Paris: Mouton & Co, 1965) at 230, 233, 240.
[49] See Section IV.A.
[50] See Dock, *supra* note 16 at 69-70.
[51] See Birn, *supra* note 43 at 41.
[52] See Negroni, *supra* note 9 at 32-33.

But unfortunately for its Director, the duties of the Librairie often proved contradictory. The Librairie was entrusted with providing commercial opportunities to members of the French book trade and, also, with defending the orthodoxies of the *Ancien régime*.[53] In the eighteenth century, publications challenging reigning political and religious ideas became increasingly popular among French readers. Strict regulation provided little leeway to more avant-garde works:[54] the *Code* strictly prohibited any and all "books or libels opposing religion, the service of the King, the good of the state, [and] the purity of morals, [and] the honour and reputation of families and private individuals."[55] The simple permission and the privilege directly emanated from the King, protector of state and Church, and could not apply to publications threatening either.[56]

The vague yet intransigent *Code* thus contained no latitude to adapt its precepts to the changing circumstances of the eighteenth-century book trade. Royal censors had no clear guidance on what was deemed contrary to religion, the Crown or morals. Therefore, what was deemed offensive varied from one censor to another. Because judicial courts, the clergy and the public could hold a censor accountable for approving a controversial book, censors preferred to err on the side of caution and, when in doubt, deny permission to publish.[57] Some censors also saw themselves as peer reviewers of sort, charged with safeguarding the standards of French literature and scholarship. They policed manuscripts

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[53] See Robert Darnton, *Édition et sédition : l'univers de la littérature clandestine au XVIIIe siècle* (Paris: Gallimard, 1991) at 13-15; Sauvy, *supra* note 30 at 138.
[54] See generally Laurent Pfister, *L'auteur, propriétaire de son œuvre ?: la formation du droit d'auteur du XVIe siècle à la loi de 1957*, doctoral thesis, Strasbourg 3, 1999 at 61-71; Pierre Recht, *Le Droit d'Auteur, une nouvelle forme de propriété: histoire et théorie* (Paris: Librairie générale de droit et de jurisprudence, 1969) at 26-38; Dock, *supra* note 16 at 62-75.
[55] *Code de la librairie*, *supra* note 14 art XCIX (translation mine).
[56] See Pellisson, *supra* note 12 at 5. See also Olivier-Martin, *supra* note 35 at 247-49, 374; Antoine, *supra* note 35 at 12-13.
[57] See Negroni, *supra* note 9 at 42-46; Pellisson, *supra* note 12 at 13-17; Cerf, *supra* note 42 at 12, 15-19.

for inaccuracies and imprecisions, and made sure that the prose and substance of texts were in good taste — often to the frustration of authors. A censor that favoured a cause, an institution or a theory could also prevent the publication of a manuscript that questioned them. While an author could attempt to negotiate with his censor, the censor's decision was final unless the Director intervened.[58]

The strict application of the *Code* thus encouraged clandestinity within the book trade. Publishers struggled to meet the evolving tastes of French readers because of the inflexibility of the legislation and of the royal censors. Clandestine publications were both a matter of police and trade: even if the police and the Librairie effectively prevented the publication of a prohibited book, it could still find its way into France through clandestine channels, especially from Neufchatel or Geneva. Only, in the latter case, foreign traders would enrich themselves instead of French printers and booksellers.[59] An honest author with no ill intent might be tempted to publish his work clandestinely if he feared authorities would overreact upon examining it. In either case, the censors could not soften the text before its release, consequently exciting the curiosity of French readers for the clandestine work. Of course, anyone determined to publish a truly reprehensible work would never submit it to the censors in the first place.[60]

Few would navigate the shortcomings of the Librairie like Guillaume-Chrétien de Lamoignon de Malesherbes. Shortly after Louis XV named him Chancellor in 1750, Guillaume de Lamoignon de Blancmesnil appointed his son Malesherbes as Director, who

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[58] See Mogens Lærke, "Introduction" in Lærke (ed), *supra* note 9, 1 at 9; Birn, *supra* note 43 at 54-58; Negroni, *supra* note 9 at 48-49; Pellisson, *supra* note 12 at 15.
[59] See Darnton, *supra* note 53 at 34-41, 86.
[60] See Guillaume-Chrétien de Lamoignon de Malesherbes, *Mémoires sur la librairie et la liberté de presse* (Paris: Agasse, 1809) at 310; Proust, *supra* note 20 at 71-72. See also Birn, *supra* note 43 at 30.

served until 1763. Malesherbes admitted in his *Mémoires sur la librairie* that the government had not enough resources to monitor France's book trade and that, even if it could, doing so would hinder the growth of the book trade at a time when French readers sought out works that defied conventions. Unable to reform censorship rules and believing print to be generally beneficial to his nation, the Director prohibited few books, but enforced those few prohibitions with ruthless effectiveness.[61]

Malesherbes made extensive use of the means his predecessors had developed to circumvent the rigidity of the *Code*, especially by granting 'tacit permissions' to publish.[62] Tacit permissions allowed the publication of a manuscript without the apparent involvement of governmental authorities, a tolerated form of illegality. Malesherbes justified them with the need to satisfy an evolving readership and avoid the appearance that authorities approved writings challenging accepted orthodoxies:

> *Depuis que le goût d'imprimer sur toutes sortes de sujets est devenu plus général, et que les particuliers, surtout les hommes puissants, sont devenus plus délicats sur les allusions, il s'est trouvé des circonstances où on n'a pas osé autoriser publiquement un livre, et où cependant on a senti qu'il ne serait pas possible de le défendre. C'est ce qui a donné lieu aux premières permissions tacites.*[63]

If he deemed it appropriate, a censor could recommend the publication of a manuscript under a tacit permission rather than a simple one or a privilege. The police registered the title, but its printed copies did not bear the mark of the Chancellor, the Director or the censor — masking their involvement and discharging them from responsibility. The censor could also require edits from its author as a condition of the tacit permission.[64] To ensure

[61] See Malesherbes, *supra* note 60 at 2-3 11, 32, 56, 299. See also Chartier, *supra* note 11 at 71-76; Pellisson, *supra* note 12 at 70-71.
[62] See Malesherbes, *supra* note 60 at 1-3, 45.
[63] Malesherbes, *supra* note 60 at 249. See also Furet, *supra* note 45 at 7.
[64] See Negroni, *supra* note 9 at 35-36, 40-41; Proust, *supra* note 20 at 74.

no one accused the Librairie of allowing a reprehensible publication in France, Malesherbes would often ask the applicant to disguise it as an illegal one. For example, instead of Paris, a title page could instead indicate that it had been printed in a foreign city, like Neuchâtel, and imported illicitly. Fittingly, the Librairie recorded the tacit permissions it granted in a *Registre des livres d'impression étrangère*.[65]

"[I]n Malesherbes hands," historian Jonathan Israel argues, "the French royal censorship had itself become part of the Enlightenment."[66] Throughout his tenure, he maintained close contact with French authors, printers and publishers, used his powers to prevent and resolve disputes, and instructed the Librairie's most zealous censors not to use their office to intrude upon literary debates.[67] Tacit permissions provided no protection against piracy, and depended on the complicity and tolerance of publishing authorities. And yet, by the end of the *Ancien régime*, their number almost equalled that of privileges.[68]

Malesherbes claimed that "a man who would have only ever read books originally published with the express permission of government, as provided by legislation, would lag behind his contemporaries by almost a century."[69] There may be some truth in the hyperbole, given the Librairie granted the vast majority of tacit permissions to new manuscripts in the fields of history, science, and arts, including philosophy, political economy, physics, chemistry, mathematics, mechanical arts, and liberal arts.[70] By operating around the *Code*, the Director not only provided opportunities for the book trade

[65] See François Moureau, *La plume et le plomb : espaces de l'imprimé et du manuscrit au siècle des Lumières* (Paris: Presses de l'Université Paris-Sorbonne, 2006) at 30-32; Estivals, *supra* note 48 at 294-97.
[66] See Israel, *supra* note 28 at 66.
[67] See Negroni, *supra* note 9 at 51-52.
[68] See Chartier, *supra* note 11 at 78, 106; Estivals, *supra* note 48 at 294-97.
[69] Malesherbes, *supra* note 60 at 300 (translation mine).
[70] See Furet, *supra* note 45 at 11, 14-15, 24.

to grow, but also strove to prevent publications that would undermine foundational principles of the *Ancien régime*, such as the inviolability of the King.[71]

3. The Encyclopédie

The *Encyclopédie* began as a translation project. In 1744, publisher André Le Breton undertook the translation of Ephraim Chambers' *Cylopædia.*[72] Le Breton secured the rights to launch the project, but soon after quarrelled with his translators and requested then-Chancellor d'Aguesseau to cancel the publisher's own privilege.[73] Le Breton did not give up on the project and in 1745, to share the financial risk, partnered with three other publishers: Briasson, David and Durand. The four associated publishers contributed a total sum of twenty thousand livres to the endeavour, placed under the management of Le Breton.[74] Their agreement reveals that the project had already extended beyond a simple translation of the *Cyclopaedia* to become a revised and augmented edition of Chambers' work, supplemented by plates.[75] Le Breton secured a new privilege from Chancellor d'Aguesseau in January 1746 and transferred half of it to his associates.[76]

Le Breton obtained a third privilege in 1748. Secured to redress his failure to comply with regulations pertaining to subscriptions, the final privilege describes the anticipated work as

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[71] *Ibid* at 65-67; Proust, *supra* note 20 at 72.

[72] See Alain Rey, *Encyclopédies et dictionnaires* (Paris: Presses universitaires de France, 1982) at 97-98; Lough, *supra* note 9 at 7-13; Proust, *supra* note 20 at 47-48; May, *supra* note 21 at 7-9.

[73] See *Mémoire signifié pour le Sieur Luneau de Boisjermain, Souscripteur de l'Encyclopédie* (1771), BNF Ms Fr 22.086 184 at 184[r]-186[r] [*Mémoire de Boisjermain*]; *Arrest du Conseil d'État du Roy, Rendu au sujet du Privilège ci-devant accordé pour l'impression de l'ouvrage intitulé*, Dictionnaire univerfel des Arts & des Sciences (18 August 1745), BNF Ms Fr NA 3.348 130.

[74] *Copie du Traité de société fait entre les sieurs Le Breton, Briasson, Durand et David L'ainé Le 18 octobre 1745 pour l'entreprise du Dictionnaire de Chambers*, BNF Ms Fr Nouv Acqu 3.347 196 at 196[r]-196[v].

[75] *Ibid* at 196[r].

[76] *Privilège du sieur Le Breton pour l'Encyclopédie* (21 January 1747), BNF Ms Fr 21.958 471 at 471[r]-72[v]. See also Wilson, *supra* note 23 at 73-77.

a translation of multiple English dictionaries. To facilitate this "extremely useful endeavour,"[77] the privilege informed all royal officers and magistrates that Le Breton benefited from the exclusive privilege to print, re-print or sell the anticipated work for a period of twenty years, prohibiting anyone else from doing the same, from importing an unauthorized reprint, or from publishing an augmented, corrected, alternated or counterfeited copy. Like other documents of its kind, the privilege compelled Le Breton to obey the regulations of the Librairie, including securing the approval of royal censors before printing any manuscript.[78]

The associated publishers first entrusted the production of the manuscripts to the Abbot Gua de Malves, a scholar of some repute.[79] But when they cancelled the agreement shortly after, the editorship duties passed to de Malves' assistants: d'Alembert and Diderot.[80] Once the two *philosophes* took over the project, it had taken a new and ambitious direction.[81] D'Alembert and Diderot perceived existing intellectual institutions — notably the French academies — as inept bastions of conservatism in which a handful of scholars contemplated divine knowledge in near isolation. They thus borrowed from Francis Bacon a utilitarian and empirical conception of knowledge that depended on human reason, imagination and memory, and a collaborative approach to scientific endeavours. The *Encyclopédie* would be constituted not by one or a handful of authors, but by a "*Société de*

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[77] *Privilège du sieur Le Breton pour l'Encyclopédie* (30 April 1748), BNF Ms Fr 21.958 828 at 828^{r}-28^{v} [*Privilège pour l'Encyclopédie*] (translation mine). See also "Pièces justificatives" in *Mémoire de Boisjermain*, *supra* note 73 at 268^{r} (for a print version).
[78] *Privilège pour l'Encyclopédie*, *supra* note 77 at 828-29.
[79] See *Copie du traité fait avec M. l'Abbé Gua de Malves pour faire l'édition du Chambers* (27 juin 1746), reproduced in May, *supra* note 21 at 18.
[80] *Ibid* at 10-11, 20-21. See also Lough, *supra* note 9 at 13-16; Wilson, *supra* note 23 at 77-81, 107-11. On Jean Le Rond d'Alembert, see Frank A Kafker, *The Encyclopedists as Individuals: A Biographical Dictionary of the Authors of the* Encyclopédie (Oxford: University of Oxford Press, 1988) at 2-8.
[81] See Lough, *supra* note 9 at 19-20.

gens de lettres:" collaborators from multiple walks of life with first-hand knowledge of the material, gathered and organized under d'Alembert and Diderot's independent editorship.[82]

Diderot held high hopes for the *Encyclopédie*. It would expand upon Chambers' *Cylopædia* in all fields, from the greatest principles to the smallest applications in the sciences, the liberal arts and in the practical arts.[83] Diderot hoped the *Encyclopédie* would preserve contemporary knowledge for the benefit of future generations …

> [*Que la postérité*] *dise à l'ouverture de notre dictionnaire, tel était alors l'état des sciences et des beaux arts. Qu'elle ajoute ses découvertes à celles que nous aurons enregistrées, et que l'histoire de l'esprit humain et de ses productions aille d'âge en âge jusqu'aux siècles les plus reculés.* Que l'*Encyclopédie* devienne un sanctuaire où les connaissances des hommes soient à l'abri des temps et des révolutions. *Quel avantage n'aurait-ce pas été pour nos pères et pour nous, si les travaux des peuples anciens, des Égyptiens, des Chaldéens, des Grecs, des Romains, etc. avaient été transmis dans un ouvrage encyclopédique, qui eut exposé en même temps les vrais principes de leurs langue!* Faisons donc pour les siècles à venir ce que nous regrettons que les siècles passés n'aient pas fait pour le nôtre.[84]

… and would therefore make future readers happier and more virtuous:

> [*L*]*e but d'une* Encyclopédie *est de rassembler les connaissances éparses sur la surface de la terre; d'en exposer le système général aux hommes avec qui nous vivons, et de le transmettre aux hommes qui viendront après nous; afin que les travaux des siècles passés n'aient pas été des travaux inutiles pour les siècles qui succéderont;* que nos neveux, devenant plus instruits, deviennent en même temps plus vertueux et plus heureux, et que nous ne mourions pas sans avoir bien mérité du genre humain.[85]

The *Encyclopédie* incarnated Diderot's belief that useful human knowledge, which conjugated philosophy and the arts, guaranteed moral improvement.[86]

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[82] See *Prospectus pour l'*Encyclopédie *(1750)*, BNF Ms Fr 22.086 at 159 at 162^{v}-65^{v}. See also Stenger, *supra* note 5 at 132-33; Dena Goodman, *The Republic of Letters: A Cultural History of the French Enlightenment* (Ithaca: Cornell University Press, 1994) at 24-29, 33.
[83] See *Prospectus pour l'*Encyclopédie *(1750)*, *supra* note 82 at 159r. See also Lough, *supra* note 9 at 15; Proust, *supra* note 20 at 46, 191-204-05, 220.
[84] See *Prospectus pour l'*Encyclopédie *(1750)*, *supra* note 82 at 161v (emphasis added). See also Chalmin, *supra* note 7 at 119.
[85] Diderot, *supra* note 7 at 635.
[86] See also Roche, *supra* note 19 at 188-89; Roche, *supra* note 11 at 575-76.

The first volume opened with d'Alembert's *Discours préliminaire*. The editor exposed therein the dual purpose of the dictionary: to "advance as much as possible the order and development of human knowledge" and to "contain about each science and each art … the general principles forming its basis and the most essential details composing its substance."[87] He compared the encyclopaedic order to

> *une espèce de mappemonde qui doit montrer les principaux pays, leur dépendance mutuelle, le chemin en ligne droite qu'il y a de l'un à l'autre: chemin souvent coupé par mille obstacles, qui ne peuvent être connus dans chaque pays que des habitants ou des voyageurs, et qui ne sauraient être montrés que dans des cartes particulières fort détaillées. Ces cartes particulières seront les différents articles de l'Encyclopédie, et l'Arbre ou Système figuré en sera la mappemonde.*[88]

The *Encyclopédie* conjugated the encyclopaedic order with the alphabetical one by drawing relations between articles with cross-references and common vocabulary.[89]

While we cannot credit Diderot and his collaborators for the encyclopaedic genre, the scale of *Encyclopédie* was groundbreaking. The *Prospectus* offered subscribers a work of eight volumes of text accompanied by two volumes containing six hundred plates, to be delivered between 1751 and 1754. Subscribers had to pay sixty livres in advance, would acquire the first volume for thirty-six livres on delivery, the last three volumes for forty livres, and all volumes in between for twenty-four livres each, for a total of two hundred eighty livres.[90] The *Prospectus* greatly underestimated the final tally: when the associated publishers delivered the *Encyclopédie*'s last volume in 1772, after many of the original subscribers had died, the work counted seventeen volumes of text and eleven of plates for

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[87] Jean Le Rond D'Alembert, *Discours préliminaire*, ed by F Picavet (Paris: Armand Colin, 1894) at 12-13 (translation mine).
[88] *Ibid* at 60.
[89] *Ibid* at 72-73.
[90] See *Prospectus pour l'*Encyclopédie *(1750)*, *supra* note 82 at 166^{r}.

a total cost of nine hundred eighty livres, excluding binding costs — well beyond the means of most readers.[91]

B. '*Mauvais discours*' in the *Ancien régime*

According to Malesherbes, his father's predecessor had personally organized the censorship of the *Encyclopédie*. Diderot convinced the Chancellor d'Aguesseau to allow the projected work. D'Aguesseau, while he appreciated Diderot's intellect, remained suspicious of his intentions and personally selected the censors of the *Encyclopédie*: "[a] theologian was made responsible for articles on theology and metaphysics, a lawyer for those on jurisprudence, etc."[92] Despite these precautions, critics of the *Encyclopédie* saw in its pages numerous threats against the prevailing order: according to Malesherbes, no "work caused more uproar among the clergy, magistrates and a large part of the public."[93] Between 1752 and 1759, Louis XV would suppress the *Encyclopédie* twice via rulings of his Conseil d'État, the second time following the indictment of the work in the Parlement de Paris. Given Diderot's stated intention for the *Encyclopédie* to change the world as a "conveyor of ideas … [that] were profoundly political in their effect,"[94] it is unsurprising that his work quickly became the target of censorship.

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[91] See Roche, *supra* note 19 at 187-88; Proust, *supra* note 20 at 61.
[92] Malesherbes, *supra* note 60 at 348 (translation mine). See also Wilson, *supra* note 23 at 81.
[93] Malesherbes, *supra* note 60 at 348 (translation mine). See for example Guillaume F Berthier, "Encyclopédie" (1752) 52 *Journal de Trévoux* 424; Anonymous, "Encyclopédie" [Sept 1751] *Journal des sçavants* 617. See also Jack R Censer, *The French Press in the Age of Enlightenment* (London: Routledge, 1994) at 89, 111; John Pappas, "La première suppression de l'*Encyclopédie* dans la correspondance de D'Alembert" (1986) 1 *Recherches sur Diderot et sur l'Encyclopédie* 64 at 65-66; Paul Benhamou, "Un adversaire de l'Encyclopédie : le Père Berthier" (1972) 46 *The French Review* 291 at 292; Lough, *supra* note 9 at 2-4, 75-76, 79-81, 107-08, 99-136 (for a survey of contemporary anti-encyclopaedic literature, with a warning that "in the absence of a free press the periodicals of these years could not be expected to mirror at all adequately the reactions, favourable or unfavourable, to the work. Even so, comment, whether friendly or hostile, is surprisingly difficult to come by," at 99); Proust, *supra* note 20 at 65-67; Le Gras, *supra* note 41 at 70-72.
[94] Wilson, *supra* note 23 at 336.

The first seven volumes of *Encyclopédie* came out in the midst of one of the worst constitutional crises of Louis XV's reign. The King despised the *philosophes* for disparaging Christian doctrines and desacralizing the Crown.[95] However, magistrates and a fractured Church bore much of the responsibility for weakening his authority. From the mid-eighteenth century until the reform of the parlements in 1777, heated disputes between the Jansenists, the Jesuits, the parti *dévôt* and their respective supporters tarnished the sanctity of royal authority.[96] The sixteenth-century Wars of Religion formed the historical bedrock of French absolutist theories. Absolutism rested on the Crown's capability to impose order between hostile factions through force or arbitration.[97] Louis' inability to resolve the constitutional crises that opposed him to his parlements in times of religious dissent did more to weaken the Crown than the *Encyclopédie* ever could.[98]

1. The King censored by his **parlements**

Before discussing the political crises of the 1750s, two institutions merit discussion: the Conseil d'État and the Parlement de Paris. Both institutions grew out of the formation of the King's Court, understood broadly, in the twelfth century. As French monarchs traditionally solicited advice from their subjects before making important decisions, bodies

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[95] See Harouel et al, *supra* note 11 at 428, 569; Antoine, *supra* note 35 at 609; Lough, *supra* note 27 at 159
[96] See Pierre Jacomet, *Vicissitudes et chutes du Parlement de Paris* (Paris: Hachette, 1954) at 24.
[97] See Olivier-Martin, *supra* note 35 at 247-49; Darrin M McMahon, *Enemies of the Enlightenment: The French Counter-Enlightenment and the Making of Modernity* (Oxford: Oxford University Press, 2001) at 44; François Olivier-Martin, *L'Absolutisme français* (Paris: Éditions Loysel, 1988) at 231-39. See also Gasparini & Gojosso, *supra* note 15 at 217 (according to Jean Bodin, a sovereign state is constituted by indivisible and perpetual royalty. The Crown should hold exclusive and supreme judicial and legislative powers, and protect the liberty and property of its subjects thanks to the prince's sole deference to God and natural law).
[98] See Harouel et al, *supra* note 11 at 422; Roche, *supra* note 11 at 285-86; Keith M Baker, "Politics and Public Opinion Under the Old Regime" in Jack R Censer & Jeremy D Popkin (eds), *Press and Politics in Pre-Revolutionary France* (Berkeley: University of California Press, 1987) 204 at 208.

organized themselves around the Crown to provide such counsel.[99] The King expressed his will primarily through the Conseil du Roi, the supreme governmental institution of the Ancien régime.[100] While the King remained the sole source of royal authority, he divided his powers as he saw fit between different sections of his Conseil du Roi.[101] In the Conseil d'État (the Conseil), the Conseil du Roi's most powerful section under Louis XV, the King discussed matters of his choosing — usually war, finance, trade or police — with an inner circle of trusted advisors.[102] These advisors included the Chancellor when deliberations touched upon matters of his competence, such as the censorship of the press.[103] The Conseil most often exercised its legislative powers through rulings that required few formalities save for their registration in *parlements*.[104]

The Parlement de Paris (the Parlement) was a prestigious judicial court that exercised jurisdiction over nearly half of France. The Parlement played a multifaceted role, conferring upon it judicial, executive and even legislative powers. Though it mostly functioned as an appellate court, the Parlement acted as a trial court over a handful of special matters, such as questions pertaining to the royal succession. In the *Ancien régime*, all legislative and executive powers devolved from judicial ones. And so, in addition to adjudication, "tradition allowed [the Parlement] to issue ... local regulations applicable to [its district], as well as to intervene in all sorts of matters from censorship of books to price-

[99] See Olivier-Martin, *supra* note 35 at 346-48, 484-87; Harouel et al, *supra* note 11 at 244-47.
[100] See generally Antoine, *supra* note 35 at 3-39.
[101] See Gasparini & Gojosso, *supra* note 15 at 237-38, 256; Harouel et al, *supra* note 11 at 477-83. See generally *ibid* at 118-61.
[102] See Antoine, *supra* note 35 at 122-23.
[103] See Olivier-Martin, *supra* note 35 at 500-02; Harouel et al, *supra* note 11 at 460-67.
[104] *Ibid* at 343-51, 552-56.

fixing, from municipal ordinances to urban planning and traffic regulation."[105] While the King could overturn the rulings of the Parlement, judicial or otherwise,[106] its magistrates had some independence *vis-à-vis* the Crown thanks to the rules governing the purchase, transfer and termination of their charge.[107] By the eighteenth century, twelve new *parlements* had been instituted, with duties and powers similar to those of the original Parlement.[108]

The last important power attributed to the *parlements* was to register legislation, including rulings of the Conseil. Originally, the procedure of parliamentary registration sought solely to authenticate, publicize, and preserve documents detailing new legislation. In the fourteenth century, Philippe VI fatefully allowed parlements to refuse registration of a royal edict if it risked contradicting 'fundamental law', such as ancestral privileges and succession rules. When so justified, the *parlements* expressed their opposition to the registration of a royal edict by way of 'remonstrances' to the Crown: formal and detailed counter-arguments to the expression of royal authority. These remonstrances, however, remained entirely advisory in nature; the King retained supreme authority over the *parlements*. He could freely ignore the advice of his magistrates, cancel their rulings and command the registration of his edicts.[109]

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[105] Roche, *supra* note 11 at 463. See also Gasparini & Gojosso, *supra* note 15 at 285-87; Olivier-Martin, *supra* note 35 at 565, 582, 592-94; *ibid* at 308-10, 370-71.
[106] See Antoine, *supra* note 35 at 8, 20.
[107] See Harouel et al, *supra* note 11 at 436; Roche, *supra* note 11 at 463 (a prospective magistrate purchased his office from the Crown. The office entered the new magistrate's patrimony and passed on to his successors. The King could only withdraw an office by repurchasing it from its owner).
[108] See Gasparini & Gojosso, *supra* note 15 at 285-87; Olivier-Martin, *supra* note 35 at 592-93; Antoine, *supra* note 35 at at 17-22.
[109] See Gasparini & Gojosso, *supra* note 15 at 274-75; Harouel et al, *supra* note 11 at 310, 370.

Louis XIV caused the tensions that led to outright conflict between Louis XV and his *parlements* throughout the latter's reign. The Sun King had deeply transformed French politics by centralizing political power, entrusting key administrative functions to a coterie of notables, relegating nobles to mere witnesses of his royal splendour, enlisting the help of the Pope to persecute Jansenists at home and thus questioning the independence of the Gallican Church.[110]. The *parlements* attempted to oppose Louis XIV, but he censored them by subjecting their remonstrances to patent letters.[111] Following his death, the Regent for the young Louis XV allowed the *parlements* to publish their remonstrances at the discretion of their magistrates to gather their support.[112]

The Regent's concession deeply affected Louis XV's reign. Early on, the King's military successes and a near-miraculous recovery from a fatal sickness earned him the nickname of '*Louis le Bien Aimé*'.[113] However, from the mid-eighteenth century onward, Louis XV's efforts to implement fiscal equality, fund military campaigns and support the oppression of the Jansenists constantly attracted the enmity of the *parlements*. Their magistrates considered the fiscal privileges of the noble and ecclesiastical estates part of French

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[110] See Gasparini & Gojosso, *supra* note 15 at 212; *ibid* at 532-33 (the Concordat de Boulogne gave the King the power to name candidates for major ecclesiastic appointments, such as évêchés and abbayes, while the Pope retained the power to make canonical nominations. The Concordat thus made the King the temporal leader of the Church in France and granted members of the French clergy much authority in ecclesiastical affairs. Louis XIV seemed to weaken the independence of the Gallican Church when he requested from the Pope the formal and explicit condemnation of Jansenist precepts, and better equip the King against the religious faction).
[111] *Ibid* at 436-39.
[112] *Ibid* at 574-75; Jacomet, *supra* note 96 at 24.
[113] See Ladurie, *supra* note 11 at 440.

society's 'fundamental law', while a "small, but highly-vocal *parti janséniste*"[114] within the Parlement fiercely defended the Jansenist minority.[115]

The magistrates hoped to expand their constitutional role and appropriate some of the Crown's legislative powers. They formulated a new constitutional theory that attributed to *parlements* the power "to negotiate with the King about laws that appeared to deviate from the traditions of public law or to be inopportune, and possibly to amend them."[116] The *parlements* repeatedly refused to register royal edicts in order to hinder the Crown.[117] The more principled magistrates believed that preserving the Crown meant opposing the King; the less scrupulous ones re-wrote the 'fundamental law' to better support their political ambitions.[118] Louis XV responded by forcing the registration of his edicts, arresting vociferous magistrates and even exiling whole *parlements*.[119] Ignored by the King, the magistrates exercised the prerogative the previous Regent had given them before Louis XV had taken the throne: they had their remonstrances printed and circulated among the public, in the hopes of winning over public opinion.[120]

In March 1766, after staunch parliamentary opposition, Louis formally addressed the Parlement in a *lit de justice*. In the famous '*discours de la flagellation*', the King rejected the theory of parliamentary legislative power in absolute and absolutist terms:

> *Entreprendre d'ériger en principe des nouveautés si pernicieuses, c'est faire injure à la magistrature, démentir son institution, trahir ses intérêts et méconnaitre les*

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[114] Julia Swann, *Politics and the Parlement of Paris Under Louis XV, 1754-1774* (Cambridge: Cambridge University Press, 1995) at 88.
[115] See Harouel et al, *supra* note 11 at 516-17, 576; Roche, *supra* note 11 at 364-78; Jacomet, *supra* note 96 at 53; See generally Swann, *supra* note 114 at 87ff.
[116] Gasparini & Gojosso, *supra* note 15 at 215.
[117] See Gasparini & Gojosso, *supra* note 15 at 287; Harouel et al, *supra* note 11 at 448-49; Roche, *supra* note 11 at 462.
[118] See Harouel et al, *supra* note 11 at 447.
[119] See Roche, *supra* note 11 at 576.
[120] *Ibid* at 463.

> *véritables lois fondamentales de l'État ; comme s'il était permis d'oublier que c'est en ma personne seule que réside la puissance souveraine, dont le caractère propre est l'esprit de conseil, de justice et de raison ; que c'est moi seul que mes cours tiennent leur existence et leur autorité ; que la plénitude de cette autorité, qu'elles n'exercent qu'en mon nom, demeure toujours en moi, et que l'usage n'en peut être tourné contre moi ;* que c'est à moi seul qu'appartient le pouvoir législatif sans dépendance et sans partage *; que c'est par ma seule autorité que les officiers de mes cours procèdent, non à la formation, mais à l'enregistrement, à la publication, à l'exécution de la loi, et qu'il leur est permis de me remontrer ce qui est du devoir de bons et utiles conseillers ;* que l'ordre public tout entier émane de moi et que les droits et les intérêts de la Nation, dont on ose faire un corps séparé du Monarque, sont nécessairement unis avec les miens et ne reposent qu'en mes mains.[121]

The *parlements*' obstruction to fiscal equality would eventually exceed Louis' patience. In 1771, seeking to neutralize the powers of the *parlements* and despite their vehement protests and calls for the convocation of the general estates, the new Chancellor Maupeou disbanded three *parlements* and formed 'superior councils' that purposefully encroached upon the remaining *parlements*' jurisdiction.[122] The reform would not last. Three years later, a newly anointed Louis XVI dismissed Maupeou and restored the parlements to their previous strength and jurisdiction. They would continue to counter the Crown's efforts to reform institutions of the *Ancien régime* until the French Revolution.[123]

The first volumes of the *Encyclopédie* came out during the 'sacraments crisis' (1752-1757), one of the worst periods of conflict between the Crown and the Parlement. The crisis began when the Archbishop of Paris instructed his priests to refuse to administer last rites to known or suspected Jansenists. The policy condemned many faithful subjects, including famous and beloved French subjects, to damnation. The Jansenists begged their allies in

[121] Quoted in Daniel Teysseire, "Un modèle autoritaire : le discours de 'la flagellation'" (1995) 43 *Mots* 118 at 126-27 (emphasis added).
[122] See Michael Kwass, *Privilege and the Politics of Taxation in Eighteenth-Century France: Liberté, Égalité, Fiscalité* (Cambridge: Cambridge University Press, 2006) at 194-95; William Doyle, "The Parlements of France and the Breakdown of the Old Régime: 1771-1788" (1970) *French Historical Studies* 415 at 426-34.
[123] See Harouel et al, *supra* note 11 at 580-82.

Parlement for help, who prosecuted clergymen for obeying the Archbishop. In response, Louis XV exiled the magistrates of Parlement, only to recall them after disgruntled Parisians complained about how their absence disrupted the administration of justice. The King then tried to appease the magistrates in turn by exiling the Archbishop, but the Archbishop's priests persevered in refusing to administer last rites.

Louis XV failed to broker peace between the Parlement and the Church. He acceded to the demands of the former in order to gain their support for an upcoming war against Great Britain and Prussia — a conflict better known as the Seven Years War (1756-1763). The magistrates emerged victorious from the sacraments crisis after the King hurt the sensibilities of every party involved. The episode severely deteriorated Louis XV's authority and encouraged the magistrates to continue extending their own.[124]

The political crises of the second half of the eighteenth century emphasised the importance of public opinion in French politics. Historian Keith Baker writes of 'public opinion' as "an abstract category of authority, invoked by actors in a new kind of politics to secure the legitimacy of claims that could no longer be made binding in the terms of an absolutist political order."[125] Public opinion, fellow historian Roger Chartier argues, "transfers the seat of authority from the will of the king alone, who decided without appeal and in secret, to the judgment of an entity devoid of an institutional basis, that debates publicly and is

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[124] See Julia Swann, "Politics: Louis XV" in William Doyle (ed), *Old Regime France, 1648-1788* (Oxford: Oxford University Press, 2001) 195 at 207-12; Ladurie, *supra* note 11 at 387-91; Negroni, *supra* note 9 at 141-56. See also Joël Félix, "The Economy" in Doyle, *supra* note 124, 7 at 31-33; Julia Swann, "The State and Political Culture" in Doyle, *supra* note 124, 140 at 151-54; William Doyle, *Jansenism* (New York: St-Martin's Press, 2000) at 61-64; Monique Cottret, *Jansénismes et lumières : pour un autre XVIIIe siècle* (Paris: Albin Michel, 1998) at 11-17; Lough, *supra* note 27 at 164-66, 170-92

[125] Baker, *supra* note 98 at 213.

more sovereign than the sovereign."[126] The crises of the mid-eighteenth century produced what Baker terms "politics of contestation"[127] made of parliamentary remonstrances, vitriolic pamphlets and '*mauvais discours*' against the Crown.[128] In turn, the royal administration paid more attention to the discourse of its opponents and courted public opinion with publications of its own.[129] These publications, both those of the Crown and the *parlements*, included censorship rulings.

2. First suppression of the **Encyclopédie** *(1752)*

As a preamble to the suppression of the *Encyclopédie* in 1752 and shortly after the publication of the first volume, Malesherbes personally intervened to save the *Encyclopédie* from Jean-François Boyer, Bishop of Mirepoix. Described by the Directeur as the *Encyclopédie*'s "most fervent foe,"[130] the Bishop held membership at the *Académie française* and the *Académie des sciences*, and had served as preceptor for the French Dauphin.[131] When Boyer complained to the King of the evils contained in the *Encyclopédie*, the Chancellor expressed his sympathy, but did not believe it necessary to suppress the work. He ordered instead his son to arrange a compromise with the Bishop. Accommodating yet protective of the *Encyclopédie*, Malesherbes placated the Bishop by

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[126] Chartier, *supra* note 11 at 51 (translation mine). But see Roche, *supra* note 11 ("[t]here was not yet such a thing as public opinion, but "there did exist a certain basic political capacity whose tentative expression constituted a kind of opposition to the actions of the king and his government. … The Jansenist crisis, which shook bedrock religious beliefs, played an important role in persuading the public of its competence and of its right to criticize, to insist on reforms, and perhaps to disobey," at 283).
[127] Baker, *supra* note 98 at 208.
[128] See Chartier, *supra* note 11 at 150-55, 164-70; Baker, *supra* note 98 at 209; See Pierre Goubert & Daniel Roche, *Les français et l'Ancien régime : culture et société* (Paris: Armand Colin, 1984) at 281.
[129] See Françoise Weil, *Livres interdits, livres persécutés 1720-1770* (Oxford: Voltaire Foundation, 1999) at 5; Chartier, *supra* note 11 at 173; Baker, *supra* note 98 at 210-13, 231.
[130] Malesherbes, *supra* note 60 at 349 (translation mine).
[131] See François-Xavier de Feller, "Boyer (Jean-François)" in *Biographie universelle : ou, Dictionnaire historique des hommes qui se sont fait un nom par leur génie, leurs talents, leurs vertus, leurs erreurs ou leurs crimes*, vol 2 (Paris: Gaume, 1847) at 186-87.

appointing three theologians of Boyer's choice to review and approve every single article of the work prior to their publication.[132]

But the matter was far from settled. In November 1751, an abbot named Jean-Martin de Prades successfully defended his doctoral thesis at the Sorbonne. As the thesis was considered exceedingly long — some eight thousand words — no examiner had actually read de Prades' work before approving it, and thus the heads of the Sorbonne only discovered that the thesis defended materialism after its publication. Having approved a work that blatantly contradicted religious orthodoxy, a deeply embarrassed Sorbonne condemned the work in January 1752. The Archbishop of Paris, the Parlement and the Pope soon followed suit, forcing de Prades to flee France to avoid arrest.[133]

The de Prades affair had severe repercussions for the *Encyclopédie*, as the abbot counted among its collaborators. To the enemies of the dictionary, the affair revealed the *Société de gens de lettres* as nothing short of a conspiracy to undermine French institutions. They claimed Diderot and d'Alembert had dictated de Prades' thesis — abstracted in the abbot's encyclopaedic article 'Certitude' — to deliberately discredit the Sorbonne's Faculty of theology.[134] In February 1752, likely following the pleas of Boyer and others, the Conseil suppressed the first two volumes of the *Encyclopédie*, prohibiting anyone from printing, re-printing or distributing them under the threat of a heavy fine.[135]

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[132] Malesherbes, *supra* note 60 at 349-50. But see Pierre Grosclaude, *Malesherbes: Témoin et interprète de son temps* (Paris: Librairie Fischbacher, 1964) at 106-07.

[133] See Edmond JF de Barbier, *Journal historique et anecdotique du règne de Louis XV*, vol 3 (Paris: Renouard, 1851) at 333-34, 336, 338-39, 346. See also Wilson, *supra* note 23 at 154-56.

[134] See René Louis de Voyer de Paulmy, *Journal et mémoires du marquis d'Argenson*, vol 7 (Paris: Renouard, 1865) at 47, 56-58, 63, 80, 95, 97, 102-03; *ibid* at 337, 344, 354. See also Cottret, *supra* note 124 at 72-76; Simone Goyard-Fabre, "Diderot et l'affaire de l'abbé de Prades" (1984) 174 *Revue Philosophique de la France et de l'Étranger* 287 at 288-93.

[135] *Arrest du Conseil d'État du Roy, Qui ordonne que les deux premiers volumes de l'ouvrage intitulé*, Encyclopédie *ou* Dictionnaire raifonné des Sciences, Arts & Métiers, par une Société de gens de Lettres,

Despite its severity, the Conseil's ruling had little effect on the *Encyclopédie*. It spared Le Breton's privilege and only applied to volumes that had already reached subscribers. To maintain appearances, Malesherbes allegedly staged a search of Le Breton's house to seize the work's manuscripts, which the Director kept in fact safe in his office.[136] In May 1752, Madame de Pompadour reportedly enjoined d'Alembert and Diderot to resume their work, provided that they avoid controversy over religious and political matters.[137]

Critics of the *Encyclopédie*, however, did not reduce their assault. Each new volume was greeted with renewed public outcries. Efforts to discredit the endeavour greatly intensified in 1757, after the publication of the seventh volume. With or without the authorization of the Librairie, the *Encyclopédie*'s detractors published numerous pamphlets and even entire books condemning the work's technical deficiencies — notably plagiarism[138] — and its unorthodox propositions.[139] For example, between 1758 and 1759, Abraham Chaumeix published his *Préjugés légitimes contre l'Encyclopédie*, in which the Jansenist ruthlessly attacked the work's use of cross-references, its subversive and anti-Christian propositions on materialism and intellectual freedom, and the editors' tendency to favour only the authors and sources that supported their views.[140]

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seront & demeureront fupprimés (7 February 1752), BNF Ms Fr 22.177 54 [*Arrest du Conseil d'État du Roy* (1752)].

[136] See Barbier, *supra* note 133 at 355. See also Grosclaude, *supra* note 132 at 105; Le Gras, *supra* note 41 at 83. But see Philipp Blom, *Enlightening the World:* Encyclopédie*, the Book that Changed the Course of History* (New York: St. Martin's Press, 2005) at 230-31, 352 (situating this event later, in the year 1759).

[137] See Stenger, *supra* note 5 at 137; Paulmy, *supra* note 134 at 223-24. See also Ladurie, *supra* note 11 at 277-78 (on Madame de Pompadour's support).

[138] See Wilson, *supra* note 23 at 241-43.

[139] See Lough, *supra* note 9 at 103-04, 110-19, 128-30.

[140] See Jonathan I Israel, *Democratic Enlightenment: Philosophy, Revolution, and Human Rights, 1750-1790* (Oxford: Oxford University Press, 2011) at 75-77; Lough, *supra* note 9 at 119-23. See also Sylviane Albertan-Coppola, "Les *Préjugés légitimes* de Chaumeix ou l'*Encyclopédie* sous la loupe d'un apologiste" (1996) 20 *Recherches sur Diderot et sur l'Encyclopédie* 149.

The philosophical movement itself came under attack. While Jacob Moureau's *Nouveau mémoire sur les Cacouacs* and Charles Palissot's *Petites lettres sur de grands philosophes* barely mentioned the *Encyclopédie*, they discredited and ridiculed the *philosophes*. When Frederick the Great commended the work of Diderot and d'Alembert, the favour of the Prussian king along with the encyclopaedists' admiration of British ideas further tarnished their image at home. The '*anti-philosophes*' — counting among them "[m]ilitant clergy, members of the parti dévot, unenlightened aristocrats, traditionalist bourgeois, Sorbonne censors, conservative parlementaires, recalcitrant journalists, and many others[141]" — accused the philosophers of sapping the warrior spirit of France, blamed them for the humiliating defeats the country suffered during the war, and condemned them for subverting the Catholic religion and corrupting social morals.[142]

3. Second suppression of the* Encyclopédie *(1759)

In January 1757, a lone man approached and stabbed the King before his entourage could overwhelm him. Louis XV lived and his aggressor, Robert-François Damiens, was prosecuted and executed. While Damiens claimed he acted alone, the affair prompted a public witch-hunt.[143] Damiens' life was dissected to find ties between him and different factions that could bear responsibility for his actions. The anti-*philosophes* saw the

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[141] McMahon, *supra* note 97 at 6.
[142] See Israel, *supra* note 140 at 62-64, 88 (Voltaire himself, now fearing to be associated with the *Encyclopédie*, withdrew from the endeavour); Blom, *supra* note 136 at 207-08, 213-14; McMahon, *supra* note 97 at 32-36; Swann, *supra* note 124 at 214-15.
[143] See Israel, *supra* note 140 at 67; Young-Mock Lee, "Diderot et la lutte parlementaire au temps de l'*Encyclopédie*" (2000) 29 *Recherches sur Diderot et l'Encyclopédie* 45 at 49-52 (Diderot himself blamed the Jesuits for the assassination attempt); Chartier, *supra* note 11 at 166-67, 169. See generally Dale K Van Kley, *The Damiens Affair and the Unraveling of the Ancien Régime, 1750-1770* (Princeton: Princeton University Press, 1984).

attempted regicide as evidence of the Enlightenment's threat to order,[144] but suspicions also extended to Parlement. Indeed, Damiens had worked as a household servant for some of its magistrates and may have overheard his masters speaking ill of the King.[145]

Now on the defensive, the magistrates in Parlement attempted to silence those who suspected their involvement by showcasing their patriotic zeal. The royal declaration of April 16, 1757, issued in the aftermath of the assassination attempt, hinted to where the magistrates could direct their attention:

> *Tous ceux qui seront convaincus d'avoir composé, fait composer et imprimer des écrits tendant à attaquer la religion, à émouvoir les esprits, à donner atteinte à notre autorité, et à troubler l'ordre et la tranquillité de nos États, seront punis de mort.*[146]

The article was never enforced, but it encouraged severity against members of the book trade. Amidst heated political disputes, paranoia and the deteriorating public image of the *philosophes*, it would only take a spark to ignite retaliation against the *Encyclopédie*.

The spark came from Helvétius' *De l'esprit*. Despite *De l'esprit* being a radically materialist essay,[147] Helvétius secured a printing privilege for it in 1758 after a royal censor authorized the work by mistake.[148] The essay prompted harsh condemnations from the Sorbonne, the Dauphin, the Archbishop of Paris and the Pope. Its privilege aggravated

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[144] See Roche, *supra* note 19 at 181.

[145] See Edmond JF de Barbier, *Journal historique et anecdotique du règne de Louis XV*, vol 4 (Paris: Renouard, 1852) ("[*l*]*e 5 janvier 1757, le roi a été assassiné par un malheureux fanatique animé contre l'archevêque de Paris à cause de ses refus de sacrements à de dignes prêtres (jansénistes), et contre le roi, de ce qu'il n'avait pas écouté favorablement les remontrances de son parlement contre l'archevêque et le clergé*," at 251). See also Blom, *supra* note 136 at 190-198; Doyle, *supra* note 124 at 65; Ladurie, *supra* note 11 at 405.

[146] *Déclaration royale du 16 avril 1757*, BNF Ms fr 22.117 200 at 200^{v}.

[147] See Goyard-Fabre, *supra* note 3 at 160-61 (: even some *philosophes* advised against its publication).

[148] See Didier Ozanam, "La disgrâce d'un premier Commis: Tercier et l'affaire de l'Esprit (1758-1759)" (1955) 113 *Bibliothèque de l'école des chartes* 140 at 146-51.

matters by suggesting the King supported the evils contained therein.[149] Helvétius had not contributed to the *Encyclopédie*, but its opponents nonetheless associated *De l'esprit* with the philosophical movement and the *Encyclopédie* in particular, notably because one of its associated publishers had published the essay.[150] Still infuriated by the seventh volume published the previous year,[151] the *anti-philosophes* found in *De l'esprit* the opportunity to formally act against the *Encyclopédie*.[152]

On February 6, 1759, Parlement issued a ruling authorizing its magistrates to handpick nine theologians, lawyers and other scholars to examine the first seven volumes of the *Encyclopédie*. These experts would help the magistrates determinate the fate of the work and its authors. Pending this evaluation, the Parlement prohibited the associated publishers from printing and distributing the seven volumes. As for *De l'esprit*, the executioner lacerated and burned the work as to show the superiority of the Parlement over the censored publication.[153] The Parlement allowed the associated publishers to continue to publish future volumes, providing they did not further trouble the peace.[154] The court could not

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[149] See Geoffrey Turnovsky, *The Literary Market: Authorship and Modernity in the Old Regime* (Philadelphia: University of Philadelphia, 2010) at 70-71, 75-78; Cottret, *supra* note 124 at 83-86; Ozanam, *supra* note 148 at 158.
[150] See Israel, *supra* note 140 at 71-73; Blom, *supra* note 136 at 226-28; Wilson, *supra* note 23 at 309-12. See also Edmond JF de Barbier, *Journal historique et anecdotique du règne de Louis XV*, vol 7 (Paris: Charpentier, 1857) at 121 (for a contemporary account).
[151] See Blom, *supra* note 136 at 208-19; Lough, *supra* note 9 at 207-08; 221-23, 267-68; Wilson, *supra* note 23 at 280-83.
[152] See Israel, *supra* note 140 at 77; Catherine Maire, "L'entrée des 'Lumières' à l'Index : le tournant de la double censure de l'*Encyclopédie* en 1759" (2007) 42 *Recherches sur Diderot et sur l'Encyclopédie* 108 at para 57-62.
[153] *Arrests de la Cour du Parlement portant condemnation de plusieurs Livres & autres Ouvrages imprimés* (23 January 1759), BNF Ms Fr 22,177 255 at 268v-269r, 271-272r [*Arrêts du Parlement de Paris* (1759)]. See also Negroni, *supra* note 9 at 90-91, 93 (on book burning).
[154] See Lee, *supra* note 143 at 63-64 (parliamentarians might also have spared the *Encyclopédie* because they shared the antagonism of the editors towards the Jesuits).

enact further plans after March 8, 1759, when the Conseil revoked Le Breton's privilege.[155] Officially, the *Encyclopédie* had ceased production.

Clandestinely, the encyclopaedists soldiered on. Following the revocation of Le Breton's privilege, Diderot, D'Alembert and the associated publishers gathered at Le Breton's home.[156] Two loyal friends and fellow encyclopaedists joined them: Baron Paul Thiry d'Holbach and the Chevalier de Jaucourt.[157] The night went smoothly until Diderot brought up his plan to complete the manuscript of the *Encyclopédie* in secret. The scheme infuriated d'Alembert, who thought they had gathered to bid adieu to the endeavour, not conspire to pursue it. He could not stand the constant harassment and criticism that working on the *Encyclopédie* attracted. He railed against his fellow encyclopaedists and stormed off after agreeing to deliver his manuscripts within two years.[158] As for the other guests, they arranged to print the work in secret: David would deliver the manuscripts; Le Breton would supervise the printing of the volumes in his workshop on Rue de La Harpe; D'Holbach would make his private library available to the contributors; Jaucourt would supervise the copyists; and Diderot would cloister himself in his home as he discreetly edited and completed the manuscripts.[159]

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[155] *Arrest du Conseil d'État du Roi, Qui révoque les Lettres de privilege obtenues pour le livre intitulé:* Encyclopédie *ou* Dictionnaire raisonné des Sciences, Arts & Métiers, par une Société de gens de Lettres (8 March 1759), BNF Ms Fr 21.177 129 [*Arrêt du Conseil d'État (1759)*].
[156] See Denis Diderot, *Correspondance*, ed by Georges Roth, vol 2 (Paris: Éditions Minuits, 1955) at 119-20.
[157] See Kafker, *supra* note 80 at 170-80. See generally Stenger, *supra* note 5 at 142-48 (on Baron d'Holbach's contribution to the *Encyclopédie* and his friendship with Diderot).
[158] See also Wilson, *supra* note 23 at 287-90 (Voltaire had advised d'Alembert to quit working on the *Encyclopédie*, and further betrayed Diderot by encouraging other collaborators to do the same).
[159] See Diderot, *supra* note 156 at 121-22. See also Lough, *supra* note 156 at 76-77.

These efforts would have been vain without the protection of Malesherbes.[160] To secure it, the associated publishers had an ace in their sleeve: moving production of the *Encyclopédie* abroad.[161] The work was a success throughout Europe. Indeed, the majority of its subscribers resided outside of France, and unauthorized foreign reprints and translations followed the publication of every volume since 1751. These editions proved that the work could be printed abroad and still find its way to French readers. The associated publishers said as much to Malesherbes when they remarked "that such works are more favourably considered abroad, since [the *Encyclopédie*] is printed in French and without modifications in Lucca and in Venice under the eyes of the inquisition."[162] Moving production abroad would deprive French traders of the revenues the work generated, not to mention allow a rival nation to rob France of its prestige.

The associated publishers deftly advanced the threat in a memorandum presented to Malesherbes shortly after the Parlement's ruling of February 1759. They implied that, considering the heavy losses abandoning the publication of the *Encyclopédie* would cause them, the associated publishers could very well move production abroad rather than let foreign printers profit from the work.[163] Doing so was "more advantageous to the publishers than total abandon."[164] Between maintaining production in Paris and relocating

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[160] See *Correspondance de Malesherbes concernant les ouvrages parus Durant son administration*, BNF Ms Fr NA 3.348 at 118^{r}-18^{v} [*Correspondance de Malesherbes*] (David, who generally dealt with the Director in the name of the associated publishers, wrote him a letter to obtain it shortly after the revocation of the privilege).
[161] See Israel, *supra* note 140 at 85-87; Proust, *supra* note 20 at 72-75.
[162] *Correspondance de Malesherbes*, *supra* note 160 at 170^{r}. See also Grosclaude, *supra* note 132 at 128-29.
[163] *Correspondance de Malesherbes*, *supra* note 160 at 170r ("[*l'*]*intérêt du commerce en général … semble s'opposer à ce que ce livre soit continué par les étrangers comme il est vraisemblable que cela arriverait même dans que les Libraires de Paris y coopérassent*").
[164] *Ibid* at 173^{v}.

it abroad, they admittedly preferred the former.[165] However, the fact that Diderot and the associated publishers truly considered moving production abroad shows it was not an empty threat.[166]

The associated publishers ended their memorandum with a proposed compromise. Should they be allowed to continue to print the *Encyclopédie* in Paris and under the protection of the authorities, they would deliver all remaining volumes at once. This plan, they argued, would allow them to pursue the endeavour while public outrage subsided, instead of reviving their opponents every time a volume appeared.[167] They could only hope not to have already exceeded Malesherbes' patience.

C. The semantics of lawbreaking

In his *Lettre sur le commerce de la Librairie*, Diderot noted that, more often than not, censorship promoted the suppressed work and made it more profitable. He thus believed no sovereign could ever prevent controversial writings from being published:

> [*J*]*e vois que la proscription, plus elle est sévère, plus elle hausse le prix du livre, plus elle excite la curiosité de le lire, plus il est acheté, plus il est lu. Et combien la condamnation n'en a-t-elle pas fait connaître que leur médiocrité condamnait à l'oubli ? Combien de fois le libraire et l'auteur d'un ouvrage privilégié, s'ils l'avaient osé, n'auraient-ils pas dit aux magistrats de la grande police : « Messieurs, de grâce, un petit arrêt qui me condamne à être lacéré et brûlé au bas de votre grand escalier ? » Quand on crie la sentence d'un livre, les ouvriers de l'imprimerie disent: « Bon, encore une édition. »*[168]

It is tempting to agree with Diderot's assessment. After all, despite its suppression, the *Encyclopédie* was the most successful commercial venture of the eighteenth century. That

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[165] *Ibid* at 172^{r}-173^{r}.

[166] See Françoise Weil, "L'impression des tomes VIII à XVII de l'*Encyclopédie*" (1986) 1 *Recherches sur Diderot et sur l'Encyclopédie* 85 at 87-88; Diderot, *supra* note 156 at 120.

[167] See *Correspondance de Malesherbes*, *supra* note 160 at 171^{v}, 173^{r}-73^{v}.

[168] Denis Diderot, *Lettre sur le commerce de la librairie* (Paris: Hachette, 1861 [1763]) at 71.

being said, it was necessarily harder for effectively suppressed books, or writings that remained unpublished because of anticipated suppression, to acquire any renown.

Diderot wrote specifically about public censorship. ‘Public censorship’ refers to when an authority loudly condemns a published work, in a manner quite different from the more subtle interventions of the Librairie. The Conseil engaged in public censorship when it suppressed the *Encyclopédie* in 1752 and revoked its privilege in 1759, as did the Parlement when it condemned the work in 1759. Public censorship drew attention to the censored material and, often, increased its circulation, albeit in clandestinity.[169] It could also apply to books already distributed or even out of print. Public censorship thus appears to be a self-defeating exercise, especially considering that the authorities of the *Ancien régime* had the means to effectively and discreetly suppress a publication whenever they so desired.[170] Why then even resort to public censorship?

One could assume that authorities that resorted to public censorship stubbornly ignored or remained oblivious to its ineffectiveness. In addition to reinforcing portrayals of *anti-philosophes* as reactionary halfwits, the thought also makes censorship a straightforward and wholly condemnable affair, which may be attractive to some. A more nuanced and charitable interpretation would emphasize how public censorship served a purpose distinct from the effective suppression of the censored publication.

[169] See also Duflo, *supra* note 9 at 122-125.

[170] See Negroni, *supra* note 9 at 62-71, 195-96 (they included for example police searches of the workshops and houses of authors, printers, and booksellers to search for, seize, and destroy any manuscript or copy deemed contrary to religion, government, or morality. Authorities could also restrict the publicity of rulings, thus providing officials with more means to act against offending titles).

Philosopher Barbara de Negroni rightfully argues that the point of censorship is always to profess the authority of the censor over the censored.[171] By suppressing some texts and allowing others, censors adjudicate which ones can legitimately take part in crucial societal endeavours, such as formulating law and religious doctrine. While censorship often manifests negatively by prohibiting works and by condemning their content, what censorship positively affirms through prohibition and condemnation merits consideration. Rather than effectively suppressing books, the purpose of public censorship was to establish, defend and promote a hierarchy of texts — a hierarchy that puts the enactments of kings and the rulings of magistrates above the encyclopaedias of *philosophes*.

1. Louis' authority and d'Alembert's foreword

Public censorship, while it did not silence the press, allowed the censors to remind readers of proper doctrines, respond to dissidents and subversive theses, and, most importantly, claim power over public discourse in the *Ancien régime*.[172] Books published under a privilege could still incur the wrath of the authorities. Though the exclusive competence of the Crown in matters of censorship ended after publication, once published, other authorities could condemn a book and blame anyone involved in its publication, including royal censors.[173] The more conservative institutions of the *Ancien régime*, such as the Church and the Sorbonne, regularly used public censorship to intervene in public discourse, and assert their authority and interests. Embroiled in disputes with the monarchy, the

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[171] Negroni, *supra* note 9 at 17-21, 92.
[172] See Benoît Garnot, *Justice et Société en France aux XVIe, XVIIe et XVIIIe siècles* (Gap: Ophrys, 2000) at 18; Negroni, *supra* note 9 at 26-27, 77-78, 258, 278-79.
[173] See Weil, *supra* note 129 at 2; Pellisson, *supra* note 12 at 16; Cerf, *supra* note 42 at 3.

parlements seized every opportunity to censor the press in order to maintain and extend their power, often over current affairs covered in print.[174]

The regulation of a work as notorious and economically significant as the *Encyclopédie* was necessarily intertwined with contemporary political struggles. Indeed, many if not most historians agree that Le Breton lost his privilege because of the political conflict between the Crown and the Parlement.[175] The Parlement's policy of aggressively censoring books after 1750 constituted a recurring challenge to the Crown.[176] The magistrates would have interfered with the publication of the *Encyclopédie* to bolster their public image as the guardian of French religion and traditions, and assert the authority of the Parlement's texts over philosophical ones. As for the Conseil, it would not have tolerated the intrusion of the magistrates into matters falling within the sole jurisdiction of the Crown, namely pre-publication censorship. The Conseil would have revoked Le Breton's privilege in order to remove the *Encyclopédie* from the Parlement's authority and promote its own brand of authoritative intolerance.

The 1752 ruling of the Conseil against the *Encyclopédie* begins with justifying the suppression of the work. The preamble portrays Louis XV receiving reports of the work, and recognizing the subversive and pervasive character of the text. The ruling addresses the 'evils' of the *Encyclopédie*, but also claims authority over public order and religion:

> *Le Roi s'étant fait rendre compte de ce qui s'est passé au sujet d'un ouvrage intitulé,* [Encyclopédie]*, dont il n'y a encore que deux volumes imprimés; Sa Majesté a reconnu, que dans ces deux volumes on affecté d'insérer plusieurs maximes tendantes*

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[174] See Harouel et al, *supra* note 11 at 447-49; Negroni, *supra* note 9 at 77-78; Pellisson, *supra* note 12 at 32-33.

[175] See for example Stenger, *supra* note 5 at 135-39; Negroni, *supra* note 9 at 171-79, 196; Chartier, *supra* note 11 at 65-71; Lough, *supra* note 9 at 25-26, 242-43; Proust, *supra* note 20 at 78-79; Wilson, *supra* note 23 at 334-35. But see Rogister, *supra* note 195 at 321-22.

[176] See Negroni, *supra* note 9 at 199, 218-19.

> *à détruire l'autorité royale, à établir l'esprit d'indépendance et de révolte, et, sous des termes obscurs et équivoques, à élever les fondements de l'erreur, de la corruption des mœurs, de l'irréligion et de l'incrédulité :* Sa Majesté, toujours attentive à ce qui touche l'ordre public et l'honneur de la religion, a jugé à propos d'interposer son autorité, pour arrêter les fuites que pourraient avoir des maximes si pernicieuses répandues dans cet ouvrage.[177]

First, while the authority of the Conseil and its members flowed from the King, and even though Louis XV participated in government affairs with regularity and assiduity, the monarch did not attend all sessions of the Conseil.[178] In his absence, appointed officials conducted governmental affairs in his name, often with their own interpretation of the Crown's best interest, sometimes against the King's express wishes.[179] Here, the phrase "*le Roi étant en son Conseil*" — as opposed to "*le Roi en son Conseil*" — signals that Louis physically attended the session that produced the ruling of 1752, endowing the Conseil's enactment with the highest authority.[180]

Second, while the ruling clearly if succinctly states the charges against the *Encyclopédie*, and while the Conseil knew the associated publishers expected to print further volumes of the dictionary, the ruling takes no measure against those future volumes. Moreover, the Conseil's decision had no effect beyond delaying the release of the *Encyclopédie*'s third volume. Ordinarily, police would seize the manuscripts and copies of a suppressed book and bring them at the Bastille to be destroyed.[181] However, when the Conseil suppressed the first two volumes, they had already been delivered to subscribers. Rather than effectively suppressing the work, the ruling primarily aimed to publicly position the Crown

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[177] *Arrest du Conseil d'État du Roy* (1752), *supra* note 135 at 54^{r}-54^{v} (emphasis added).
[178] See Antoine, *supra* note 35 at 614.
[179] See Olivier-Martin, *supra* note 35 at 590.
[180] See Negroni, *supra* note 9 at 94-95.
[181] See Pellisson, *supra* note 12 at 28.

against the condemned content of the *Encyclopédie*, and seize the opportunity to assert the position of the King in matters of state, morality and religion.[182]

The third volume of the *Encyclopédie* appeared in 1753. In d'Alembert's *Avertissement*, which introduced the new volume, the editor defended the encyclopaedists and answered their critics with aplomb. D'Alembert meant to restore the honour of the *Encyclopédie*, repel past accusations and lead the offensive against its enemies. He supported the work against reproaches of technical deficiencies, justified editorial choices and argued the project would enlighten the people.[183] He retold the events leading to the suppression of the *Encyclopédie*, warning that even the wisest and fairest authority could be misled. D'Alembert implied that the encyclopaedists had never truly lost royal support, being either complicit with the *philosophes* or had fallen victim to poor counsel. He also presented royal authority as a well-intended if unpredictable force:

> *L'Encyclopédie, … a été le sujet d'un grand scandale … mais ce n'était pas par nous. Aussi l'autorité, en prenant les mesures convenables pour le faire cesser, était trop éclairée et trop juste pour nous en croire coupable. En prévenant les conséquences que des esprits faibles ou inquiets pouvaient tirer de quelques termes obscurs ou peu exacts, elle a senti que nous ne pouvions, ni ne devions, ni ne voulions en répondre …*
>
> *Cependant, comme l'autorité la plus sage et la plus équitable peut enfin être trompée, la crainte d'être exposés de nouveau nous avait fait prendre le parti de renoncer pour jamais à la gloire pénible, légère, et dangereuse d'être les éditeurs de l'Encyclopédie.*[184]

D'Alembert's account of the events surrounding the 1752 ruling differs greatly from that set out in the ruling itself. The ruling portrays the suppression the *Encyclopédie* as a

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[182] See Barbier, *supra* note 133 at 346. See also Lough, *supra* note 9 at 21; Grosclaude, *supra* note 132 at 103-05 (Grosclaude suspected Malesherbes convinced his father not to cancel the *Encyclopédie*'s privilege); Paulmy, *supra* note 134 at 102-03; 122-23.
[183] See Jean le Rond d'Alembert, "Avertissement" in Jean le Rond d'Alembert & Denis Diderot (eds), *Encyclopédie ou Dictionnaire raisonné des sciences, des arts et des métiers, par une Société de gens de lettres*, vol 3 (Paris: chez Brisasson, David, Le Breton & Durand, 1753) i at xiii.
[184] *Ibid* at ii.

decision grounded in counsel and consistent with royal station. In d'Alembert's version, the authority represented by the Conseil is either a shrewd political operator or a brute, mistaken force. The editor appeals to public opinion by ambiguously opening the Conseil's ruling to both praise and criticism.

The last volume of the *Encyclopédie* published under Le Breton's privilege appeared in November 1757. It contained a handful of articles that strongly advocated in favour of the liberalization of trade, political liberty and religious tolerance. The controversy surrounding the volume infuriated Malesherbes as it signalled the failure of his administration: how could these articles have evaded the attention of the censors? Had he not specifically assigned theologians to approve every single article? Le Breton assured Malesherbes that the three theologians had censored most articles, but he could not guarantee they had inspected them all.[185] The Director's own investigation revealed that while the encyclopædists had followed his instructions for the third volume and for most of the fourth, they had not done so for the subsequent ones. Malesherbes realized the extent of which Diderot and his colleagues had dissimulated their most provoking ideas in seemingly innocuous articles reviewed by censors who lacked the experience or knowledge to grasp their true meaning.[186]

The stratagem had cleverly turned the Librairie's practices against itself. Diderot and his colleagues distributed manuscripts to royal censors on the basis of their expertise, knowing they would hesitate to police passages within individual articles that fell outside their

[185] See *Correspondance de Malesherbes concernant les ouvrages parus durant son administration*, BNF Ms Fr 22.192 at 25^{v} [*Correspondance de Malesherbes*].
[186] *Ibid* at 23^{r}. See also Wilson, *supra* note 23 at 284; Grosclaude, *supra* note 132 at 106-07.

competence, if they even noticed them.[187] For example, because a theologian would have likely condemned passages in which Diderot taught readers how to confront religious beliefs, he hid them in an article on an ordinary species of plant.[188] The same may be said of the article 'Cerf', in which the *philosophe* wrote of deers growing up to the "age of reason,"[189] a barely dissimulated assertion of a materialist similarity between man and beast. Under 'Aigle', Diderot went as far as equating philosophy with religion:

> [*L*]*a superstition imagine plutôt les visions les plus extravagantes et les plus grossières que de rester en repos. Ces visions sont ensuite consacrées par le temps et la crédulité des peuples; et malheur à celui qui, sans être appelé par Dieu au repos et connaîtra assez peu les hommes pour se charger de les instruire. Si vous introduisez un rayon de lumière dans un nid de hiboux, vous ne ferez que blesser leurs yeux et exciter leurs cris. Heureux cent fois le peuple à qui la religion ne propose à croire que des choses vraies, sublimes et saintes, et à imiter que des actions vertueuses; telle est la nôtre, où le philosophe n'a qu'à suivre sa raison pour arriver aux pieds de nos autels.*[190]

Many collaborators followed Diderot's lead and inserted unorthodox passages in seemingly innocuous articles.[191] In 'Genève', certainly the seventh volume's most scandalous article,[192] d'Alembert criticized French institutions and policies in support of Voltaire's politics, whereas the dictionary had usually covered geographic matters in short and unobjectionable terms.[193] Malesherbes severely admonished the three theologians, considering them equally responsible for the blunder along with the encyclopaedists,

[187] See Stenger, *supra* note 5 at 135; Negroni, *supra* note 9 at 42-45.
[188] See Denis Diderot, "Agnus scythicus" in Jean le Rond d'Alembert & Denis Diderot (eds), *Encyclopédie ou Dictionnaire raisonné des sciences, des arts et des métiers, par une Société de gens de lettres*, vol. 1 (Paris: chez Brisasson, David, Le Breton & Durand, 1751) 179 at 180.
[189] Denis Diderot, "Cerf" in Jean le Rond d'Alembert & Denis Diderot (eds), *Encyclopédie ou Dictionnaire raisonné des sciences, des arts et des métiers, par une Société de gens de lettres*, vol. 2 (Paris: chez Brisasson, David, Le Breton & Durand, 1752) 840 at 840.
[190] [Denis Diderot] "Aigle" in d'Alembert & Diderot (eds), *supra* note 188, 194 at 196. See also Stenger, *supra* note 5 at 135; Lough, *supra* note 9 at 116-17, 167-68, 229.
[191] *Ibid* at 94.
[192] See Blom, *supra* note 136 at 213; *ibid* at 23, 76-77; Wilson, *supra* note 23 at 277-83.
[193] *Ibid* at 280-83.

warning them all against future negligence.[194] But as the Parlement's involvement would show, the damage was already done.

2. De Fleury's indictment and Diderot's admission

Joseph Omer Joly de Fleury (1715-1810), the attorney general who initiated and led the procedures against the *Encyclopédie*, was a member of the Parlement's 'parquet'.[195] Formed in the fifteenth century, the parquet gathered a number of jurists under the leadership of the King's attorney general. Together, the '*gens du Roi*' intervened in parlements on behalf of the Crown in all matters implicating the King and the public order, and more generally monitored the administration of justice.[196] De Fleury, therefore, prosecuted the *Encyclopédie* in his capacity of representative of the Crown. He did so out of a genuine belief that the *philosophes* threatened the social fabric of France. Since anyone, even anonymous denunciators, could petition the *parlements* to condemn seditious and blasphemous writings, and punish the offenders, the attorney general thought it imperative that the Parlement condemn the *Encyclopédie* on the parquet's initiative for the King to remain the primary defender of France's traditions.[197]

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[194] See *Correspondance de Malesherbes*, *supra* note 185 at 20^{r}-20^{v}. See also *ibid* at 284; Grosclaude, *supra* note 132 at 108-09.

[195] See John Rogister, "Le gouvernement, le Parlement de Paris et l'attaque contre *De l'esprit* et l'*Encyclopédie* en 1759" (1979) 11 *Dix-huitième Siècle* 321 at 323. See also *Dictionnaire historique, critique et bibliographique, contenant les vies des hommes illustres, célèbres ou fameux de tous les pays et de tous les siècles*, vol. 10 (Paris: Ménard & Desenne, 1822) ("*Joly de Fleury joignait à un sens droit une érudition profonde en plus d'un genre. Aussi instruit dans l'histoire et la politique que dans la jurisprudence, il avait pressenti en homme d'état les effets des opinions dangereuses qu'il combattit avec courage. ... On ne sait par quel miracle il a su échapper à la hache révolutionnaire, qui fit tomber presque toutes les têtes du parlement de Paris*," at 491).

[196] See Harouel et al, *supra* note 11 at 371.

[197] See Rogister, *supra* note 195 at 324-34 (and yet he overreached by blaming individual royal censors for the publication of reproachable books, and risked portraying the Crown as inept at best, or complicit at worst. Members of the government did see eye-to-eye with the parquet on the matter of Helvétius' *de l'Esprit*, but they attempted to prevent de Fleury from prosecuting Tercier, the censor who had recommended that the

The ruling of the Parlement thus opens with de Fleury's indictment, a lengthy declaration exposing the substance of the charges brought against the accused:[198] in the present case, *De l'esprit* and the *Encyclopédie*. While devoid of formal legal value, the indictment gives important insight into the rationale of the decision pronounced by the Parlement. The indictment sought to expose the 'true' meaning of the text on trial, to expose the dangers that lie within and to oppose its subversive content. More importantly, the procedure of indictment admits no plurality of meaning and attributes a monopoly of interpretation to the magistrates of the Parlement. Indeed, the authors or publishers of the indicted texts were not allowed to respond to the accusations of the attorney general.[199]

De Fleury's indictment did not simply denounce blasphemous and seditious books, but also attacked the French Enlightenment as a whole.[200] He distinguished 'true' from 'false' philosophy to incite Parlement to act against the latter in order to preserve the former, and celebrated the virtues of the Christian revelation over those of the Enlightenment:

> *Le caractère de la* vraie philosophie *est de terminer les spéculations par des accroissements de sainteté et d'amour envers l'Être suprême ; celui de la* fausse philosophie *est de terminer les siennes par des systèmes impies, par un accroissement de présomption et d'ignorance, et de rendre le philosophe vain, plus superbe et plus aveugle qu'il n'était avant ses recherches.*
>
> Des hommes qui abusent du nom de philosophe *pour se déclarer par leurs systèmes les ennemis de la société, de l'État et de la religion,* sont sans doute des écrivains qui mériteraient que la Cour exerçât contre eux toute la sévérité de la puissance que le prince lui confie*, et le bien de la religion pourrait quelquefois l'exiger de l'attachement de tous les magistrats à ses dogmes et à sa morale.*[201]

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work received a privilege. The Chancellor also resented not being consulted before the prosecution of the *Encyclopédie*).

[198] See Negroni, *supra* note 9 at 87-89.

[199] *Ibid* at 88-89.

[200] *See Arrêts du Parlement de Paris* (1759), *supra* note 153 at 257^{v}-259^{r} (the attorney-general de Fleury had prosecuted the *Encyclopédie* along with seven other philosophical books in the Parlement de Paris, including *de l'Esprit* and *Étrennes aux esprits forts*, a revised edition of Diderot's *Pensées philosophiques*).

[201] *Ibid* at 267^{v}-68^{r}.

De Fleury produced a scathing review of *De l'esprit* in which he reconstructed Helvétius' work into a prototypical text of irreligious propaganda.[202] Even so, the attorney general believed Helvetius' book paled in comparison with the *Encyclopédie*. Echoing the crisis of 1752, de Fleury presented the work as evidence of a plot meant to "support materialism, destroy religion, inspire independence and sustain the corruption of public morals."[203] Effectively opposing this conspiracy required the condemnation of its publications. De Fleury focused much of his efforts on Diderot's article 'Encyclopédie'. Therein the editor explained the work's use of cross-references for critical purposes:

> *Toutes les fois, par exemple, qu'un préjugé national mériterait du respect, il faudrait à son article particulier l'exposer respectueusement et avec tout son cortège de vraisemblance et de séduction ; mais renverser l'édifice de fange, dissiper un vain amas de poussière, en renvoyant aux articles où (ce qu'ils appellent) des principes solides, servent de base aux vérités opposées. Cette manière de détromper les hommes opère très-promptement sur les bons esprits ... et elle opère infailliblement et sans aucune fâcheuse conséquence secrètement et sans éclat sur tous les esprits. C'est l'art de déduire tacitement les conséquences les plus fortes.* Si ces renvois de confirmation et de réfutation sont prévus de loin et préparés avec adresse, ils donneront à une encyclopédie le caractère que doit avoir un bon dictionnaire. Ce caractère ... est de changer la façon commune de penser.[204]

For de Fleury, the article 'Encyclopédie' was a plain admission of guilt. The attorney general used Diderot's words as evidence of the *philosophes*' intent to undermine France's most cherished beliefs. To be fair, Diderot himself had hoped the *Encyclopédie* would transform his countrymen,[205] but historians argue that the *Encyclopédie*'s cross-reference

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[202] *Ibid* at 259^r-63^r.
[203] *Ibid* at 257^v (translation mine). See also Israel, *supra* note 28 at 72-74 (there was never as little unity among the *philosophes* than during the 1759 crisis, when d'Alembert and Voltaire deserted Diderot); McMahon, *supra* note 97 at 33; Wilson, *supra* note 23 at 312-13 ("[t]his allegation of conspiracy became one of the standard myths of the party opposed to the *philosophes*," at 312)
[204] Diderot, *supra* note 7 at 642 (emphasis added). See also Duflo, *supra* note 9 at 128.
[205] See Denis Diderot, *Correspondance*, ed by Georges Roth, vol 4 (Paris: Les Éditions de Minuit, 1958) (Diderot wrote to his muse and mistress Sophie Volland that the *Encyclopédie* "*produira sûrement avec le temps une révolution dans les esprits, et j'espère que les tyrans, les oppresseurs, les fanatiques et les intolérants n'y gagneront pas*," at 172).

system was nowhere as subversive and effective as he claimed.[206] De Fleury trusted Diderot's words simply because they confirmed what he already thought.[207]

De Fleury's indictment brought "together under a single viewpoint the maxims"[208] of the *Encyclopédie*.[209] Drawing elements from Chaumeix's *Préjugés légitimes*,[210] he emphasized a handful of articles to stress the deviancy of the dictionary: 'Adorer' and 'Âme' promoted deism and materialism, 'Dimanche' encouraged working on Sundays, 'Christianisme' questioned the morality of the Christ and compared him to a mere legislator, 'Conscience (Liberté de)' and 'Aius Locutius' defended religious tolerance, and 'Athées' argued that even atheists could achieve happiness.[211] Whichever passage concurred with conventional beliefs was mere subterfuge: disguised as a work of reference, the *Encyclopédie* was a biased collection of absurdities and impieties.[212] De Fleury claimed that justice demanded the magistrates agree with such interpretation.[213]

While de Fleury pushed for a swift condemnation of the other prosecuted books, he did not believe it appropriate in the case of the *Encyclopédie*. The size and complexity of the work called for a more thorough examination in order to mount a solid case against the

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[206] See Lough, *supra* note 9 at 94; Wilson, *supra* note 23 at 238-46, 333-34.
[207] See *Arrêts du Parlement de Paris* (1759), *supra* note 153 at 266^{r}-66^{v}. See also Israel, *supra* note 28 ("Diderot's and d'Alembert's editorship of the Encyclopédie did frequently resort to underhand tactics and devious cross-referencing; to a considerable extent the Encyclopédie did amount to precisely what its foes claimed it was — namely, from the viewpoint of the existing order, a cleverly masked and deeply subversive *matérialiste* conspiracy," at 70); Grosclaude, *supra* note 132 at 108-09 (Malesherbes himself had trouble preventing the editors from evading censorship).
[208] See *Arrêts du Parlement de Paris* (1759), *supra* note 153 at 266^{r}.
[209] See Negroni, *supra* note 9 at 88.
[210] See Israel, *supra* note 28 at 67; Lough, *supra* note 9 at 123-24; Wilson, *supra* note 23 at 334.
[211] See *Arrêts du Parlement de Paris* (1759), *supra* note 153 at 263^{r}-264^{v}. See also Proust, *supra* note 20 at 290-91, 304-17, 350-51.
[212] See *Arrêts du Parlement de Paris* (1759), *supra* note 153 at 263^{r}.
[213] *Ibid* at 266^{v}.

dictionary, its editors and its publishers. He suggested that Parlement appoint scholars to investigate the content of the work and advise the court on further proceedings.[214]

The Parlement's *Chambre des enquêtes* assigned three of its members to inspect the condemned publications. Reporting to their peers eleven days later, the three magistrates joined de Fleury in condemning *De l'esprit*, but advised Parlement to spare its author and censor from punishment, believing their retractions and apologies sufficiently sincere. The *Chambre des enquêtes* reported on the *Encyclopédie* three days later. The magistrates conceded that the dictionary could serve the interests of the nation as a reference work, but only if its 'good' content was distinguished from 'evil' content.[215] The court could have condemned the *Encyclopédie* and its authors, and ordered the associate publishers to print and distribute an official parliamentary retort to heal those readers harmed by the dictionary's content.[216] Such measures, of course, never came to be.

While Malesherbes conceded the Parlement had jurisdiction in the matter,[217] the involvement of the magistrates in the censorship of the *Encyclopédie* exacerbated his problems. The examiners appointed by the Parlement risked revealing the failings of his administration. The scandal would have undermined the Crown's position as supreme guardian of religion and order, and caused great embarrassment to Malesherbes and his father the Chancellor.[218] And so, when members of the King's court called for further condemnation of the *Encyclopédie*, Malesherbes elected to revoke its privilege.[219]

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214 *Ibid* at 268^{v}-69^{r}.
215 *Ibid* at 271^{r}-72^{v}.
216 Cited in Rogister, *supra* note 195 at 345.
217 See Malesherbes, *supra* note 60 at 351 n 1.
218 See Wilson, *supra* note 23 at 283-84.
219 See Grosclaude, *supra* note 132 at 130-33, 137. See also Barbier, *supra* note 150 at 141-42.

3. Malesherbes' ruling and Le Breton's betrayal

Malesherbes himself drafted the Conseil's ruling on behalf of his father. In comparison with de Fleury's indictment and the Parlement's pronouncement, the Conseil's 1759 ruling is remarkably short. When censoring, the *parlements*' rulings generally discussed at length the wickedness of the condemned book, along with the denunciator's and the magistrates' responses to its content. These rulings allowed the magistrates to assert their importance as political actors and to directly oppose the censored doctrines in order to restore the moral health of corrupted readers. But the King, consistent with the tenets of absolute monarchy, had no need to seek such power: in themselves and at least in principled, the rulings of the Conseil sufficiently expressed the inherent power of the Crown. Therefore, the more a Conseil's ruling explained the reasons behind its issuance, and the more complex and nuanced its pronouncement, the weaker the King appeared.[220]

Public censorship already put the Crown in a difficult position. For the royal administration, publicly denouncing a book necessarily meant admitting the failures of the Librairie. The censorship of a book published under a royal privilege, with the positive, explicit and advertised assent of the King, was especially problematic.[221] The Conseil had to strike a balance between establishing the Crown's power over parliamentary and philosophical texts, on the one hand, and saving face on the other.

Malesherbes achieved some of that balance in the wording of the ruling. He depicted the King as a magnanimous and dutiful sovereign, and blamed the encyclopaedists for deceiving royal officials, which prompted Louis XV's intervention:

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[220] See Negroni, *supra* note 9 at 95-96.
[221] *Ibid*.

> *Le Roi ayant accordé ... des lettres de privilège pour un ouvrage qui devait être imprimé sous le titre, d'*Encyclopédie *... les auteurs dudit dictionnaire en auraient fait paraître les deux premiers volumes, dont Sa Majesté aurait ordonné la suppression ... mais en considération de l'utilité dont l'ouvrage pouvait être à quelques égards, Sa Majesté n'aurait pas jugé à propos de révoquer pour lors le privilège, et se serait contentée de donner des ordres plus sévères pour l'examen des volumes suivants. Nonobstant ces précautions,* Sa Majesté aurait été informée que les auteurs dudit ouvrage, abusant de l'indulgence qu'on avait eue pour eux, ont donné cinq nouveaux volumes qui n'ont pas moins causé de scandale que les premiers, et qui ont même déjà excité le zèle du ministère public de son Parlement.[222]

Malesherbes reaffirmed the superiority of the King's legislation over the *Encyclopédie* and other texts. The Conseil's ruling places sciences and arts firmly under the auspices of public morals and religion, thus subjugating both fields to the King's law. It recalls how Louis administered justice in matters of the press through the administration of royal privileges as the source of all justice and the ultimate arbiter of his kingdom:

> Sa Majesté aurait jugé qu'après ces abus réitérés, il n'était pas possible de laisser subsister ledit privilège ; *que l'avantage qu'on peut retirer d'un ouvrage de ce genre, pour le progrès des sciences et des arts, ne peut jamais balancer le tort irréparable qui en résulte pour les mœurs et la religion.*[223]

The ruling exposed the merits of the King's policy, arguing that even if royal authorities could prevent dangerous maxims from finding their way into future volumes, the inevitable success of the *Encyclopédie* would increase circulation of the previous volumes and thus perpetuate their evil. The ruling asserts revoking the privilege not only as the sole prerogative of the Crown, but also as the most effective course of action. Whether or not Malesherbes was right, this assertion seems unnecessary if not hazardous, considering that kings who had to explain their decisions betrayed weakness.

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[222] *Arrêt du Conseil d'État (1759)*, *supra* note 155 at 129^{r}-29^{v} (emphasis added). See also Grosclaude, *supra* note 132 at 130-32 (the Chancellor and the Director sought to dissociate the King's intervention from that of his attorney general and depicted the Conseil's ruling as the more measured and opportune intervention).
[223] *Arrêt du Conseil d'État (1759)*, *supra* note 155 at 129^{v} (emphasis added). See also Martin, *supra* note 97 at 121, 231-39; Negroni, *supra* note 9 at 224-25.

Malesherbes limited the publication of the Conseil's ruling to quietly end the controversy. He instructed the royal printer to print only twenty-four copies of it, and have it "distributed without being shouted."[224] Restricting the dissemination of the ruling only to the Parlement, members of the book trade and a handful of officials mitigated the risk that it might compromise the authority of the King and keep the *Encyclopédie* in the public's eye.[225] Malesherbes was well aware of the measures the magistrates of Parlement had taken just a few weeks earlier and knew that they might plan to involve themselves in the censorship of future volumes of the *Encyclopédie*.

The Director might have intended to make peace with the magistrates and considered silencing the matter as worth the risk inherent to a reasoned argument:

> [*Q*]*uelques nouvelles mesures qu'on prît pour empêcher qu'il ne se glissât dans les derniers volumes des traits aussi répréhensibles que dans les premiers, il y aurait toujours un inconvénient inévitable à permettre de continuer l'ouvrage, puisque ce serait assurer le débit non seulement des nouveaux volumes, mais aussi de ceux qui ont déjà paru.* Que ladite Encyclopédie étant devenue un dictionnaire complet et un traité général de toutes les sciences, serait bien plus recherché du public et bien plus souvent consultée, et que par-là on répandrait encore davantage et on accréditerait en quelque sorte les pernicieuses maximes dont les volumes déjà distribués sont remplis.[226]

Malesherbes protected the *Encyclopédie* until the end of his administration, suppressing it with one hand as he guarded it with the other. A note from Malesherbes suggests that he approved of the associated publishers' plan of finishing the *Encyclopédie* in secret under a tacit permission.[227] When the Conseil enacted another ruling ordering the publishers of the *Encyclopédie* to reimburse each subscriber the sum of seventy-two livres to compensate

[224] *Correspondance de Malesherbes*, *supra* note 160 at 147^{r}-47^{v} (translation mine).
[225] See Grosclaude, *supra* note 132 at 133-34.
[226] *Arrêt du Conseil d'État (1759)*, *supra* note 155 at 129^{v}.
[227] See *Correspondance de Malesherbes*, *supra* note 160 at 171^{v}. See also Grosclaude, *supra* note 132 at 130.

for the loss of the promised work,[228] he delayed the publication of the ruling to give the associated publishers enough time to formulate a counter-proposition.[229] One evening, Malesherbes warned Diderot he would search his home the following day to seize the manuscripts of the *Encyclopédie.* To save them, the Director told the editor to send the manuscripts to his own house for safekeeping.[230] A grateful Diderot would not miss the opportunity to honour Malesherbes in the article "Librairie:"

> *Sous les nouveaux auspices de M. de Malesherbes, la* Librairie *changea de face, prit une nouvelle forme et une nouvelle vigueur ; son commerce s'agrandit, se multiplia; de sorte que depuis peu d'années, et presque à la fois, … l'on vit éclore et se consommer les entreprises les plus considérables. … Nous avouerons ici avec reconnaissance ce que nous devons à sa bienveillance. C'est à ce magistrat, qui aime les sciences, et qui se récrée par l'étude de ses pénibles fonctions, que la France doit cette émulation qu'il a allumée, et qu'il entretient tous les jours parmi les savants ; émulation qui a enfanté tant de livres excellents et profonds.* [231]

In the end, revoking Le Breton's privilege proved crucial to the survival of the *Encyclopédie*. It placated elements from the royal court demanding its suppression and overrode any measure the Parlement might adopt to interfere with the enterprise. Indeed, nothing came of its inspection of the first seven volumes.[232] The Conseil had re-affirmed

[228] See *Arrest du Conseil d'État du Roi, Qui ordonne aux Libraires y dénommés, de rendre la somme de soixante-douze livres à ceux qui ont foufcrit pour le Dictionnaire des Sciences* (21 July 1759), BNF Ms Fr 22.177 at 155^{r}-55^{v}. See also Proust, *supra* note 20 at 53-56.

[229] See Grosclaude, *supra* note 132 at 134-36 (instead of handing over the seventy-two livres, subscribers obtained an equivalent discount on the first engraving volume).

[230] See Diderot, *supra* note 156 ("[*i*]*l a fallut tout à coup enlever pendant la nuit les manuscrits, se sauver de chez soit, découcher, chercher un asile, et songer à se pourvoir d'une chaise de poste et à marcher tant que la terre me porterait*," at 122); Marie-Angélique Caroillon de Vandeul, "Mémoires pour server à l'histoire de la vie et des ouvrages de Diderot" in J Assézat (ed), *Oeuvres complètes de Diderot*, vol 1 (Paris: Garnier Frères, 1875) at xlv. Marie-Angélique Caroillon de Vandeul, born Diderot, situates this event during the 1752 suppression crisis, which matches Barbier's own recollection (see Barbier, *supra* note 133 at 355). However, Diderot's letter to Grimm situates it in 1759 (see Blom, *supra* note 136 at 230-31, 352; Wilson, *supra* note 23 at 339).

[231] See Denis Diderot, "Librairie, *(Comm.)*" in Jean le Rond d'Alembert & Denis Diderot (eds), *Encyclopédie ou Dictionnaire raisonné des sciences, des arts et des métiers, par une Société de gens de lettres*, vol. 9 (Paris: chez Brisasson, David, Le Breton & Durand, 1766) 478, at 479.

[232] See Proust, *supra* note 20 at 78-79.

the King's authority over matters of censorship and painted him as the supreme guardian of order and morality without directly confronting the Parlement.[233]

While cancelling the Parlement's ruling ordering the inspection of the *Encyclopédie* would have been well within the Crown's authority, doing so would have required a steep political price, notably because it would also have required cancelling the condemnation of the universally reviled *De l'esprit.* By revoking the privilege of the *Encyclopédie*, Malesherbes made the encyclopædists autonomous and accountable, but also increased his power over them under the tacit permission and administrative supervision. He had contemplated the new arrangement ever since the publication of d'Alembert's 'Genève': censoring the *Encyclopédie* had caused the Librairie too much trouble.[234]

Having now revoked Le Breton's privilege, the Conseil firmly prohibited "all booksellers and others, to sell, retail, and otherwise distribute volumes that have already been published, and to print new volumes."[235] As no one could, on principle, print anything without a royal privilege, the general prohibition to publish the *Encyclopédie* may seem redundant in light of the revocation of its privilege. Yet, by then, Malesherbes had already allowed the associated publishers to print the dictionary under a tacit permission. Tacit permissions, however, offered no protection against piracy; only royal privileges granted publishers protection against non-authorized reprints of their work. In conjunction with the tacit permission, a general prohibition to print and publish the *Encyclopédie* provided the associated publishers all the economic benefits of a privilege without the restrictions of the

[233] See Lough, *supra* note 9 25-26.
[234] See Wilson, *supra* note 23 at 308.
[235] *Arrêt du Conseil d'État (1759)*, *supra* note 155 at 129^{v} (translation mine).

Code. In practice, only the associate publishers could publish the dictionary in France, making the Conseil's ruling a blessing in disguise.

Diderot would have been free of censors if it were not for his publisher. In November 1764, when Diderot consulted one of the printed volumes of the *Encyclopédie* that had yet to appear, the editor realized that parts of its text had been cut. Le Breton admitted that, fearing further controversy and commercial losses, he had some of the editorial passages of the original text removed or re-written before printing.[236] Diderot bitterly accepted to finish a work he now considered unfaithful to its original intent, but not before expressing his scorn to a man he had once called friend:

> *Vous m'avez lâchement trompé deux ans de suite ; vous avez massacré … le travail de vingt honnêtes gens qui vous ont consacré leur temps, leur talent et leurs veilles gratuitement, par amour du bien et de la vérité, et sur le seul espoir de voir paraître leurs idées et d'en recueillir quelque considération qu'ils ont bien méritée et dont votre injustice et votre ingratitude les aura privés … On fera passer votre livre pour une plate et misérable rapsodie. On apprendra une atrocité dont il n'y a pas d'exemple depuis l'origine de la librairie. En effet, a-t-on jamais ouï parler de dix volumes in-folio clandestinement mutilés, tronqués, hachés, déshonorés par un imprimeur ?*[237]

While Diderot may have, in his anger, overestimated the extent of Le Breton's betrayal, his reaction highlights the views he held on censorship. In his *Lettre sur le commerce de la Librairie*, a text written in 1767 to defend the publishers' interests against piracy to Malesherbes' successor as Director of the Librairie, Diderot dissimulated an argument promoting the liberty of the press and authors' rights over their literary works. I have cited above Diderot's views on the general ineffectiveness of state censorship, which resulted more often than not in increasing the demand for the condemned work. In the same work,

[236] See generally Douglas H Gordon & Norman L Torrey, *The Censoring of Diderot's "Encyclopédie" and the re-established text* (New York: Columbia University Press, 1947).
[237] Denis Diderot, "Letter from Diderot to Le Breton" (1764) cited in Pierre Grosclaude, *Un audacieux message :* l'Encyclopédie (Paris: Nouvelles éditions latines, 1951) at 101-02.

the *philosophe* recommended following the example of England, where authors, printers and booksellers can publish whatever they may like, only to face public criticism and satire should the published text threaten public sensibilities.[238]

Diderot did not advocate against all forms of censorship, but rather for the abolition of pre-publication censorship and for the democratization of public censorship. Contrary to the sort of censorship practiced by the Librairie, he argued that public censorship does not dissimulate, but rather educates by "[exhibiting] the arguments and the ideas that it condemns and which explains … the reasons for condemning them."[239] Diderot's conception of censorship would not leave it in the sole hands of public authorities, but also in the authority of the public. He foresaw the democratization — and rationalization — of censorship through its decentralization. Censorship would not disappear, only the centralized, arational censoring authority would.

Save for a handful of incidents, the encyclopaedists completed the *Encyclopédie* in relative peace on rue de la Harpe in Paris.[240] The associated publishers discreetly released the remaining volumes of text in 1766 under the pseudonym of 'Samuel Fauche'. They invited subscribers to order their volumes from designated printers in exchange of the sum of two hundred livres, along with the address to which they should be delivered. The final release

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[238] Diderot, *supra* note 168 at 73-74. But see See John Feather, "The English Book Trade and the Law, 1695-1799" (1982) 12 *Publishing History* 51 at 56-57, 58, 60-63; John Feather, "The Book Trade in Politics: The Making of the Copyright Act of 1710" (1980) 8 *Publishing History* 19 at 21, 25-28; Fredrick S Siebert, *Freedom of the Press in England, 1476-1776: The Rise and Decline of Government Control* (Urbana: University of Illinois Press, 1965) at 260-63, 269-75 (Diderot failed to emphasize how contemporary English authors could still face criminal prosecution for libel or treason).

[239] Duflo, *supra* note 9 45at 132.

[240] See generally Stenger, *supra* note 5 at 299-324; Lough, *supra* note 9 at 27-29; Proust, *supra* note 20 at 68-70; Wilson, *supra* note 23 at 323-42; Georges Huard, "Les planches de l'Encyclopédie et celles de la Description des Arts et Métiers de l'Académie des Sciences" (1951) 3-4 *Revue d'histoire des sciences et de leurs applications* 238.

of the *Encyclopédie* attracted little attention.[241] Time had silenced the controversy. Except for Parisians, who had to wait two or three years for authorities to allow distribution of the volumes in the capital, most subscribers had no difficulty in obtaining their copies in France or Europe.[242] On the title page of the long-awaited eighth volume, one could read that it had been printed in "Neuchâtel."

The story of the *Encyclopédie* teaches us that the main purpose of censorship is to assert the authority of the censor over the censored by establishing and maintaining a hierarchy of texts. The effective suppression of a text is ancillary to censorship, but not essential to it. Treating technology as text naturally extends this reflection to technology regulation. Again, the primary purpose of technology regulation is not to shape or limit technologies, but to assert the authority of Louis XV over Pierre Le Roy. This is why criticizing lawmakers for failing to properly understand technology betrays a limited understanding of lawmaking. Understanding technology is neither the point nor a requirement of regulating technology. Rather, the crux of the matter is the authority under which and the purpose for which the one can and should censor technology, and the strategies used to resist, deflect and evade that censorship.

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[241] See Frank A Kafker, "The Risks of Contributing to Diderot's Encyclopedia" (1973) 16 *Diderot Studies* 119 (even though "the Crown, the law courts, and the Church continued to restrict freedom of the press up to the French Revolution," at 140-41); Lough, *supra* note 9 at 103, 111, 130-36.
[242] *Ibid* at 28-29.

VI. THE PLURALITY OF WORK

With this final Chapter, I find myself revisiting the very beginning of my doctoral journey. I wrote most of these pages in 2012, before any of the preceding chapters came to be. Evidently, the final product of doctoral studies can bear little resemblance to the student's initial plans: a topic mutates with evolving interests, opportunities, failures and insecurities. I realized as much when I compared the second-to-last version of the following pages to their earlier versions. As I approach the end, these drafts compel me to contemplate where I started, where I am now and the lessons I learned along the way.

This Chapter examines the inception of the fair abridgment doctrine and its evolution within English copyright law. The fair abridgment doctrine arose in the first half of the eighteenth century in the English Court of Chancery. The doctrine shielded defendants to copyright infringement suits from liability for producing and distributing the abridgment of a copyrighted work without the authorization of its owner. Over the next hundred years, unauthorized abridgments grew in popularity alongside growing literacy rates, a nascent magazine publishing trade, and a broader political movement in favour of public education and the wide diffusion of knowledge. Once a valued feature of English copyright law, the doctrine continued to respond to demands for cheap publications until it disappeared with the adoption of the *Copyright Act* of 1911.[1]

My interest in the fair abridgment doctrine stems from my initial approach to law and technology. At the time, I objected to the field's overwhelming focus on new technologies,

[1] 1911 (UK), 1 & 2 Geo V, c 46.

which narrowed the contribution of legal scholarship to overcoming law lag problems. I believed examining old technologies would sustain a different kind of intellectual project, namely the legal shaping of technology — what I would have then described as a subset of the social shaping of technology model. Rather than examining the ways in which legal rules, institutions and practices fell behind technological change, the legal shaping of technology would look at law as a potential cause for such change.

In focusing on copyright law and books, I hoped to reverse some of the tropes of law and technology literature. The book was a familiar technology, contrary to the new and complex ones that usually attract the attention of legal scholars. Back in the eighteenth century, statutory copyright was the novelty behind which the printing press and the book might have 'lagged'. The fair abridgment doctrine, having lived and died in the span of two centuries, suggested a good case study: a specific period within which a technology, the book, evolved in response to legal change.

I had hoped to link the fair abridgment doctrine to the competitive interpretation of written works. By retrenching, extracting and summarizing passages of an original work, the abridger effectively re-composed it. The re-composition provided a different readership access to, and often ascribed a different meaning to, the original work.[2] Beyond its use in the Court of Chancery, the doctrine of fair abridgment could support the use of unauthorized abridgments to formulate and diffuse competing interpretations of popular titles concurrent to their first publication. In researching the birth and demise of the

[2] See for example Martin Woodside, "The Politics and Process of Abridgment" (2011) 6 *Revista Electronica de Literatura Comparada* 9; Marietta Horster & Christiane Reitz, "'Condensation' of Literature and the Pragmatics of Literary Production" in Marietta Horster & Christiane Reitz (ed), *Condensing Texts — Condensed Texts* (Bad Tölz: Franz, Steiner, Verlag, Stuttgart, 2010) 3.

doctrine, I sought to examine whether it had altered the material reality of the book. Law would have shaped this technology over time, which would in turn question the focus on law lag within law and technology scholarship.

The history of the fair abridgment doctrine provided its share of opportunities and challenges. It nurtured my interest in history as a critical perspective and deepened my understanding of copyright law. However, recent contributions from Isabella Alexander, Ronan Deazley and other legal historians made me doubt whether there was anything left to say about the fair abridgment doctrine.[3] Conversely, the challenge also became one of containment. The doctrine did not limit itself to a handful of cases tied to the circumstances of the publishing trade. Half a century after its inception in the Court of Chancery, the doctrine found itself at the center of overlapping legal controversies: defendants attempted to invoke the exception in relation to non-literary works; legislators and stakeholders debated its merit in Parliament; treatise writers discussed its standing in relation to emerging principles of copyright law; and courts touched on it in cases of non-literal infringement, notably by taking inspiration from patent law. A hundred pages in, my analysis already felt superficial, and I had yet to examine how the doctrine connected to publishing and reading practices.

Testing my hypothesis with rigour would have required substantial bibliographical evidence to track the amount of unauthorized abridgments published over a relevant period,

[3] See for example Matthew Sag, "The Prehistory of Fair Use" (2011) 76 Brook L Rev 1371; Isabella Alexander, "All Change for the Digital economy: Copyright and Business Models in the Early Eighteenth Century" (2010) 25 Berkeley Tech LJ 1351 at 1363-77 [Alexander, "All Change"]; Isabella Alexander, *Copyright Law and the Public Interest in the Nineteenth Century* (Oxford: Hart Publishing, 2010) at 159-61, 167-76, 184-86, 191-99, 216-20, 241-42 [Alexander, *Copyright Law*]; Ronan Deazley, "The Statute of Anne and the Great Abridgment Swindle" (2010) 47 Houston L Rev 793.

in addition to qualitative evidence regarding the production and use of such abridgments. I lacked the training to gather and make sense of such evidence, not to mention the difficulty of accessing relevant sources from this side of the Atlantic Ocean. Until I formulated more realistic ambitions, I chose to shift my attention elsewhere. I ended up expanding upon on my notes on the 'obsolescence' of law and technology literature. Most of the preceding chapters result from strategic procrastination.

As I approach the end of the thesis, I must decide whether the fair abridgment doctrine belongs therein. I could salvage what I can from my work on the doctrine without changing its original course in the hopes that the Chapter succeeds despite its half-finished form. However, even in a finished form that included all the aforementioned bibliographical evidence, I fear the Chapter would still fail to question the implicit and predominant narratives of law and technology literature. Even if my work revealed one instance of law shaping technology, it still would fail to draw attention away from the law lag problem. It would invert the problem without dispelling it. One could admit that copyright law did not lag behind books, at least with regard to abridgments, and still maintain that law has lagged behind new technologies before and will do so again. My original project would have failed not by lack of biographical evidence, but because it was complicit with the assumptions I hoped to renounce.

Indeed, I posited both law lag and legal shaping as a realist rather than experiential phenomena. Neither depended on perception: they existed on their own, outside the eye of the beholder. Law did not require legal agents to shape technology, nor lag behind it. Showing that copyright law had shaped the production and the use of books would only, at best, invalidate only extreme claims of technological determinism, which do not sway law

and technology scholarship in the first place. I would have in fact repurposed Lawrence Lessig's framework of law and architecture for historical research, along with its deterministic assumption of a limited yet irreducible sphere of materiality.[4] My work on the fair abridgment doctrine was flawed from the start. Without addressing this flaw, no amount of additional work would have saved it. In any case, proclaiming that law shapes technology seems not, with hindsight, insightful, surprising or even useful.

It may seem appropriate to remove this portion of my work entirely and reduce the reader's burden in kind, including four or so pages of self-indulgent introspection. But the fair abridgment doctrine freed me from realism and provided room for an interpretive account of law and technology. The history of the doctrine is inextricably tied to that of copyright infringement, more specifically to how the scope of copyright expanded to cover an increasingly intangible and polymorphic object: the 'work'. Just as I searched for how law impacts the material world, I witnessed eighteenth- and nineteenth-century jurists producing intangible figments of their imagination out of law.

To understand how these figments came to be, I consulted Alain Pottage and Brad Sherman's *Figures of Invention*. I only realised on my second reading of their work how much they contributed to inspiring the interpretive approach to law and technology:

> Our argument is based upon the idea that the things that are taken to be intangible objects are generated and sustained by real-world acts of representation, interpretation, and argumentation. … Because inventions have to be elicited from material embodiments [as opposed to the mind of the inventor], the invention only speaks 'for itself' through the material features and observable movements to which patent discourse ascribes legal significance. *The intangible is only visible in the material shape, configuration, and operation of a material artefact or process where it reveals*

[4] See above, Subsection I.C.1.a.

> *itself. In that sense material embodiments are like texts; they have to be deciphered, interpreted, and ascribed a meaning*.[5]

Eighteenth- and nineteenth-century jurists were consciously doing, in copyright and patent law, what I claim legal agents do with all technology: interpreting artefacts into objects of legal analysis. From the moment jurists accepted that the intangibility of copyrighted works proved no obstacle to property claims, intangible objects were 'real' enough to bear legal consequences on a wide range of economic, literary and artistic activities. The formation of intangibles in intellectual property can therefore illuminate the legal interpretation of technology as a contained but explicit version of what is usually a tacit affair. Because it drew me away from a realist but flawed critique of the law lag problem, the history of the fair abridgment doctrine deserves its place here.

This chapter follows the fair abridgment doctrine from its inception to its demise in the court reports and treatises of the eighteenth and nineteenth centuries. The Company of Stationers had dealt with the problem of abridgments and other 'altered reprints' — the precursors of derivative works — long before the first copyright legislation. But when Parliament enacted statutory copyright, it provided no explicit protection against altered reprints, which brought concern to many booksellers. Since they could not count on legislators to address this issue, it would fall on British courts to distinguish permissible altered reprints from infringing ones. Their approach to copyright infringement sought to reward authorial labour and spare defendants lacking fraudulent intent. In the nineteenth

[5] Alain Pottage & Brad Sherman, *Figures of Invention: A History of Modern Patent Law* (Oxford: Oxford University Press, 2010) at 13 (emphasis added. Pottage and Sherman quote Stanley Fish immediately after this passage).

century, courts — with the encouragement of a new generation of treatise writers — took a new approach, instead finding infringement in the 'substance' of copyrighted works.

A. Matter and epitome

Before he authored *Robinson Crusoe*, Daniel Defoe campaigned against the blanket censorship regime in an *Essay on the Regulation of the Press*. To replace the *Licensing Act*,[6] he proposed letting authors print freely, knowing they would face consequences for publishing despicable texts.[7] But while Defoe campaigned against the *Licensing Act*, he conceded that it had at least the merit of policing the press against piracy. He thus supported the legal protection of literary property to "put a stop to a certain sort of thieving which is now in full practice in *England*, … some printers and booksellers printing copies none of their own."[8] Other prominent literary and political personalities campaigned against censorship and supported the booksellers in demanding new legislation to regulate the print trade after the lapse of the *Licensing Act*.[9]

Piracy affected not only the interests of honest booksellers and authors, but also impoverished readers with second-rated and unreliable books:

> [F]or it not only robs their neighbour of their just right, but it robs men of the due reward of industry, the prize of learning, and the benefit of their studies; in the next place, it robs the reader, by printing copies of other men incorrect and imperfect,

[6] See *An Act for preventing the frequent Abuses in printing seditious treasonable and unlicensed Bookes and Pamphlets and for regulating of Printing and Printing Presses*, 1662 (Eng), 14 Car II c 33.
[7] Daniel Defoe, *An Essay on the Regulation of the Press* (London: 1704). See also Joly Greene, *The Trouble with Ownership: Literary Property and Authorial Liability in England, 1660-1730* (Philadelphia: University of Pennsylvania Press, 2005) at 107-42.
[8] *Supra* note 7 at 25. See also Oren Bracha, *Owning Ideas: A History of Anglo-American Intellectual Property*, DJS Thesis, Harvard University Law School, 2005 ("[t]he brilliant maneuver was dropping all references to censorship and shifting the entire weight of the argument of protecting authors and encouraging learning" at 183).
[9] Mark Rose, *Authors and Owners: The Invention of Copyright* (Cambridge: Harvard University Press, 1993) at 28-30, 32-41 (some intervening before the lapse of the *Licensing Act* in 1695, they included John Milton, John Locke, and Joseph Addison).

> making surreptitious and spurious collections, and innumerable errors, by which design of the author is often inverted, concealed, or destroyed, and the information of the world would reap by a curious and well studied discourse, is dwindled into confusion and nonsense.[10]

Unauthorized abridgments in particular, which Defoe described as widespread, plagued their sources with "such a contrary turn to the sense, such a false idea of the design, and so huddle matters of the greatest consequence together on abrupt generals, that no greater wrong can be done to the subject."[11] Abridgments were one of many examples of altered reprints susceptible to compete with their original sources. Such reprints included partial reprints, from a quote to a near identical reproduction missing only a few passages, to more extensive changes such as translations.

Parliament fulfilled only some of Defoe's wishes. After a few failed attempts,[12] Parliament promulgated *An Act for the Encouragement of Learning* in 1710,[13] also known as the Statute of Anne. The new Statute sought to encourage "learned men to compose and write useful books,"[14] by giving authors and their assigns the means to fight piracy. While censorship survived the new legislation,[15] the Statute of Anne borrowed from the Stationers' copyright to propose a radically new organization of the printing trade. Copyright had left the bounds and regulations of the Company to become a uniform and

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[10] *Ibid* at 25-26.
[11] *Ibid* at 26. See also Adrian Johns, *The Nature of the Book: Print and Knowledge in the Making* (Chicago: University of Chicago Press, 1998) at 226, 455-56, 607 (a number of authors shared Defoe's sentiment).
[12] See John Feather, "The Book Trade in Politics: The Making of the Copyright Act of 1710" (1980) 8 *Publishing History* 19 at 21-25, 30-33.
[13] *An Act for the Encouragement of Learning, by Vesting the Copies of Printed Books in the Authors or Purchasers of such Copies, during the Times therein mentioned*, UK (1710), 8 Anne, c 19 [*Statute of Anne*]. See also *ibid* at 34-37 (on the legislative process leading to the *Act*, and the preceding versions of the final bill).
[14] *Statute of Anne*, *supra* note 13 Preamble.
[15] See generally David Saunders, "Copyright, Obscenity and Literary History" (1990) 57 *The Journal of English Literary History* 431.

general right.[16] However, the Statute remained entirely silent on the matter of unauthorized abridgments and other 'altered reprints'.

1. Enactment

The Statute of Anne took a very tangible approach to copyright law. Copyright constituted only one of many measures the Statute put in place to encourage the production of books. It established a price-control mechanism to allow disgruntled customers to complain to officials when copyrighted books were sold for "too high or unreasonable" a price.[17] The Statute of Anne also excluded from its application "the importation, vending, or selling … books in Greek, Latin, or any other foreign language printed beyond the seas"[18] to facilitate the introduction of classical and foreign titles. Furthermore, the Statute preserved the validity of printing privileges granted before its adoption. Without understating the political considerations involved in preserving these privileges, they also served the continuous supply of essential tomes.[19] As a whole, the Statute meant to secure the supply and circulation of important and tangible goods.[20] While not all copyright cases involved books, they still focused on corporeal objects.[21]

The Statute of Anne delimited copyright in conformity with its tangible approach. It provided exclusive rights to print and reprint a given book, and prevented anyone to "print,

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[16] See Bracha, *supra* note 8 at 186-87.
[17] *Statute of Anne*, *supra* note 13 s IV.
[18] *Ibid* s VII.
[19] *Ibid* s IX; Bracha, *supra* note 8 at 124, 126.
[20] See Ronan Deazley, "The Myth of Copyright at Common Law" (2003) 62 Cambridge LJ 106 at 108-09. But see Alexander, *Copyright Law*, *supra* note 3 ("[t]he lack of any real coherent rationale underlying the Statute of Anne can be seen in the conflicting objectives of its various provisions," at 26).
[21] See Jane Ginsburg, "'*Une Chose Publique*'? The Author's Domain and the Public Domain in Early British, French and US Copyright Law" (2006) 65 Cambridge LJ 636 at 643.

reprint or import, or cause to be printed, reprinted or imported, any such book … without the consent of the proprietor"[22] or publish and sell "any such book… without such consent."[23] Referring to copyright as "copy," the language of the Statute mirrored that of the Stationers who used the terms to designate not only the privilege to print a book, but also its manuscript. The legislation similarly defined infringement with the actions of printing, distributing and exposing for sale a book without the assent of the copyright holder.[24] To secure copyright, the Statute required authors and their assignees to record their title in the Register of the Company.[25] It further demanded that copyright holders provide "nine copies of each book or books upon the best paper… to the Warehouse-Keeper of the said Company"[26] who would deliver them to nine designated libraries.[27] These provisions corporeally circumscribed copyright to a book: one could trace copyright on the pages of a registry and pick it off the bookshelf of a library.[28]

Like the *Licensing Act* before it, the new Statute of Anne made no mention of altered reprints.[29] This does not mean there was no obstacle to the publication of altered reprints during the years of the *Licensing Act*. The Company of Stationers had its own misgivings about unauthorized altered reprints. While its officials once tolerated such reprints, from around 1600 to 1774, they suppressed them by refusing to inscribe their titles in the

[22] See *Statute of Anne*, *supra* note 13 s I.
[23] *Ibid*.
[24] *Ibid.*
[25] *Ibid* s II.
[26] *Ibid* s V.
[27] *Ibid*. See also John Feather, "Publishers and Politicians: The Remaking of the Law of Copyright in Britain 1775-1842. Part I: Legal Deposit and the Battle of the Library Tax" (1988) 24 *Publishing History* 49.
[28] But see Alexander, "All Change", *supra* note 3 at 1360-61 (registration and legal deposit found limited application after the promulgation of the *Statute*).
[29] But see Deazley, *supra* note 3 at 810-15 (less than a third of printing patents issued under the reign of Queen Anne included the exclusive privilege to publish abridgments).

Company's Registry.[30] They also formally forbade Company members to reprint any part of a copy belonging to another without authorization.[31] Finally, Company officials sanctioned a number of Stationers for printing altered reprints, including abridgments that would undersell original copies.[32] But despite these measures, numerous abridgments found their way to the market.[33] Considering the continual decline of the Company's control over the publishing trade, booksellers sought more effective ways to restrict the publication of unauthorized altered reprints, including petitioning for new legislation.

As early as 1735, dissatisfied booksellers petitioned to replace the Statute of Anne with another *Act for the encouragement of Learning*, or 'Booksellers' Bill'.[34] The Booksellers' Bill proposed several innovations to increase the effectiveness of copyright legislation, including a tailored approach to altered reprints.[35] Notably, the Bill provided a grace period within which copyright holders would be protected against unauthorized abridgments and translations of their work:

> [I]f any person or persons shall, within three years after publication of any book, print, publish, import, or sell any abridgement of the same [original book], or any translation thereof, into any other language, without the consent of the author or proprietor …

[30] See William St-Clair, *The Reading Nation in the Romantic Period* (Cambridge, Cambridge University Press, 2004) at 72. *Contra* Simon Stern, "Copyright, Originality, and the Public Domain" in Reginald McGinnis (ed), *Originality and Intellectual Property in the French and English Enlightenment* (New York: Routledge, 2008) 69 at 73.
[31] See Edward Arber, *A Transcript of the Register Registers of the Company of Stationers of London, 1554-1640*, vol 1 (London: privately printed, 1875) at I16, I22. See also Alexander, "All Change", *supra* note 3 at 1364.
[32] See Bracha, *supra* note 8 at 174-75; Johns, *supra* note 11 at 223-26.
[33] See Alexander, "All Change", *supra* note 3 at 1364; Deazley, *supra* note 3 at 799-807
[34] See Bill no 39, *An Act for the encouragement of Learning, by the more effectual securing the sole right of printing books to the authors thereof, their executors, administrators, or assigns, during the times therein mentioned*, Geo II, 1737 [*Booksellers' Bill*]; United Kingdom, *Journal of the House of Commons*, vol 22 (March 3rd, 1734) at 400.
[35] See *Booksellers' Bill*, *supra* note 34 s II, VIII-IX. See also Ronan Deazley, *On the Origin of the Right to Copy: Charting the Movement of Copyright Law in Eighteenth-Century Britain (1695-1775)* (Oxford: Hart Publishing, 2004) at 105-08; John Feather, "The Publishers and the Pirates: British Copyright Law in Theory and Practice, 1710-1755" (1987) 22 *Publishing History* 5 at 11-12.

> then such offender shall forfeit such abridgement or translation, and every sheet and part thereof, to the proprietor or proprietors of the original book, [and pay a fine].[36]

Parliamentarians may have imposed the provision, but it is also possible that booksellers shared a commercial interest in unauthorized abridgments. Indeed, enough individual booksellers may have been involved in both the publication of original works they owned as well as the abridgment of the copyrighted works of their competitors. In any case, the Booksellers' Bill restricted unauthorized abridgments not only to protect the pecuniary interests of copyright holders, but also to preserve the integrity of the source work: "authors and proprietors … are often greatly injured by such hasty and incorrect abridgements or translations of the same; as not only to lessen the sale, but also frequently sink the reputation of the original composition."[37]

The booksellers' campaign led to the introduction of two bills, but neither became law. The first bill passed in the House of Commons, but failed to do the same in the House of Lords before the prorogation of Parliament. It underwent several modifications before its second presentation in 1737, but booksellers withdrew their support, possibly because the bill started to favour the interests of authors over their own.[38]

The failure of the Booksellers' Bill left to courts the task of settling the scope of copyright and the matter of altered reprints until Parliament did so in the *Copyright Act* of 1911.[39] From these early infringement cases emerged a conception of copyright law that sought to reward all instances of authorial labour, whether it led or not to the creation of an original

[36] *Ibid* s XXII.
[37] *Ibid*.
[38] See Deazley, *supra* note 35 at 107 (the *Bookseller's Bill* included a clause that limited assignment of copyright to ten years, after which it would return to the author).
[39] *Supra* note 1 s 2.

work. The courts thus came to tolerate a number of 'fair' unauthorized uses of copyrighted works, such as abridgment, review, quotation and refutation.[40] Together these defences established what Alexander describes as the "new work principle:" an altered reprint would not infringe on a copyrighted work if the reprint differed enough from its source to be considered a new work.[41]

2. Abridgment

The Court of Chancery played an important role in determining the scope of copyright early on. The Statute of Anne provided only for the seizure and destruction of infringing works along with the payment of a fine, but it did not provide common law courts with any means to prevent further infringement.[42] For this reason, many if not most copyright holders sought relief from Chancery. Unlike common law judges, the lord chancellors had the power to issue injunctions that typically lasted until the defendant answered the complaint. The burden then fell on the plaintiff to demonstrate why the Court should maintain the injunction.[43] Considering stopping the publication of competing works was often enough to satisfy copyright holders, injunctions offered a more effective remedy than those provided by the Statute of Anne.[44]

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[40] See Melissa de Zwart, "An Historical Analysis of the Birth of Fair Dealing and Fair Use: Lessons for the Digital Age" (2007) 1 *Intellectual Property Quarterly* 60 at 78ff.
[41] Alexander, *Copyright Law*, *supra* note 3 at 182.
[42] *Statute of Anne*, *supra* note 13 s I, X.
[43] See Henry Horwitz, *A Guide to Chancery Equity Records and Proceedings, 1600-1800* (Kew: Public Record Office, 1998) at 19; Harold G Handbury & DCM Yardley, *English Courts of Law*, 5th ed (Oxford: Oxford University Press, 1979) at 96, 103.
[44] See Alexander, *Copyright Law*, *supra* note 3 at 68.

The first reported case decided on the basis of the Statute of Anne, *Burnett v Chetwood*,[45] involved the publication of an unauthorized translation. The defendant pleaded that the translator had reformulated the passages taken from the plaintiff's work "in his own style and expression, and at least pu[t] it into a different form."[46] Lord Macclesfield compared the two works and agreed with the defendant: the unauthorized translation of a copyrighted work did not constitute infringement, being a different book.[47] *Burnett* signalled that, to escape infringement liability, defendants had to sufficiently distinguish an altered reprint from the original.[48]

This threshold was not easily overcome, as learned by the publishers of an emerging magazine trade sued in Chancery for publishing extracts of copyrighted works.[49] Defendants justified their takings on the basis of prevailing practices, the fact that the Statute of Anne made no mention of altered reprints and the benefits of a wide dissemination of literary works. But until they represented the extracts as abridgments, the strategy failed: the defendants either abandoned the proceedings or were defeated.[50]

Edward Cave, one of such defendants in *Austen v Cave*[51] (*Austen*), counted among the most successful publishers of the nascent magazine trade. He staunchly supported altered reprints to satisfy his expanding readership, but not without reprisals from rival copyright

[45] (1720), 35 ER 1008, 2 Mer 441 (Ch).
[46] *Ibid* at 441.
[47] *Ibid* (his Lordship nevertheless ruled against the defendants on censorship grounds). See also Alexander, *Copyright Law*, *supra* note 3 at 224-25 (the precedent set by *Burnett* that unauthorized translations did not amount to infringement remained in force for nearly two hundred years).
[48] *Ibid* at 173; Deazley, *supra* note 35 at 79-80.
[49] See *Austen v Cave* (1739), c 11 1552/3, c 33 371/493 (Ch); *Hitch v Langley* (1739), c 11 1559/23, c 33 371/493r (Ch).
[50] See Alexander, "All Change", *supra* note 3 at 1368-73 (the plaintiffs — many of them congers — likely made a concerted effort to target rivals of the publishing trade).
[51] See *Austen v Cave*, *supra* note 49.

holders.[52] To develop a more effective strategy against them, he sought the counsel of one of his editors, the eminent essayist and poet Samuel Johnson. Johnson described the altered reprint at issue in *Austen* not as a mere compilation of extracts, but as an abridgment.[53] Johnson distinguished the reprint from its source work, arguing in favour of excluding abridgments from infringement.

Johnson made his case on the basis of utility and prevailing practices. Abridgments, he argued, "benefited mankind by facilitating the attainment of knowledge, and by contracting arguments, relations, or descriptions, into a narrow compass; to convey instruction in the easiest method, without fatiguing the attention, burdening the memory, or impairing the health of the student."[54] Their disappearance would disadvantage readers belonging to "the busy, the indolent, and the less wealthy part of mankind."[55] Johnson did not however comment on the specific utility of unauthorized abridgments, if any, saying only that the benefits they brought to readers "from the easier propagation of knowledge"[56] stood above the pecuniary interests of copyright holders. In any case, the latter had to tolerate unauthorized abridgments, being a staple of the publishing trade.[57]

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[52] See Sag, *supra* note 3 at 1385-86; Iona Italia, *The Rise of Literary Journalism in the Eighteenth Century: Anxious Employment* (London: Routledge, 2005) (the *Gentleman's Magazine* offered an "anthology of all the best essays from the daily and weekly papers, combined with book reviews, translations, short biographies, poetry and readers' correspondence," at 20); John Feather, *A History of British Publishing*, 2nd ed (London: Routledge, 2006) at 58 (the first periodical of its kind, the *Gentleman's Magazine* became immensely successful, and generated many imitators).

[53] Samuel Johnson, "Considerations [by the late Dr. Samuel Johnson] on the Case of Dr T[rapp]'s Sermons, abridged by Mr. Cave, 1739", *Gentleman's Magazine* 57 (July 1787) 555 at 557 (although the *Gentleman's Magazine* published the commentary only in 1787, the editor of the magazine assures its reader that Johnson wrote it on the occasion of Cave's defeat in *Austen*, at *in fine*). But see Rose, *supra* note 9 at 96, 107-08 (Johnson had inconsistent views on copyright).

[54] Johnson, *supra* note 53 at 556.

[55] *Ibid* at 557.

[56] *Ibid* at 556. (Johnson added that "so a tedious volume may no less lawfully be abridged, because it is better that the proprietors should suffer some damage, than that the acquisition of knowledge should be obstructed with unnecessary difficulties, and the valuable hours of thousands thrown away," at 557).

[57] *Ibid* at 557.

Johnson's arguments echoed in *Gyles v Wilcox*[58] (*Gyles*), the case that would settle the matter of abridgments for decades to come. The plaintiffs sought to confirm an injunction against an abridgment of Sir Matthew Hale's *Pleas of the Crown*.[59] According to the Lord Chancellor Hardwicke, superficially shortening a work solely to evade copyright constituted infringement. But this would not be the case of

> a real and fair abridgment, for abridgments may with great propriety be called a new book, because not only the paper and print, but the invention, learning, and judgment of the author is shown in them, and in many cases are extremely useful, though in some instances prejudicial, by mistaking and curtailing the sense of an author.
>
> If I should extend the rule so far as to restrain all abridgments, it would be of mischievous consequence, for the books of the learned, *les Journals des Scavans*, and several others that might be mentioned, would be brought within the meaning of this act of Parliament.[60]

Lord Hardwicke re-appropriated the arguments of the defendants in *Austen* and *Hitch*, but recast them as the attributes of abridgments: such altered reprints proved "extremely useful," they differed from their source and did not run counter to publishing practices.[61]

There is more to *Gyles*. John Atkyns, who reported cases from the Court of Chancery between 1737 and 1754, wrote the above extract. A second report of *Gyles* survives today, written by Thomas Barnardiston, who shortly served as reporter at the Court between 1740 and 1741. Contrary to Atkyns, Barnardiston did not report on the usefulness of abridgments or the importance of encouraging the dissemination of writings. Instead, whereas Atkyns'

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[58] (1740), 2 Atk 141, 26 ER 489 (Ch). An unsuccessful attempt to avoid infringement liability by depicting the altered reprint as an abridgment preceded *Gyles*. See *Read v Hodges* (1740), c11 538/36; c 33 374/153 (Ch) (the Lord Chancellor admitted in *Gyles* that he had in *Read* gave "his thoughts without much consideration, and therefore [did] not lay any great weight upon" the case. *Ibid* at 490). See also *Tonson v Walker* (1752), 3 Swans 672; 36 ER 1017 (Ch) (Lord Hardwicke thought the defendant's reprint in *Read* "an evasive abridgment, and therefore allowed the injunction," at 1020).

[59] See Deazley, *supra* note 3 at 808-10 (for a detailed account of the case).

[60] *Gyles v Wilcox*, *supra* note 58 at 490.

[61] See Alexandra Sims, "Appellations of Piracy: Fair Dealing's Prehistory" (2011) 1 *Intellectual Property Quarterly* 3 at 5; Sag, *supra* note 3 at 1384-86.

report describes the fair abridgment doctrine as an exception founded on public utility, Barnardiston's portrays it as a limitation on copyright ownership warranted by a narrow interpretation of the Statute of Anne:

> The words in the statute all along are any such book or books; and therefore, when complaints of this sort have come before the Court, the single question has constantly been, whether the second book has been the same book with the former? And *where the second book has not otherwise differed from the former than by reducing or shortening the style, or by leaving out some of the words of the first book, the second book has been construed with the former. But where the second book has been an abridgment of the former, it has been understood not to be the same book, and therefore to be out of the Act*.[62]

Taken together the reports somewhat obscures the meaning of *Gyles*. In each of them, the reporters describe Lord Hardwicke as proposing different understandings of the Statute of Anne, which raises questions on the nature of the fair abridgment doctrine between an exception founded on public utility or a limitation upon the scope of copyright.[63] We may blame these apparent contradictions on a misunderstanding of the Statute of Anne, but a more charitable account would conclude that early case law ascribed multiple purposes to the Statute.[64]

In both reports, however, Lord Hardwicke emphasized how "real" abridgments distinguish themselves from their sources. The "fair" abridger did not reduce its source down to its bare bones, but recomposed it.[65] A third, unpublished case report quotes Lord Hardwicke depicting an abridgment as "a book of labour and art and is as much a new work as the

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[62] *Gyles v Wilcox* (1740), Barn C 368, 27 ER 682 (Ch) at 682 (emphasis added).
[63] *Gyles v Wilcox*, *supra* note 58 (L Hardwicke: an *Act* made "to secure the property of books in the authors themselves … as some recompense for their pains and labour in such works as may be of use to the learned world," at 490); *Gyles v Wilcox*, *supra* note 62 (Hardwicke L: "an Act made for the encouragement of learning, … for the public benefit and advantage," at 682).
[64] See Deazley, *supra* note 35 at 85.
[65] See *Gyles v Wilcox*, *supra* note 58 ("for abridgments may with great propriety be called a new book, because not only the paper and print, but the invention, learning, and judgment of the author is shown in them," at 490); *Gyles v Wilcox*, *supra* note 62 ("[t]o make an abridgment is a work of judgment," at 682).

translation of a book from one language to another,"[66] recalling *Burnett.* By categorizing the altered reprint as an abridgment, defendants distinguished it from its source work in purpose and design, a distinction that could anchor arguments of social utility, lack of prejudice and publishing practices to a familiar type of literary work.[67]

Gyles had an almost immediate impact. When Cave returned in Chancery in 1743 to answer for another unauthorized reprint, he argued that he had not simply reprinted the *Memoirs*, but abridged it — the case did not proceed further.[68] From the 1740s onwards the English book trade and the reading public grew thanks to a higher population, income levels and literacy rates. Customers had a strong appetite for cheap publications, including unauthorized abridgements.[69] Lord Hardwicke confirmed the fair abridgment doctrine in *Tonson v Walker* in 1752,[70] and it remained a fixture of British copyright law until the mid-nineteenth century.[71] Its supporters included not only producers of abridgments, but also those who had an interest in public education and the wide dissemination of knowledge. When legislators attempted to expel the doctrine from copyright law in the mid-nineteenth century, they faced so strong opposition that they backed down, fearing it would compromise other reform plans.[72]

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[66] *Gyles v Wilcox* (Ch 1740), English Legal Manuscripts, Stage II, Lincoln's Inn, H-1787, microfiche B217 at 50, quoted in Simon Stern, "From Author's Right to Property Right" (2012) 62 UTLJ 29 at 56, n86.
[67] See Alexander, *Copyright Law*, *supra* note 3 at 173; Sims, *supra* note 61 at 6-7.
[68] *Cogan v Cave* (1743), c 12 2204/4 (Ch) cited in *ibid* at 1375.
[69] See John Feather, "The British Book Market 1600-1800" in Simon Eliot & Jonathan Rose (eds), *A Companion to the History of the Book* (Malden: Blackwell Pub, 2007) 252 at 237-39.
[70] *Tonson v Walker*, *supra* note 58 at 1020.
[71] See *Sweet v Benning* (1855), 16 CB 459, 24 LJCP 175 cited in Harold G Fox, *The Canadian Law of Copyright and Industrial Designs*, 2nd ed (Toronto: Carswell Company, 1967); *D'Almaine v Boosey* (1835), 1 Y&C Ex 288, 160 ER 117 (Ex); *Butterworth v Robinson* (1801), 5 Ves Jun 709, 31 ER 817 (Ch) at 817-18; *Bell v Walker* (1785), 1 Bro CC 451, 28 ER 1235 (Ch) at 1235; *Macklin v Richardson* (1770), Amb 694, 27 ER 451 (Ch) at 452.
[72] Extending from 1837 and culminating with the enactment of a new *Copyright Act* (UK (1842), 5 & 6 Vict, c 45), the reform's main victory was to extend the copyright term from twenty-eight years to the life of the author plus sixty years. See generally Catherine Seville, *Literary Copyright Reform in Early Victorian*

3. Infringement

Early treatise writers took the fair abridgment doctrine for granted. Robert Maugham recognized the doctrine despite his staunch criticism of other provisions of the Statute of Anne that, he argued, disadvantaged copyright holders.[73] For Richard Godson, the Statute allowed the publication of unauthorized abridgments for the benefit of their readers. A well-composed abridgment could even promote the source work.[74] Peter Burke said as much,[75] even though his definition of infringement contradicted the doctrine in principle: "the unauthorised publication of a book so transcribed from another in which copyright subsists, as to preclude the necessity of reading the original work."[76]

The fair abridgment doctrine corresponded to the prevalent understanding of copyright. Until the mid-nineteenth century, most jurists saw copyright as a narrow privilege meant to reward all authorial labour, whether or not it led to an original work. A defendant could therefore avoid infringement liability if he showed that the creation of an altered reprint had involved authorial labour.[77] As Maugham explained,

> [w]here labor, judgment, and learning, however, have been applied in adapting existing works into a new method, and the composition has been evidently made with a fair and honest intention to produce a new and improved work, it seems the law will

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England: The Framing of the 1842 Copyright Act (Cambridge: Cambridge University Press, 1999); John Feather, "Publishers and Politicians: The Remaking of the Law of Copyright in Britain 1775-1842. Part II: The Rights of Authors" (1989) 25 *Publishing History* 45. See also Alexander, *Copyright Law*, *supra* note 3 at 191-93.

[73] See Robert Maugham, *A Treatise on the Law of Literary Property* (London: Longman Rees, Orme, Brown, and Green, 1828) at 129-32 (Maugham especially advocated for the extension of the copyright term and the abolition of the mandatory deposit in libraries).

[74] See Richard Godson, *A Practical Treatise on the Law of Patents for Inventions and Copyright (1822): To Which Is Added a Supplement* (London: Saunders & Benning, 1832) at 238.

[75] Peter Burke, *A Treatise on the Law of Copyright in Literature, the Drama, Music, Engraving, and Sculpture* (London: John Richards & Co, 1842) at 28.

[76] *Ibid* at 26.

[77] See *Wilkins v Aikin* (1810), 17 Ves 422, 34 ER 163 (Ch) at 165.

> justify the publication, although the abridgment or compilation should injure the sale of the former works.[78]

Courts paid attention to the intent of the defendant to determine whether an altered reprint embodied authorial labour. This focus on intent may originate from the genesis of copyright, when the Stationers treated copyright as a matter of civility. Piracy constituted not only an economic harm, but also a moral offence with profound implications over the status of the Company and its products. The Stationers forged copyright and print in propriety.[79] The importance of industry and honesty may also result from the influence of Chancery, from which originated much of early infringement case law. The defendant's conscience constituted the main object of inquiry for the Lord Chancellors, in opposition to the plaintiff's right.[80] The Lord Chancellors and the officials following their precedents interpreted the defendant's work as a window into his conscience. The altered reprint indicated a defendant's creative process (or lack thereof).

Judges would rule in favour of the plaintiff if they considered the altered reprint a fraudulent attempt to evade infringement liability. They could find clues of the defendant's fraudulent intent, otherwise termed "*animus furandi*," in the altered reprint itself. For example, failures to acknowledge the source work,[81] close paraphrasing,[82] the character of the reproduction,[83] the amount of the reprint,[84] the pretence of quotation,[85] the lack of other

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[78] Maugham, *supra* note 73 at 126.
[79] See above, Subsection IV.A.2. See also Rose, *supra* note 9 ("the right to control publication has economic implications, and it sometimes becomes difficult to distinguish what we might call matters of propriety from matters of property," at 18).
[80] See Michael Lobban, *A History of the Philosophy of Law in The Common Law World, 1600-1900* (Dordrecht: Springer, 2007) at 51-52; Heneage F Nottingham, *Lord Nottingham's 'Manual of Chancery Practice' and 'Prologemena of Chancery and Equity'* (Holmes Beach: Gaunt & Sons, 1986) at 23.
[81] See *Bohn v Bogue*, (1846) 10 Jurist 420.
[82] See *Campbell v Scott* (1842), 11 Sim 31, 59 ER 784 (Ch).
[83] See *Sayre v Moore* (1783), 1 East 361, 102 ER 139 (KB).
[84] See *Mawman v Tegg* (1826), 2 Russ 385, 38 ER 389 (Ch).
[85] See *Wilkins v Aikin*, *supra* note 77.

references in addition to the original[86] or the price of the altered reprint in comparison to its source[87] could all indicate that a fraudulent intent animated the defendant. Lord Hardwicke thought as much when he described some abridgments as evasive.[88] Fraudulent intent negatively correlated with authorial labour: the lack of one indicated the presence of the other.[89] The composition constituted the happy consequence and the evidence of authorial labour.[90] Provided that the defendant's altered reprint suggested genuine authorial labour, such as in the case of a "real and fair" abridgment, courts were likely to spare him from liability and consider the reprint as a new work.[91]

To ascertain whether one work infringed upon another, the tribunal did not compare works to each other. Instead, a judge examined whether a defendant and his work drew sufficiently close to what an author or an altered reprint should be. In *Gyles*, Lord Hardwicke considered the intent of the defendant along with publishing practices and the nature of abridgments as a distinct type of literary works. He did not determine whether the plaintiff's and the defendant's works were "the same" by comparing one to the other, but by comparing the defendant's work to his understanding of the abridgment and the

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[86] See *Cary v Kearsley* (1803), 4 Esp 168, 170 ER 679 (NP).
[87] See Godson, *supra* note 74 at 215-16.
[88] *Tonson v Walker*, *supra* note 58 at 1020.
[89] See *Lewis v Fullarton* (1839), 2 Beav 6, 48 ER 1080 (Rolls); *Campbell v Scott*, *supra* note 82. See also de Zwart, *supra* note 40 at 79.
[90] See Sherman & Bently, *supra* note 107 at 47-50; Mark Rose, "The Author as Proprietor: Donaldson v Becket and the Genealogy of Modern Authorship" (1988) 23 *Representations* 51 at 58-59. See for example *Millar v Taylor*, *supra* note 109 (Willes J: it is "not agreeable to natural justice, that a stranger should reap the beneficial pecuniary produce of another man's work," at 218; Yates J: "every man is [entitled] to the fruits of his labour," at 231; Mansfield L: "just that an author should reap the pecuniary profits of his own ingenuity and labour," at 252); Blackstone, *supra* note 120 (literary property is "grounded in labour and invention," at 405).
[91] See Isabella Alexander, "The Genius and the Labourer: Authorship in Eighteenth- and Nineteenth-Century Copyright Law" in Lionel Bently, Jennifer Davis & Jane Ginsburg (eds), *Copyright and Piracy: An Interdisciplinary Critique* (Cambridge: Cambridge University Press, 2010) 300 at 303; Stern, *supra* note 30 at 78.

abridger.[92] Later defendants could evade liability by showing that their work represented a different kind of work.[93] The question of infringement did not lie solely in the works at controversy, but beyond them: in the morality of the defendant, the civility of the publishing trade and the epitomes of meritorious works.

B. Sense and substantiality

Charles Reade was called to the bar in 1843, but shied away from practicing law to become a novelist and a dramatist. His literary pursuits and legal knowledge likely led him to develop an interest in copyright law and involve himself in its reform.[94] Reade had little appreciation for the fair abridgment doctrine: he called it "[m]onstrous, idiotic, heartless, illegal, and iniquitous, and the laughing-stock of all foreign jurists."[95] The French, he claimed, derided the doctrine the most,

> because the French judges were jurists, and the English judges attorneys in long wigs. The French judges were *impartial*, and so to them one man's legal property was as sacred as another's. The English judges were *partial*, and drew an arbitrary distinction in law between an author's "personal property" and a carpenter's, making the former *infinitely* less secure than the latter. Finally the French judges were loyal and independent, and the mouthpieces of the law: the English judges evaded the law's declared intention, and *truckled to opinion*… They saw justice on one side and

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[92] *Gyles v Wilcox*, *supra* note 58 at 490. Compare with *Gyles v Wilcox*, *supra* note 62 at 682.
[93] See for example *D'Almaine v Boosey*, *supra* note 71 ("[abridgments and digests] are in their nature original. Their compiler intends to make of them a new use, not that which the author proposed to make. Digests are of great use to practical men, though not so, comparatively speaking, to students. The same may be said of an abridgment of any study; but it must be a bona fide abridgment, because if it contains many chapters of the original work, or such as made that work most saleable, the maker of the abridgment commits a piracy," at 123); *Sweet v Benning*, *supra* note 71 (to produce a fair abridgment, the abridger "applies his mind to the labour of extracting the principles of the original work and by his labour really produces a new work," at 363-64); *Strahan v Newbery* (1774), 1 Loff 775, 98 ER 913 (Ch) (when an abridger preserves the sense of its source work, "then the act of abridgment is an act of understanding, employed in carrying a large work into a smaller compass, and rendering it less expensive, and more convenient both to the time and use of the reader," at 913).
[94] *Ibid* at 119-20, 148-50, 227.
[95] Charles Reade, *The Eighth Commandment* (London: Tübner & Co, 1860) at 152.

> popularity on the other; and chose the latter. It is a common preference where the heart is small and the head is not big.[96]

Reade believed the fair abridgment doctrine effectively negated copyright. He wrote his critique in 1860, when support for the fair abridgment doctrine had begun to dwindle. But his critique was rather unfair. English judges could hardly evade "the law's declared intention" when it said naught about altered reprints, even less so on abridgments. French jurists had also permitted unauthorized abridgments before changing their position in the mid-nineteenth century.[97] Reade could afford such confidence only because his forbearers had already debated some of the most controversial aspects of copyright.

The first of these debates, the so-called "Battle of the Booksellers,"[98] is famous among copyright law historians. The dispute took root in the Statute of Anne's drastic reduction of the duration of copyright. Whereas the old Stationers' copyright lasted forever, the Statute limited the duration of copyright to twenty-eight years for new books and until 1731 for books published before 1710.[99] Even so, many English booksellers ignored the new term. In London, the most powerful ones maintained a *de facto* monopoly over their copies long past the duration provided by the Statute. However, they could not stop provincial booksellers, especially in Scotland, from reprinting titles upon which copyright had expired and underselling the London booksellers.[100]

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[96] *Ibid* at 270.
[97] See *Juris-Classeur Propriété Littéraire et artistique,* Fasc 1110: Histoire du droit d'auteur, para 61 (like English copyright law, French courts also had an early permissive approach towards altered reprints); Augustin-Charles Renouard, *Traité des droits d'auteurs dans la littérature, les sciences et les beaux-arts*, vol 2 (Paris: J. Renouard et cie, 1839) at 30-33; Eugène Pouillet, *Traité théorique et pratique de la propriété littéraire et artistique et du droit de représentation* (Paris: Marchal, Billard et cie, 1879) para 520.
[98] See Augustine Birrell, *Seven Lectures on the Law and History of Copyright in Books* (London: Carswell & Company, 1899) at 99.
[99] *Statute of Anne*, *supra* note 13 s I.
[100] See Simon Stern, *supra* note 30 at 76; Deazley, *supra* note 35 at 109; Rose, *supra* note 9 at 69, 93.

To maintain control of the book trade and extend their titles, English booksellers engaged their Scottish rivals in multiple court proceedings. Because the Statute of Anne univocally limited the term of copyright, the English booksellers sought to establish a perpetual copyright based in common law. The legislation, they argued, only strengthened such 'literary property'; it did not supersede it. While their attempt ultimately failed in the last quarter of the eighteenth century, it contributed to conceptualizing copyright as an intangible object delimited by a work's composition.[101]

The fundamentals of British copyright law changed dramatically in the following century, especially with regard to copyright infringement. The Battle of the Booksellers had not directly challenged the status of altered reprints. Indeed, until the mid-nineteenth century, treatise writers and much of case law supported a permissive stance towards unauthorized abridgments, translations, adaptations, etc. But the Battle of the Booksellers had consecrated copyright as an intangible object in British law, a characterization that expanded well beyond the literal meaning of copyright legislation. With its flexibility confirmed, jurists could recast the determinacy of the copyrighted work to fit the evolving needs of the publishing industry and the general orientations of copyright law.

In the nineteenth century, the finality of copyright law progressively shifted from rewarding authorial labour to preserving the full commercial value of a work. Case law increasingly favoured an 'objective' approach to infringement, which focused on similarities between the plaintiff's and the defendant's works, as opposed to a subjective approach that would take into account the intent of the defendant, his own authorial labour

[101] See Ronan Deazley, *Rethinking Copyright: History, Theory, Language* (Cheltenham: Edward Elgar, 2006) at 13-25; Bracha, *supra* note 8 at 202; Rose, *supra* note 9 at 67-91.

and publishing practices. Whereas the copyrighted work once wholly existed in surface — i.e. the original composition — increased attention from the tribunal conferred layers upon the work. It became a multifaceted geometric prism, of which the original composition formed only one of its possible incarnations, the other forms being considered 'derivative' rather than merely 'altered'. As a result, jurists could now look upon a copyrighted work and an abridgment, and consider them as 'the same'.

Copyright law as a whole experienced a movement from the particular to the general, from the concrete to the abstract. At first, lawmakers and treatise writers had not organized copyright law in a systematic manner. A hodgepodge of copyright-inspired statutes, each regulating a specific trade, constituted the fragmented field.[102] Throughout the nineteenth century, jurists and legislators became increasingly concerned with the aesthetics of copyright law for both formal and practical reasons. The modernisation of copyright law involved its abstraction, categorisation and codification into a smaller number of general principles.[103] Case law and legal theory developed in the midst of this movement towards the simplification and consolidation of intellectual property law. Changes in the field did not result from a straightforward refinement of legal theory, but from a different way to practice legal theory.

[102] See for example *Fine Arts Copyright Act*, 1862 (UK), 25 & 26 Vic, c 68; *Publication of Lectures Act*, 1835 (UK), 5 & 6 Will IV, c 65; *Dramatic Literary Property Act*, 1833 (UK), 3 & 4 Will IV, c 15; *Sculpture Copyright Act*, 1814 (UK) 54 Geo III, c 56; *Act for Encouraging the Art of Making New Models and Casts of Busts, and other things therein mentioned*, 1798 (UK), 38 Geo III, c 71.
[103] See Sherman & Bently, *supra* note 107 at 73-75, 115-23, 126-28. See also Alexander, *Copyright Law*, *supra* note 3 at 237-41.

1. Determinacy

Proponents of common law copyright benefited from an early case from Lord Chancellor Hardwicke. *Pope v Curll* (*Pope*) concerned a collection of letters the defendant, a bookseller, had lawfully acquired and now intended to publish. One of the authors of the letters, Alexander Pope, obtained an injunction in Chancery to prevent the publication.[104] According to the Lord Chancellor, the Statute of Anne granted copyright to the authors of the letters even though they did not constitute a 'book' *per se*.[105] More importantly, his Lordship ruled that simply owning a letter did not grant the liberty to publish its content. That privilege belonged to its author alone.[106] Lord Hardwicke had crucially distinguished copyright from both physical goods and ordinary property rights.

Pope was a mixed blessing for the proponents of common law copyright. It gave credence to the argument that copyright could extend beyond the literal meaning of the Statute of Anne, but it also removed the benefits of the legislation's material approach. Indeed, if literary property existed independently from the Statute, an author failing to comply with the legislation's formalities, namely registration, did not forfeit copyright, but only the remedies provided by the Statute. But in the absence of registration, common law copyright immediately raised a problem of identification: without registration, what then would delimit the holder's claim?[107] Identifying the limits of copyright required jurists to develop new ways to draw the contours of copyright.

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[104] (1741), 2 Atk 342; 26 ER 608 (Ch). See generally Mark Rose, "The Author in Court: *Pope v Curll* (1741)" (1991) 10 Cardozo Arts & Ent LJ 475.
[105] See also Godson, *supra* note 74 at 219.
[106] *Pope v Curll*, *supra* note 104.
[107] See Brad Sherman & Lionel Bently, *The Making of Modern Intellectual Property: The British Experience, 1760-1911* (Cambridge: Cambridge University Press, 1999) at 25, n 54. See also *Wheaton v Peters*, 33 US

Opponents of common law copyright capitalized on this conceptual fog by focusing the debate on the intangible shortcomings of literary property. As a barrister and later as a justice sitting on the King's Bench, Joseph Yates maintained that copyright could not exist outside the Statute of Anne for its immaterial nature lacked the crucial features of common law property: it could not be identified, nor could it be harmed. In *Tonson v Collins* he depicted the essential features of property strictly in material terms, insisting on the physical enjoyment and possession of goods along with any other "indicia, or marks of appropriation to ascertain the owner of this species of property."[108] Justice Yates later maintained property rights could only stem from a corporeal substance:

> There may be many different rights: but the object of them all, the principal subject to which they relate, or in which they enjoy must be corporeal. And this I apprehend is no arbitrary ill-founded position: but a position which arises from the necessary nature of all property. For property has some certain distinct and separate possession: *the object of it must therefore must be something visible… which has bounds to define it, and some marks to distinguish it. ... It must be something that is visibly and distinctly enjoyed; that which is capable of all the rights and accidents and qualities incident to property: and this requires a substance to sustain them*.
>
> *But the* [*literary*] *property here claimed is all ideal*; a set of ideas which have no bounds or marks whatever, nothing that is capable of a visible possession, nothing that can sustain any one of the qualities or incidents of property. Their whole existence is in the mind alone; incapable of any other modes of acquisition or enjoyment, than by mental possession or apprehension; safe and invulnerable, from their own immateriality: no trespass can reach them; no tort affect them; no fraud or violence diminish or damage them. Yet these are the phantoms which the author would grasp and confine to himself: and these are what the defendant is charged with having robbed the plaintiff of. [109]

(8 Pet) 591 (1834); Craig Joyce, "'A Curious Chapter in the History of Judicature': *Wheaton v Peters* and the Rest of the Story (of Copyright in the New Republic)" (2005) 42 Hous L Rev 325.

[108] *Tonson v Collins* (1762), 1 Black W 321, 96 ER 180 (KB) at 185. See also Pierre-Emmanuel Moyse, "La nature du droit d'auteur : droit de propriété ou monopole" (1998) 43 McGill LJ 507 at 524-29.

[109] *Millar v Taylor* (1769), 4 Burr 2303, 98 ER 201 (KB) at 232-33 (emphasis added). See also *Millar v Kincaid* (1749-1751), *The Case of the Appelants*, 8 February 1751, BL BM 18th century reel 4065/03, *The Case of the Respondents*, 11 February 1751, BL BM 18th century reel 4065/04 (the defendants pleaded that "there can be no property without a subject. The books that remain upon hand are, no doubt, the property of the author and his assigns: but after the whole edition is disposed of, the author's property is at end: there is no subject nor *corpus* of which he can be said to be proprietor," cited in Bracha, *supra* note 8 at 205); Sherman & Bently, *supra* note 107 at 25.

Henry Home, future Lord Kames, denied the existence of literary property. According to him, only material goods could constitute objects of property. Rather than literary property, the Statute of Anne conferred a limited monopoly.[110] Samuel Johnson subjugated copyright to the property of the book, believing that "every book, when it falls into the hands of the reader, is liable to be examined, confuted, censured, translated, and abridged,"[111] even to the disadvantage of copyright owners.

The opponents of common law copyright thought it unreasonable, even foolish, to grant a property right in an author's "doctrine."[112] A perpetual monopoly would provide its holder the means to suppress certain works and extort high prices for publications.[113] While Yates believed authorial labour should attract compensation, he would not go as far as letting an author have a perpetual monopoly — the interests of the public in the dissemination of writings demanded it.[114] These interests came at the forefront in *Donaldson v Becket*[115] (*Donaldson*), in which a majority of Lords rejected the notion of common law copyright. Copyright lasted as long as the Statue of Anne prescribed and not a day more.[116] The campaign for the common law copyright had failed.

And yet, the Battle of the Booksellers had strongly influenced the theory of copyright law. For common law copyright to take hold, its proponents had to show that, while intangible,

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[110] See Deazley, *supra* note 101 at 117-18, 120-121.
[111] Johnson, *supra* note 53 at 557.
[112] William Warburton, "A Letter from an Author to a Member of Parliament Concerning Literary Property (1747)" in Richard Hurt (ed), *The Works of the Right Reverend William Warburton, DD Lord Bishop of Gloucester*, vol 12 (London: Luke Hansard & sons, 1811) 406 ("in the other case of property in the product of the mind, as in a *book* composed, it is not confined to the original [manuscript], but extends to the *doctrine* contained in it: which is, indeed, the true and peculiar property in a book," at 408).
[113] See Deazley, *supra* note 20 at 122-24; Sherman & Bently, *supra* note 107 at 29.
[114] *Millar v Taylor*, *supra* note 109 at 231.
[115] (1774), 4 Burr 408, 98 ER 257 (HL); 2 Bro PC 129, 1 ER 837 (HL); UK, HL, *Parliamentary History of England* vol 17 953.
[116] See Deazley, *supra* note 20 at 122-26; Abrams, *supra* note 101 at 1156-71.

its object was conspicuous enough to sustain property rights. After a few flawed alternatives,[117] they came up with a conception of literary property centred on the composition: the "fusion of idea and language."[118]

Then counsel William Blackstone presented this conception of literary property as composition to the King's Bench in *Tonson v Collins*. When the opposing counsel, Yates, argued that the plaintiff could not claim property over an unidentifiable object, Blackstone replied: "style and sentiment are the essentials of a literary composition. These alone constitute its identity."[119] Blackstone later extended upon the nature of literary property in his *Commentaries on the Laws of England*, where he described it as

> the right, which an author may be supposed to have in his own original literary compositions: so that no other person without his leave may publish or make profit of the copies. When a man by the exertion of his rational powers has produced an original work, he seems to have clearly a right to dispose of that identical work as he pleases, and any attempt to vary the disposition he has made of it, appears to be an invasion of that right.
>
> Now the identity of a literary composition consists entirely in the *sentiment* and the *language;* the same conceptions, clothed in the same words, must necessarily be the same composition: and whatever method be taken of exhibiting that composition to the ear or the eye of another, by recital, by writing, or by printing, in any number of copies, or at any period of time, it is always the identical work of the author which is so exhibited; and no other man (it hath been thought) can have a right to exhibit it, especially for profit, without the author's consent.[120]

Blackstone compared ordinary property to its literary counterpart to respond to Yates and the other opponents of common law copyright, but also to articulate copyright from the existing corpus of English law. He needed to give literary property enough material

[117] See Sherman & Bently, *supra* note 107 at 26-27 (these alternatives included delimiting literary property in the profits attached to a given title or in the title page).
[118] Rose, *supra* note 9 at 89.
[119] *Tonson v Collins*, *supra* note 108 at 343. See also Moyse, *supra* note 108 at 545-46.
[120] William Blackstone, *Commentaries on the Laws of England*, vol 2, 16th ed (London: Strahan, 1825) at 405 (underscore added). See also Stern, *supra* note 30 at 80 (Blackstone appears to have used the phrase "dispose of" to mean the distribution of the work, not its alteration).

characteristics without letting it be confused and subsumed with its material support. Blackstone resolved this tension by arguing that literary property emulated matter:

> The paper and print are merely accidents, which serve as vehicles to convey that style and sentiment to a distance. Every duplicate therefore of a work, whether ten or ten thousand, if it conveys the same style and sentiment, is the same work which was produced by the author's invention and labour. But *a duplicate of a mechanic engine is, at best, but a resemblance of the other, and a resemblance can never be the same identical thing. It must be composed of different materials, and will be more or less perfect in the workmanship*.[121]

Emulation conferred material characteristics upon literary property without running the risk of subsuming copyright with print. Like print, literary property persisted.[122] Print did not constitute literary property, yet it provided a reliable and consistent mark of its extent: "a literary work really original, like the human face, will always have some singularities, some lines, some features, to characterize it, and to fix and establish its identity."[123] Literary property could persist through time thanks to the determinacy of print in the form of a composition.

The literary property debate led to understand copyright understood as statutory, "incorporeal right to print a set of intellectual ideas or modes of thinking, communicated in a set of words and sentences and modes of expression."[124] *Donaldson* ended all hope of perpetual copyright: if a copyright existed by virtue of the common law, publication took that right away to replace it with statutory copyright. However, its proponents had still managed to establish a lasting definition of literary property, one few contested beyond the Battle of Booksellers.[125]

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[121] *Collins*, *supra* note 108 at 343 (emphasis added).
[122] See Subsection II.B.2.a.
[123] Francis Hargrave, *An Argument in Defense of Literary Property*, 2nd ed (London, 1774) at 7.
[124] *Millar v Taylor*, *supra* note 109 at 251.
[125] See Catherine Seville, "The Statute of Anne: Rhetoric and Reception in the Nineteenth Century" (2010) 47 Hous L Rev 819 at 826; Sherman & Bently, *supra* note 107 at 41-42; Rose, *supra* note 9 at 112.

Jurists could thus begin distancing themselves from the materialist approach of the Statute of Anne. Few would argue that intangibility prevented copyright if the object of its protection remained fairly perceptible and if it persisted in time. To fulfill this requirement, Blackstone had successfully portrayed the composition, "conceptions, clothed in … words,"[126] as capable of sustaining "the rights and accidents and qualities incident to property."[127] Justice Aston effectively summed up the Battle of Booksellers when he affirmed that "the composition … is the substance: the paper, ink, type, only the incidents or vehicle."[128] In the next century jurists turned this substance into a three-dimensional object capable of reaching altered reprints.

2. Geometry

As he described it, Blackstone's copyright was robust and conspicuous, if shallow and inflexible. The composition secured the object of copyright in its entirety — no more, no less. The work existed only in range; its protection extending as far as the composition could reach other works of authorial labour began. As composition, the work was wholly and immediately perceptible. Accordingly, barring external factors, such as the intent of the defendant, the scope of copyright could not reach into an altered reprint that exhibited a different composition. The status of altered reprints would only change after jurists interpreted more complexity into copyrighted works.

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[126] Blackstone, *supra* note 120 at 405.
[127] *Millar v Taylor*, *supra* note 109 at 232-33 (Yates J).
[128] *Ibid* at 226.

The Battle of Booksellers bolstered the courts' permissive outlook on altered reprints.[129] Justices Wiles and Aston, both supporters of common law copyright, argued that "*bona fide* imitations, translations, and abridgments are different; and … may be considered as new work,"[130] and that the owner of a book "may improve upon it, imitate it, translate it."[131] Referring to Blackstone, the first treatises on British copyright law also adopted a narrow conception of copyright that condoned the unauthorized production and circulation of a wide range of altered reprints.[132] Authors of altered reprints would be granted literary property if their work differed from their source:

> [W]hat is the kind of property meant to be here protected? Original works doubtless; but are compilations and abridgments to be considered in this light? Will spelling books, dictionaries, books of chronology, or collections of occurrences, &c. come under this denomination? *Certainly they will. They are all works of labour and invention.* … like the several historians, [their authors] draw their materials from the same source, not only vary in their arrangement of facts, and other circumstances, but have clothed their conceptions in different language. … each man's work stands distinct by itself, new and original.[133]

Blackstone said as much: copyright holders were "not injured by the sale of [an altered reprint] which resembled their composition; but … by the sale of [the composition] itself."[134] The fixity of the composition, inherited from print, prevented copyright from extending to altered reprints. Blackstone had the opportunity to directly apply his conception of copyright to an abridgment in *Strahan v Newbery*.[135] Upon examining both works, a Master in Chancery considered the defendant's work a fair abridgment. To resolve

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[129] See Bracha, *supra* note 8 at 224.
[130] *Millar v Taylor*, *supra* note 109 at 205 (Wiles J).
[131] *Ibid* at 226 (Aston J).
[132] See Burke, *supra* note 75 at 1-2; Godson, *supra* note 74 at 215; Maugham, *supra* note 73 at 126.
[133] John Trusler, *An Essay on Literary Property* (London: Printed for the author, 1798) at 14-15 (emphasis added). See also Stern, *supra* note 100 ("[t]hat Trusler worked so energetically to mine others' works helps to explain why he would have cared to insist that compilations and abridgments should be regarded as original for purposes of copyright protection," at 88).
[134] *Tonson v Collins*, *supra* note 108 at 342.
[135] (1774), 1 Loff 775, 98 ER 913 (Ch).

the case, Lord Chancellor Aspley consulted Justice Blackstone and both men agreed that a fair abridgment did not amount to infringement.[136]

The status of altered reprints in copyright law changed in the nineteenth century. Jurists discarded authorial labour as the organizing principle of copyright law in favour of providing copyright holders with the full market value of their original work.[137] They gradually increased the scope of copyright to protect "the exclusive right to take all the profits of publication which the book can, in any form, produce."[138] While maximizing the profits of literary works was a general concern of copyright law ever since its inception,[139] 'value' became the defining component of copyrighted works and the determining factor of infringement liability, thus increasing the scope of copyright.

For instance, in *Bramwell v Halcomb*,[140] Lord Cottenham gave little import to the quantity taken from the protected work, focusing instead on the value of the extracts: "[o]ne writer might take all the vital part of another's book, though it might be a small proportion of the book in quantity. It is not only quantity but value that is always looked to."[141] Anyone can measure the quantity of an extract, but his Lordship appealed to an element of a different

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[136] *Ibid* 913-14 (Newbery's "edition might be read in the fourth part of the time, and all the substance preserved, and conveyed in language as good or better than the original, and in a more useful manner," at 913). See also Mark Leeming, "Hawkesworth's *Voyages*: The First 'Australian' Copyright Litigation" (2005) 9 Austl J Legal Hist 159.

[137] See Alexander, *Copyright Law*, *supra* note 3 at 195-96 ("copyright owners sought to derive revenue from books in innovative ways and the courts developed the law in directions which made this possible," at 237); Bracha, *supra* note 8 at 303; Sherman & Bently, *supra* note 107 at 173-74, 194-95.

[138] George T Curtis, *A Treatise on the Law of Copyright: in books, dramatic and musical compositions, letters and manuscripts, as enacted and administered in England and America* (Boston: CC Little and J Brown, 1847) at 237-38. See also Thomas E Scrutton, *The Laws of Copyright: An Examination of the Principles which Should Regulate Literary and Artistic Property in England and Other Countries* (London: J Murray, 1883) at 22-23, 43-44; Walter A Copinger, *The Law of Copyright in Works of Literature and Art* (London: Stevens & Haynes, 1870) at 95.

[139] Alexander, *Copyright Law*, *supra* note 3 at 195-96.

[140] (1836) 3 My & Cr 737; 40 ER 1110 (Ch).

[141] *Ibid at* 1110.

order when he referred to value; taking a single line could constitute infringement if it was vital enough to the protected work.[142]

Bramwell would greatly benefit copyright holders. Lord Cottenham had omitted the intent of the defendant or even the amount of the reprint as determining factors of infringement in favour of the value of the copyrighted work. This would later be known as the 'objective' approach to infringement, contrasted with the 'subjective' one that had until then taken into account the intent of the defendant. But without the intent of the defendant and other circumstances to support infringement liability in cases of non-literal reproductions, jurists had to let go of the Blackstonian conception of literary property and extend the scope of copyright beyond the composition.

Jurists ceased to see copyrighted works in range to scrutinize them in depth. Like the composition, value was intrinsic to the work. But unlike the composition, it was not immediately perceptible. Recognizing value suggested that the composition corresponded merely to the surface of a work and not its entirety. This opened the way to suggest in turn that the object of copyright could be found in the bowels of the work. But letting go of the composition once again confronted tribunals with the problem of identifying the subject matter of copyright. Value did not freely disclose itself to observers; it compelled the tribunal to look beneath the surface of the work. Copyrighted works had therefore to increase in complexity to sustain the judicial gaze: to remain identifiable and determinate enough to support legal analysis, adapt to different facts, and sustain exclusive rights. Jurists looked into copyrighted works and spoke of the 'substance' found therein.

[142] See *Kelly v Morris*, (1866) LR 1 Eq 697 ("the Defendant could not take a single line of the Plaintiff's Directory for the purpose of saving himself labour and trouble in getting his information," at 702).

The House of Lords did as much in *Chatterton v Cave* (*Chatterton*).[143] The appellants had translated and adapted a French play, and complained that the respondent infringed on their work by presenting a version of his own.[144] At trial, the Lord Chief Justice Coleridge concluded that the defendant had taken without authorization two scenes from the appellants' play, but chose to spare the defendant from infringement liability.[145] The plaintiffs presented their objections to the Court of Common Pleas, but the Court agreed with his Lordship: the defendant had not taken a substantial part of the plaintiff's work, at least not enough to amount to infringement liability.[146]

Failing again on appeal, the plaintiffs brought their case to the House of Lords. Like the eight justices before them, the Lords did not find the defendant liable for infringement. Lord Hagan took the opportunity to reformulate the test in the following terms:

> [T]o render a writer liable for literary piracy, [the defendant] must be shown to have taken a material portion of the publication of another: the question as to its materiality being left to be decided by the consideration of its quantity and value, which must vary indefinitely in various circumstances. … *The quantity taken may be great or small, but if it comprises a material portion of the book, it is taken illegally. The question is as to the substance of the thing*, and if there be no abstraction of that which may be substantially appreciated, no penalty incurred.[147]

The House of Lords insisted that, to amount to infringement, a partial taking must be "material" or "substantially appreciated," as in 'big enough to matter' and not a mere particle.[148] In other words, *de minimis non curat lex*.[149] But despite appearances, the taking

[143] *Chatterton v Cave*, (1878) LR 3 HL 483.
[144] See *Dramatic Copyright Act*, *supra* note 102.
[145] *Chatterton v Cave*, (1875) LR 10 CP 572 at 573-74.
[146] *Ibid* at 575, 577, 580.
[147] *Chatterton*, *supra* note 143 at 497-98 (Hagan L, emphasis added), see also at 501, 504.
[148] *Ibid* at 492, 501. See also *Chatterton v Cave*, (1876) 2 CPD 42 (CA) ("whilst we are anxious to protect the property of authors, we must be careful not to withdraw from the common stock of literature or art that which is of no substantial value," at 44, Cockburn CJ); Evan J MacGillivray, *A Treatise upon the Law of Copyright* (London: John Murray, 1902) at 97-100.
[149] See also *Copyright Act*, *supra* note 1 s 1(2); Evan J MacGillivray, *The Copyright Act, 1911, Annotated* (London: Stevens and Sons Ltd, 1912) at 15.

of a substantial part of a copyrighted work as a necessary element of infringement derives from a movement towards the extension of the scope of copyright, through the notion of substance, rather than its limitation.[150]

Consider parallel developments in patent law. A little over a year before *Chatterton*, in *Clark v Adie*[151] (*Clark*), Lord Cairn considered in *obiter* how juries and tribunals should address partial or colourable reproductions of patented inventions. When an infringer appropriated some but not all parts of a protected invention, the tribunal had to determine "whether … [the defendant] had not really *taken and adopted the substance of the instrument* patented."[152] Indeed, "if the instrument patented consisted of twelve different steps, … an infringer who took eight or none or ten of those steps might be held … *to have taken in substance the pith and marrow of the invention*, although there were … steps which he might not actually have taken."[153]

Lord Cairn's "pith and marrow" doctrine remained a staple of British patent law for over a century.[154] The doctrine enabled courts to protect patent holders against the non-literal infringement of inventions.[155] Similarly to *Chatterton*, the defendant in *Clark* had taken no

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[150] See also Oren Bracha, "The Ideology of Authorship Revisited: Authors, Markets, and Liberal Values in Early American Copyright" (2008) 118 Yale LJ 186 at 229-30.
[151] (1877) LR 2 App C 315 (HL).
[152] *Ibid* at 320 (emphasis added).
[153] *Ibid* (emphasis added).
[154] The House of Lords eventually replaced it with the 'purposive construction' doctrine. See *Catnic Components Limited v Hill and Smith Limited* [1981] FSR 60 (HL); William Aldous, David Young, Antony Watson & Simon Thorley, *Terrell on the Law of Patents*, 13th ed (London: Sweet & Maxwell, 1982) at 174-177. See also Thomas Terrell, *The Law and Practice relating to Letters for Patent for Inventions* (London: H Sweet, 1884) at 155-56; Richard Godson & Peter Burke, *A Practical Treatise on the Law of Patents for Inventions and of Copyright* (London: W Benning, 1851) at 231-32 (*Clark* did not so much create the pith and marrow doctrine as consecrate a line of precedents supporting it).
[155] See Godson, *supra* note 74 at 159 (patent claims defined the outer limit of the scope of the patent, had to be interpreted literally, and with limited recourse to the specification as a whole). See also Matthew Fisher, *Fundamentals of Patent Law: Interpretation and Scope of Protection* (Oxford: Hart, 2007) at 7-10.

substantial part from the plaintiff's invention and could therefore not be found liable for infringement.[156] *Clark* shows how the minimal requirement of a substantial taking derives from the enlargement of the scope of intellectual property rights from literal to non-literal infringement.[157] The Lords in *Chatterton* only adopted a line of precedents that associated the identity of a work to its value through the idea of substance.[158]

In 1879, Eaton Drone published a landmark treatise in Anglo-American copyright law.[159] He presented therein two conceptions of copyright infringement. The first, simple and straightforward: infringement violated "the exclusive right of the owner to multiply and dispose of copies of an intellectual production."[160] Drone then exposed what we would understand today as non-literal infringement. Contrary to Blackstone, Drone did not limit the scope of copyright to "the mere words alone."[161] Instead, he argued that infringement occurred when someone reproduced the substance of the original work:

> The true test of piracy … is not whether a composition is copied in the same language or the exact words of the original, *but whether in substance it is reproduced*; not whether the whole, but whether a material part, is taken. In this view of the subject, it is no defence of piracy that the work entitled to protection has not been copied literally; that it has been translated into another language; that it has been dramatized; that the whole has not been taken; that it has been abridged; that it is reproduced in a new and more useful form. *The controlling question always is, whether the substance of the work is taken without authority*.[162]

[156] *Clark v Adie*, *supra* note 151 at 322. See also *Clark v Adie*, (1875) LR 10 Ch App 667 (CA) at 671-72. See also Sherman & Bently, *supra* note 107 at 55.
[157] See *Roworth v Wilkes* (1807), 1 Camp 94, 170 ER 889 (KB) (Ellenborough L: "it is enough that the publication complained of is in substance a copy," at 890).
[158] See *Bramwell v Halcomb*, *supra* note 140 (Cottenham L: "it is not only quantity but value that is always looked to," at 1110). See also *Leslie v Young & Sons*, [1894] AC 335 (HL) at 342, 344; *Campbell v Scott*, *supra* note 82 at 787.
[159] Eaton S Drone, *A Treatise on the Law of Property in Intellectual Productions in Great Britain and the United States* (Boston: Little, Brown, and Co, 1879).
[160] *Ibid* at 100-01.
[161] *Ibid* at 97.
[162] *Ibid* at 385 (emphasis added). See also J Herbert Slater, *The Law Relating to Copyright and Trade Marks, Treated more Particularly with Reference to Infringement* (London: Stevens and Sons, 1884) at 32-33.

Substance tied value and identity together. All works now included a set of essentials features from which they drew value. Tribunals emphasized these features to confer upon works enough identity and determinacy to support findings of infringement. Altered reprints, because they reproduced the underlying identity of their source, necessarily preyed on its value. With value not being tied to extrinsic authorial labour, but intrinsic substance, a defendant could not avoid infringement liability for the authorial labour vested in the altered reprint. As an object of substance and not mere surface, the copyrighted work allowed copyright holders to mount stronger claims against publishers of altered reprints.[163]

3. Alchemy

The substance of a work is an abridgment. At a time when the fair abridgment doctrine faced much criticism,[164] tribunals made abridgments of copyrighted works to defend them against non-literal infringement. According to American Justice John McLean, who

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[163] See Scrutton, *supra* note 138 at 47; Drone, *supra* note 159 at 434-45; Curtis, *supra* note 138 at 265-90. But see Charles P Philips, *The Law of Copyright in Works of Literature and Art and in the Application of Designs* (London: V&R Stevens, Sons & Haynes, 1863) at 110-11. In some cases, however, uncovering the substance of a work could prove useless to determine non-literal infringement. For example, courts expected reference works covering the same topic, such as grammars, directories, or maps, to share evident similarities. Because similarities alone could not support a finding of infringement, courts had to fall back on examining the intent of the defendant to determine whether the plaintiff's work had been unlawfully appropriated (see for example *Pike v Nicholas*, (1869) LR 5 Ch App 251 (CA) at 268; *Jarrold v Houlston* (1857), 3 K & J 708, 69 ER 1294 (Ch) at 1297-98). Courts insisted defendants could not "save themselves the trouble and expense, by availing themselves, for their own profit, of other men's works still subject to copyright" (*Lewis v Fullarton*, *supra* note 89 at 1081), should they even take a single line (see *Kelly v Morris*, (1866) LR 1 Eq 697 at 701-03).

[164] See *Tinsley v Lacy* (1863), 1 H & M 747, 71 ER 327 (Ch) (Wood V-C: "it is difficult to acquiesce in the reason sometimes given, that the compiler of an abridgment is a benefactor to mankind, by assisting in the diffusion of knowledge," at 330); *Sweet v Benning*, *supra* note 71 (Maule J: "[y]ou cannot justify the piratical use of another man's book, by merely calling the result an abridgment or a digest," at 846); *Dickens v Lee*, (1844) 8 Jur 183 (Ch) (Bruce V-C: "I am not aware that one man has the right to abridge the work of another. … to say that one man has the right to abridge, and so publish in an abridged form the work of another, without more, is going much beyond my notion of what the law of this country is," at 184).

discussed the fair abridgment doctrine more than any of his British peers, an abridgment "must not only contain the arrangement of the book abridged, but the ideas must be taken from its pages … To abridge is to preserve the substance, the essence of the work, in language suited to such a purpose."[165] Through this operation and for the purpose of non-literal infringement, the tribunal would distil "the substance, the essence of the work"[166] by "retrenching [its] unnecessary and uninteresting circumstances."[167]

Tribunals abridged a work into its substance by comparing its composition to that of its alleged reproduction.[168] Lord Herschell provided a vivid illustration of such interpretation, this time in reference to the design of a stove:

> And yet, *when you come to look at the kind of ornamentation*, and even to a certain extent in some cases to the form, *you can point to obvious differences when the two are placed side by side*. For instance the cover of the plaintiffs' is concave, there is a convexity about the cover of the defendants'. But all these differences in detail do not prevent the two designs being essentially the same.[169]

While all works had a substance susceptible of being illegally appropriated, it could only be revealed in the light of another. The scope of copyright derives from interpretation: the substance of the plaintiff's work emerges from comparing it with the defendant's, which in turn allows the tribunal to judge whether the latter constitutes a copy of the original.[170] The House of Lords said as much at the end of the nineteenth century:

> [*T*]*he question of infringement of the right depends on the degree of resemblance*. It must be solved by taking each of the works to be compared as a whole and determining whether there is not merely a similarity or resemblance in some leading feature or in certain of the details, but whether, keeping in view the idea and general effect created

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[165] *Story's Executors v Holcombe*, 23 F Cas 171, 4 McLean 306 (CCD Ohio 1847) at 311.
[166] *Ibid*.
[167] *Strahan v Newbery*, *supra* note 93 at 913-14.
[168] See *De Trusler v Murray* (1789), 1 East 362, 102 ER 140 (KB) at 141 ("[t]he main question," said Lord Kenyon, was "whether in substance the one work is a copy and imitation of the other," 141). See also Drone, *supra* note 159 ("[w]hat amounts to a substantial identity is a question of fact, to be determined in each case by a comparison of the two works," at 408).
[169] *Harper v Wright*, (1896) 1 Ch 142 (CA) at 147 (emphasis added).
[170] See Pottage & Sherman, *supra* note 5 at 143.

> by the original, *there is such a degree of similarity as would lead one to say that the alleged infringement is a copy or reproduction of the original or the design — having adopted its essential features and substance.*[171]

The substance of the work was to be constituted from the space between the original composition and the infringing work through careful observation, one resemblance at a time. The infringing work formed an alternate composition of the same substance as the original, like two faces of the same geometric prism. A copyrighted work and its alleged reproduction formed a closed system within which a tribunal could resolve the whole question of infringement. The tribunal did not have to resort to external factors, such as trade practices or the intent of the defendant. The source of truth for infringement shifted from civility and morality to the eye and the ear of the judge.

Take for example *West v Francis* (*West*).[172] The case concerned the unauthorized reproduction of seven copyrighted prints, a matter then governed by the *Engravers' Copyright Act*.[173] Unlike the Statute of Anne, the *Engravers' Act* explicitly prohibited altered reprints. It forbade anyone to "engrave, etch, or work, or cause or procure to be engraved, etched, worked, in mezzotint or chiaroscuro, or otherwise, or in any other manner copy in the whole, or in part, by varying, adding to, or diminishing from, the main design,"[174] without the authorization of its copyright holder. The defendant's reprints in *West* varied upon the original design of the plaintiff, and so the case hinged on whether these reprints constituted a copy within the meaning of the *Act*.[175] The King's Bench refused to limit 'copy' to literal reproductions, and found against the defendant. Justice

[171] *Hanfstaengl v HR Baines & Co Limited and EJ Mansfield*, [1895] AC 20 (HL) at 30-31 (Shand L, emphasis added).
[172] *West v Francis* (1822), 5 B&A 737, 106 ER 1361 (KB).
[173] 17 Geo III, c 57.
[174] *Ibid* s 1.
[175] *West v Francis*, *supra* note 172 at 1361-62.

Bayley defined copy on the basis of sight: "that which comes so near to the original *as to give every person seeing it* the idea created by the original."[176] He extended copyright to the plaintiff work's capacity to visually represent an idea.[177] Case reports would refer to his definition of copy well into the nineteenth century.[178]

In another example, the plaintiffs of *D'Almaine v Boosey* (*D'Almaine*) held against the defendant the unauthorized arrangement of their opera into a number of quadrilles and waltzes. The defendant's arrangements did not include the full score of the opera, but parts of its melodies; an "experienced musician" deposed an affidavit stating that the dissimilarities between the two works did not differ from usual arrangements, meaning that the defendant's works indubitably derived from the plaintiffs'.[179] The defendant replied that these variations distinguished his work enough from the original to spare him from infringement liability and provided the written testimonies of musicians to that effect, dancing his way to a fair abridgment defense.[180]

Lord Abinger acknowledged the new-work principle, but refused to apply it. He found instead that the defendant's work infringed on the plaintiffs' because they shared the same

[176] *Ibid* at 1363 (emphasis added).
[177] But see *Hanfstaengl v Baines*, [1895] AC 20 (HL) ("[t]he same idea which is suggested by the copyright work may be expressed by another painting or drawing which is in no sense a copy, and does not borrow its design," at 27).
[178] See for example *Boosey v Whight*, [1898] 1 Ch 122 (CA) at 124; *Hanfstaengl v Empire Palace,* (1893) 3 Ch 109 (CA) at 129; *Dicks v Brooks*, (1880) 15 ChD 22 (CA) at 29.
[179] *D'Almaine v Boosey*, *supra* note 71 (he concluded "by saying, that although in several instances the music of the quadrilles in question was slightly varied from the airs of the opera, yet such variation was not more than is always found to be necessary when the music of an opera is arranged in the form of quadrilles," at 118).
[180] *Ibid* (the defendant argued that the plaintiffs' work "is so altered, so abridged, arranged, and adapted as to be performed on the piano forte by one person, and that it is an entirely distinct work from the overture of Auber, which last-mentioned composition can only be performed by the united efforts of a number of persons performing on different instruments," at 119).

melody. That melody endured from original to arrangement, orchestra to piano, opera house to ballroom, and so did the substance of the work:

> *It must depend on whether the air taken is substantially the same with the original*. Now the most unlettered in music can distinguish one song from another, and the mere adaptation of the air, either by changing it to dance or by transferring it from one instrument to another, does not, even to common apprehensions, alter the original subject. *The ear tells you that it is the same. Substantially the piracy is where the appropriated music, though adapted to a different purpose from that of the original, may still be recognised by the ear*. The adding variations make no difference in principle.[181]

Tribunals discarded the original composition to determine the scope of copyright in favour of an abstract understanding of copyrighted works, i.e. 'substance'. The composition manifested the substance, which was what copyright meant to protect.

Importantly, substance was precise enough to mean something, but flexible enough to mean anything. It could support a range of findings in infringement cases and therefore help navigate the contradictory premise of copyright law: encouraging the creation and distribution of works by restricting the creation and distribution of works. We have already seen how substance extended the scope of copyright towards works that did not reproduce the composition of a protected work and restricted it from works that merely reproduced a particle of said composition.[182]

A single work could even support contradictory findings, depending of the angle at which a competent observer examined it. This is nowhere as clear as when comparing *D'Almaine* to *Wood v Boosey* (*Wood*).[183] In *Wood*, a Mr. Brissler had prepared arrangements for piano of an opera by Otto Nicolai at the behest of Nicolai's representatives. The representatives

[181] *Ibid* at 123 (emphasis added).
[182] See above, Subsection VI.B.1.
[183] See *Wood v Boosey*, (1867) LR 2 QB 340 (QB) [*Wood v Boosey*, (1867)]; affirmed in (1868) LR 3 QB 223 (Ex) [*Wood v Boosey*, (1868)].

then assigned the piano arrangements to the plaintiff. The plaintiff engaged proceedings against the defendants when they publicly performed the said arrangements without his authorization. The defendants responded that the plaintiff held no copyright in the arrangements: he had failed to comply with the requirements of the *International Copyright Act*,[184] having registered the arrangements and identified their author as Nicolai instead of Brissler. The case, therefore, did not hinge on whether the piano arrangements infringed on Nicolai's copyright, but on who should be considered their true author between Brissler and Nicholai.

Every reported opinion in *Wood* agreed that Brissler had authored the arrangements and therefore considered them distinct from Nicolai's opera. The justices came to this conclusion after underlining the differences between the compositions and emphasizing the authorial labour required to produce the arrangements.[185] *Wood* thus seemed to contradict *D'Almaine* on principle, but not according to the Chief Baron Kelly. When the plaintiff's counsel explicitly referred to *D'Almaine*, arguing that Brissler had taken the melody and other essential parts of Nicolai's opera, the judge responded he would have considered Brissler's an infringer should he had made the arrangements without authorization.[186] When looking for an infringer, the arranger was "a mere mechanic."[187] When looking for an author, the arranger had created a "new and substantive work."[188]

[184] *An Act to amend the Law relating to International Copyright*, 1844 (UK), 7 & 8 Vict, c 12 s 6.
[185] See *Wood v Boosey*, (1867), *supra* note 183 at 350, 354-56; *Wood v Boosey*, (1868) *supra* note 183 at 229-33.
[186] *Ibid* at 228-29.
[187] *D'Almaine v Boosey*, *supra* note 179 at 123.
[188] *Wood v Boosey*, (1868), *supra* note 183 at 229.

Depending on the circumstances of the case, the same work would be considered original or infringing. Chief Baron Kelly and his colleague on the Queen's Bench[189] paid more attention to the dissimilarities between the two works in the context of authorship, while they would have paid more attention to their similarities in that of infringement.Their approach sheds doubt on the capacity of a work to represent anything without the interpretive efforts of the tribunal. The distinction is not so much about the passage from a 'subjective' and an 'objective' approach to infringement, but about how changes in how tribunals interpreted copyrighted works from the eighteenth to the nineteenth century transformed these works into a substance complex enough to meet the needs of contemporary industries.

C. Synthesis

As I undertook historical work, I did my best to follow one legal scholar's advice: to take the past on its own terms, strangeness and all.[190] The differences that separate us from our ancestors not only make their lives and beliefs harder to understand, but also make it inherently precarious to draw implications from history in order to sustain arguments about how we should understand ourselves and the difficulties we face:

> Anyone who chooses to engage in this enterprise [writing history] … "must be prepared to be surprised: the people she studies will reject or ignore implications she finds self-evident while insisting on drawing associations she thinks untenable." Our forbears are *not* just like us except that their hygiene was worse or they woke earlier and ate fewer meals each day. The differences between us just as often touch the most profound questions in life, everything from rules of friendship and business to attitudes

[189] See *Wood v Boosey*, (1867), *supra* note 183 ("if the arrangement be made without the consent of the composer of the opera, such an adaptation would be an infringement of his copyright," at 350).
[190] See Larry D Kramer, "When Lawyers Do History" (2003) 72 Geo Wash L Rev 387 at 396.

> about fundamental values to the way in which perceptions of reality itself are constructed and experienced.[191]

Avoiding assumptions of similarity between the past and the present is a challenge for any professional historian, even more so for an amateur such as myself. And so, rather than ignoring major historical differences, I have made them the very focus on my work: the indeterminacy of print, the efficacy of censorship and the singularity of works.

No one in seventeenth-century England could trust a book by its cover. Rampant piracy, literary fraud and clandestine publications continually exposed readers to the risk of encountering false, seditious or blasphemous texts. Exacerbating the problem, books were attributed the capabilities to transform, even corrupt their readers. The Crown thus regulated the press by means of a licensing system, enforced by the officers of the Company of Stationers and printing patents delivered to favoured subjects. While authorities struggled to counteract piracy, literary fraud and clandestine publications, the licensing system and the printing patents still helped readers, censors, printers and booksellers establish relationships of trust.

Cavalier Richard Atkyns mounted a legal challenge against the Company of Stationers during one of the most precarious periods of its history. Atkyns held a printing patent over common law books, one the Company claimed for itself when royal institutions broke down during the Interregnum. Atkyns, helped by an idealist printer named John Streater, launched legal proceedings against the Company to secure the exclusive privilege to print common law books. The patentees published a pamphlet in which they argued that all publishing should proceed under the direct authority of the Crown, entrusted to gentlemen–

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[191] *Ibid* at 396-97, quoting H Jefferson Powell "Rules for Originalists" (1987) 73 Va L Rev 659 at 668.

patentees rather than treasonous and greedy booksellers. Atkyns and Streater's more moderate views would form the basis of Crown copyright, still in force today in jurisdictions following the English tradition of copyright law.

Drawing from Thomas Hobbes, I reformulated Atkyns and Streater's proposal as a political solution to an epistemological problem. The governance of the kingdom and the administration of justice demanded that the reading public reach a minimal degree of consensus on which law books could be trusted to contain the law of the land. But there could be as many reasons to trust a book as there were readers, making reaching such a consensus highly impractical in seventeenth-century England. I portrayed the legislator as a sovereign linguistic authority entitled to command the signification of equivocal names, such as 'authenticity'. Readers could keep disagreeing on what made a book authentic, but until they agreed, they would have to comply with the sovereign's command.

Chapter IV underlines two modes of interaction between law and culture, the latter of which Naomi Mezey describes as "any set of shared, signifying practices … by which meaning is produced, performed, contested, or transformed."[192] The routine and implicit reliance of readers and members of the book trade on legal signs of trust correspond to a version of culture, "conceived as the almost unconscious meaning-systems that people inhabit and enact without choice."[193] In contrast, Atkyns' efforts to lobby lawmakers to redirect the signifying expression of law in favour of his printing patent over the symbols of the Stationers fits another version of culture, conceived "as the more self-conscious

[192] Naomi Mezey, "Law as Culture" (2001) 13 Yale JL & Human 35 at 42.
[193] *Ibid*.

deployment of certain symbols whose meaning becomes temporarily salient."[194] In both cases, law remains an important "institutional cultural actor whose diverse agents … order and reorder meanings."[195]

Portraying the legislator as a sovereign linguistic authority is a comforting theory of lawmaking, but an incomplete one. Admitting the signifying expression of law necessarily implies rejecting the prescriptivist stance. Indeed, "[s]hort of brainwashing and other coercive manoeuvres aimed at consciousness rather than action, the individual conscience can neither be coerced nor dictated to by any external rule of just conduct."[196] The best the sovereign linguistic authority can hope for is for its subjects to act *as if* they had considered and internalized the substance of her commands, whether or not they effectively did.[197] Admitting this degree of agency in legal subjects implies rejecting legal prescriptivism, which only admits a binary response to legal prescriptions (to comply or not to comply), in favour of an anti-prescriptive stance in which

> law and legal rules are the symbols by which human beings make preliminary and provisional allocations of the range of choice appropriate to maximizing human freedom both selecting the various normative communities within which they seek to participate, but also in selecting responses to the normative commitments that such participation implies.[198]

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[194] *Ibid*.
[195] *Ibid* at 45 ("law is one of the signifying practices that constitute culture and vice versa," at 38).
[196] Roderick A Macdonald & David Sandomierski, "Against Nomopolies" (2006) 57 N Ir Legal Q 610 at 627.
[197] See also *ibid* at 626-27 (considering the diverse reasons someone would act or not in accordance with the legal rules of the State: "even when people are aware of an official legal rule, their conforming behaviour may have more to do with indifference, prudential considerations or adherence to an identical standard arising in religion on personal morality than with deep commitment to official law," at 627).
[198] *Ibid* at 624.

The anti-prescriptive stance ‘muddies the water’ of the legal theory by injecting therein an untoward amount of unpredictability and scepticism — this is the point — as illustrated by the censorship of the *Encyclopédie* and the evolution of copyrighted works.

In eighteenth century France, a caste of public intellectuals came to incarnate the values of the Enlightenment. Armed with reason and Newtonian science, the *philosophes* launched an offensive against the institutions of the *Ancien régime*, especially the Church. One of these *philosophes*, Denis Diderot, sought to encapsulate all the knowledge of his generation in a critical encyclopaedic work that would, he hoped, triggered an intellectual revolution in France. To do so, however, Diderot and his fellow encyclopædists had to carefully manoeuvre the strict state censorship rules of the *Code de la librairie*. The royal administration of censorship, the Librairie, faced a difficult task og its own: protecting the political and religious orthodoxies of the *Ancien régime* and favouring the growth of the publishing trade at a time when French readers were growing fonder for authors willing to adopt a more critical voice on public affairs, including religious matters. To overcome this challenge, Malesherbes, the Director of the Librairie, allowed for a clandestine book trade regulated by tacit permissions to publish.

The associated publishers of the *Encyclopédie* published its first volumes in a time of intense conflict between the King and his *parlements*. Under the leadership of the Parlement de Paris, one of France’s most powerful judicial courts, the *parlements* openly criticized Louis XV’s policies through the emission and publication of remonstrances in response to his legislative edicts. The King and the *parlements* became political rivals, each one attempting to establish oneself as the most effective and zealous guardian of France’s traditional values. Not long after the Parlement had involved itself in the censorship of

Diderot's *magnum opus*, the *Encyclopédie* fell victim to the ongoing constitutional crisis when the Conseil d'État revoked Le Breton's publishing privilege.

The suppression of the *Encyclopédie* showcases one of the main purposes of censorship, namely the establishment and reinforcement of a hierarchy of texts. In every instance of censorship, the censor claims authority over the censored. Diderot and his allies reasoned away from censorship rules by inserting unorthodox and even radical passages in seemingly innocuous entries, and by developing a language and a system of cross-references their readers would learn to decipher. The arational commands of the sovereign linguistic authority faces an inherent limit: when the legislator commands the signification of a name, she delimits the signified name. Legal agents attempt to evade the commands of the sovereign linguistic authority by staying clear of the name, for example by labelling their actions under another. Legal agents, not unlike the encyclopædists, nullify the effect of rules by turning their formality against them.[199]

Because they depend on language, the meaning of rules and analogous normative statements is always indeterminate.[200] The commands of the sovereign linguistic authority themselves require interpretation. Following Louis XV's proclamation of 1757, condemnable writings tended "to attack religion, rouse the minds, demean [royal] authority, and disturb order and peace."[201] However, making sense of the proclamation necessarily involved interpreting its meaning in relation to a specific context or set of facts.

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[199] See also Robert W Gordon, "Lawyers in Producing the Rule of Law: Some Critical Reflections" (2010) 11 Theoretical Inq L 441 at 452.
[200] See Kurt M Saunders, "Law as Rhetoric, Rhetoric as Argument" (1994) 44 J Legal Educ 566 at 567-68; James B White, "Law as Rhetoric, Rhetoric as Law: The Arts of Cultural and Communal Life" (1985) 52 U Chi L Rev 684 at 689.
[201] *Déclaration royale du 16 avril 1757*, BNF Ms fr 22.117 200 at 200^{v} (translation mine).

Doing so also depended on language and, therefore, generated more interpretations. In arguing in favour of one interpretation over another, legal agents introduce more signs and meaning, leading to further dispute.[202]

The law does not end linguistic disputes. Instead, legal agents resort to law to structure these disputes within the language of law's rules and statements, where disputes can be resolved with further commands. The Parlement de Paris and the Conseil d'État did as much with the *Encyclopédie*. The Parlement re-established the censorship of the work by asserting a monopoly over its interpretation. No rational argument as to what the *Encyclopédie* was, or what it could do, would suffice to overcome the terms in which the work was condemned in de Fleury's indictment. Whereas Diderot contemplated censorship as a decentralized forum wherein all texts would confront each other on equal terms on the sole basis of reason, the Parlement unilaterally asserted a hierarchy of texts in which its proclamations lorded over the dissertations of the *philosophes*.

Malesherbes responded to the Parlement's involvement by pressing for the revocation of the *Encyclopédie*'s privilege. In so doing, the Director saved the work from the Parlement, removed it from a hierarchy of texts that was both threatened by and threatening the *Encyclopédie*, reasserted the superiority of the King's texts over the Parlement's, and thus fulfilled the dual, contradictory mandate of the Librairie. Sheltered in clandestinity and protected by the terms of the very ruling that revoked the privilege of the *Encyclopédie*, the encyclopædists completed their work in relative peace. But unbeknownst to Diderot,

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[202] See White, *supra* note 200 ("[t]he legal speaker always acts upon the language that he or she uses, to modify or rearrange it; in this sense legal rhetoric is always argumentatively constitutive of the language it employs," at 690).

Le Breton took it upon himself to perform the functions of the royal censors, fearful that the editor and his most radical contributors would further provoke the ire of the powerful.

The rational ambiguity that comes with the arational exercise of linguistic authority leads to an ever more complex system of commands and interpretations. For some legal agents, complexity is a rhetorical resource. In the early years of the Statute of Anne, defendants could avoid infringement liability for publishing an unauthorized altered reprint of a copyrighted work, such as an abridgment. They only needed to show that producing the altered reprint had required authorial labour and they had done so without fraudulent intent. Progressively, the courts focused less on the defendant's intent and actions, and more on whether the defendant's work reflected the so-called 'substance' of the plaintiff's. Justices ascertained this substance with a mixture of observation and projection, drawing from similar developments in patent case law. The work increased in complexity as it dissociated itself from authorial labour, expanding the scope of copyright towards non-literal infringement. Jurists simultaneously discovered and produced the substance of intangible goods from the singular matter to the plural substance.

The history of the British copyrighted work shows a succession of interpretations of similar objects fuelled by ambiguous legislation. Chancery dissociated the work from the material representation it had inherited from legislation, only for this representation to be pushed aside by common law courts binding the work to the flat, plain contours of its composition. When the courts turned away from the defendant's actions, the 'substance' of the work became the primary battleground on which infringement cases were fought. The nineteenth-century ambition to re-organize copyright law in a principled and elegant manner also supported the ascendency of substance. Treatise writers, eager to promote their

own vision of the field, turned one development of case law — protecting the value of the copyrighted work — into the organizing principle of copyright law. Substance came from a line of precedents that supported this principle.

The protagonists of the preceding chapters responded to the challenges they faced with authority, ambiguity and plurality. Faced with the indeterminacy of print, Atkyns and Streater would have commanded readers to consider books published by patentees as authentic. The Stationers did as much by pointing to the figure of the author to guarantee the authenticity of their publications. Faced with the efficacy of censorship, Diderot and his fellow encyclopædists attempted to outmanoeuvre the *Code de la librairie* with evasive wordplay, hiding passages royal censors would have considered unlawful in innocuous titles. Malesherbes, in turn, circumvented the *Code* by granting the associated publishers the 'tacit permission' to publish the *Encyclopédie*. Finally, faced with the simplicity of copyrighted works, justices and jurists turned a flat composition into a complex substance capable of preventing the unauthorized, non-literal reproduction of protected works. As the work became plural, it became ever harder to determine with certainty whether a given work constituted the copy of another.

The synthesis of the present Part is a cycle of lawmaking. Indeterminacy calls for authority, the efficacy of which is threatened by ambiguity, leading to a movement from singularity to plurality that, in turn, produces more indeterminacy. Apparent conflicts of law and technology should not be understood as such, but rather as the visible process of legal agents coming to terms with the rhythm of law. What calls for further study is not technology or even social change, but law's relation to time.

CHRONOMANCER

The evening after my father broke the news of his diagnosis, I was saddened by the thought that he would likely not attend my thesis defense. He was a man of habit who enjoyed small rituals. One of these rituals was to give me a watch every time I earned a degree. The day after his passing, putting the cart before the horse, my mother clasped my father's last watch around my wrist. It is an Armani, with elegant hands and an orange face. It had been perhaps four years since I last wore a watch. As a millennial smartphone-user, I find that carrying two time-giving devices somewhat redundant. That said, I rarely take this one off.

In the short time since I began wearing my father's watch, I noticed how quickly it has affected my cognitive habits. Obviously, I look at it whenever I need to know the time of day, but I also often glance at the watch when I need to think about time more generally. For example, when I need to plan a course of action, to remember past events or even to decide whether I should wait for the espresso I ordered at the counter or at a table. The watch also reminds me of the finality of my father's life and, consequently, of my own. By representing time, the watch encourages me to think in temporal terms. Clocks are so effective at representing time that most people think of time in terms of duration.[203] In other words, we tend to think that time *is* regular, and that it advances at constant intervals: seconds, minutes, hours, days, weeks, months, years and centuries.

French historian Daniel Roche described the mechanical clock and the watch as "[t]he great triumph of the modern age."[204] Not only did these inventions allow even a child to keep

[203] See generally Kevin K Birth, *Objects of Time: How Things Shape Temporality* (New York: Palgrave Macmillan, 2012).
[204] Daniel Roche, *France in the Enlightenment*, trans by Arthur Goldhammer (Cambridge: Harvard University Press, 1998) at 88.

track of time on a rainy day or at night, they also "reflected the idea that the world, indeed the universe, as well as the human body, could be understood in mechanical terms. … The metaphors of the clock found application in all fields of human freedom and the mechanics of society."[205] Clocks and calendars manufacture a predictable and orderly kind of time that corresponds to Newtonian physics. In that form, time is an absolute, objective standard to which the whole world can align and even commodify. The watchmaker put time within arm's reach of the masses. It is therefore no surprise that we delegate keeping track of time to our watches and thus take it for granted.

Save for the rare exception,[206] legal scholarship largely ignores law and time as a theme of research. To say that time is a pre-condition of law may seem too obvious to be of interest — one could make the same point about oxygen. And yet, we may also take note of the different kinds of time that inhabit law, and of how legal agents seamlessly move from one kind to another. For example, one only needs to compare procedural rules setting the pace of judicial proceedings to statements of 'lag' or 'newness' so central to law and technology practice. The former kind of time focuses on duration as measured by clocks and calendars, whereas the second evokes an idea of timing abstract from the regular progression of hours and days. Rules of procedure evoke quantitative time, whereas lag and newness refer to qualitative time as statements about the past, the present and the future. Statutes of limitations bring to mind irreversible time, whereas retroactive legislation evokes the reversible kind. But while legal agents routinely take advantage of the plurality of time, legal scholars have yet to specifically consider it.

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[205] *Ibid*.

[206] See Emily Graham & Sian Beynon-Jones, "Regulating Time".

While interpretation is the overlying theme of the thesis, time is the underlying one. With its emphasis on obsolescence and lag, Chapter I explicitly examines the interaction between law and time. The model of technological deviancy does not differ from that of law lag in its conception of time: time is absolute, a permanent feature of the universe that exists independently from the actions occurring within the universe. As an objective fact or the result of legal interpretation, the newness of technology still occurs in clock- and calendar-time. One finds the same conception of time in Rudolph Von Jhering's work, discussed in Chapter II. Jhering's laws of causality and purpose cannot operate without time: an event cannot trigger another event unless there is a minimal amount of time between them.[207] The same extends to Jhering's conception of rules ('If …, then …') and coercion. As for technological neutrality, speculation and discretion, they attempt to tame an unpredictable and terrifying future by making law timeless. The art of governing by rules may also rest on timing: too long a temporal delay between the utterance of a rule and its reception, and the rule may suffer entropy; too short, and the ruler and the ruled collapse into each other.

Nostalgia fuels Chapter III. Concerns over techno-regulation reflect the fear of losing something precious and uniquely human in the face of implacable, deterministic innovation. A similar nostalgia drives the account of legal instrumentalism, within which Jacques Ellul's frame of reference marks the ascension of legal technique over law's justice. The feeling in turn becomes personal as I contemplate how, from the turning point between paper and electronic tools of research, modern information technology "challenges forth" legal materials and "enframes" law, as Martin Heidegger might have said. In my attempt to challenge the conceptual boundaries between law and technology, I

[207] See Barbara Adam, *Time and Social Theory* (Cambridge: Polity Press, 1990) at 57.

re-positioned them in time and, in doing so, endowed them with the permanency of irreversible time. But irreversible does not mean immutable. It is easier to picture the new destroying the old than it is to imagine them transforming each other over time.

Part I of the thesis underlines that the continuous reliance on the obsolescence stereotype leaves law and technology literature in a time loop: a constant retelling of a basic narrative from normality to novelty, and back again. While enforcing looped time can consist of a heroic attempt at subjugating a threat,[208] legal scholars who seek to achieve different (perhaps even good) insights about law and technology may want to extend the range of their repertoire. The attempt has caused me much anxiety. I had spent years perfecting obsolescence as a guarantee of success in my field. To renounce the dogma, I had to deconstruct my own knowledge, which made me the prime target of the critique of the first Part of this thesis. The more effective I became at doing just that, the more confused I was. The second Part of the thesis consists as much of an attempt to renew my understanding of law and technology as it is one to soothe my anxieties.

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[208] See Scott Derrickson (dir.), *Doctor Strange*, Walt Disney Studios Motion Pictures, 2016:

Dormammu

You cannot do this forever.

Dr. Stephen Strange

Actually, I can. This is how things are now!

You and me. Trapped in this moment. Endlessly.

…

Dormammu

End this! You will never win.

Dr. Strange

No. But I can lose. Again. And again. And again. Forever.
That makes you my prisoner.

The centrality of time in Part II goes beyond history. Hobbes describes two stages of human development: a state of nature that predates language and a second, post-language state characterized by strife and conflict. The commonwealth may never come to be, but once it is constituted, it is irreversible. The conflicts generated by equivocal names inevitably emerge through time as individuals give different meanings to the same names after their own experiences. Language destroys by accumulation and it is susceptible to entropy. In early modern England, an abundance of suspicious titles threatened the authenticity and integrity of print. As two troublesome patentees pleaded, a sovereign could overcome the indeterminacy of print by using arational commands.

Hobbes offers an interesting perspective on law and technology. Based on his philosophy of language and the terms of the social contract, I suggest that the role of law is to mitigate conflicts over technological meaning. It does not matter, then, whether the law accurately depicts technology or keeps up with its development. The law's focus is on people, not their stuff. Law retains its relevance so long as there is disagreement over technological meaning. If legal subjects are dissatisfied with the rules applicable to technology, law offers a starting point over which they can achieve consensus. Technological change alone is thus no cause for reform: law does not have to adapt to technology, only to human conflict. The spectre of technological change is substituted for that of impossible consensus. In temporal terms, one sequence of events beginning with a new technology and leading to law reform substitutes for another beginning with conflict and ending with its possible resolution.

Innovation is prestidigitation: it is about conjuring new problems out of old ones, but with panache. A conception of law that rests on the sheer exercise of authority cannot stand

because, within law, power always cohabits with reason.[209] Even Hobbes acknowledged that the sovereign must employ rational symbols for her subjects to recognize the exercise of her authority. That being said, the anti-prescriptive stance I have taken attributes to reason a more active role than the mere recognition of the law. The sovereign's arational commands may substitute for reason as a political solution to epistemological problems, but they can never displace reason altogether. Because language is contextual and ambiguous, commanding the meaning of names does not eradicate equivocality. Instead, law pushes equivocality forward in time by prophesying about the interpretation of names. It supports coordination and peace in the present by delegating any eventual confusion and discord to our future selves.

When the *Ancien Régime*'s *Code de la librairie* asserted the Crown's authority over books, it left to the Chancellor's Librairie the task of determining which books would be considered unlawful. With their rulings, the royal censors clued Diderot and the encyclopedists into circumventing censorship with innocuous titles — names leading to a more favourable future. When the authorities caught on to them, the authorities imposed their own interpretation over the meaning of the *Encyclopédie* and attempted to reverse its publication through suppression. In doing so, they asserted their power over the *philosophes*, which attorney-general de Fleury demonstrated by indicting the *Encyclopédie* in *Parlement de Paris* with Diderot's own words. But the rulings of the Parlement and the Conseil failed to write the future of the work in stone, for Malesherbes interpreted 'suppressing' the *Encyclopédie* as concealing it.

[209] See Hanoch Dagan, "The Realist Conception of Law" (2007) 57 UTLJ 607 at 628-29, 636-37 ("[l]aw is … a forum of reason, and reason imposes real albeit elusive constraints on the choices of legal decision makers and thus on the entailed application of state power," at 623).

Law can hardly be set on a stable trajectory precisely because of its reliance on language and the context of its use. Even in written form, law is continually emerging and mutating; it is never static. Future trajectories can only be surmised with the benefit of hindsight or, more precisely, as a synthesis of the past. It is with the benefit of historical records that one can construct the trajectory of the copyrighted work from matter to substance. But at the time when these records are constituted, litigants, lawyers, judges, reporters and treatise writers are not following a path laid in front of them. Instead, they plot a trajectory from that of their predecessors. Lawmaking involves an alignment between past and future that only emerges in the present.[210]

I can articulate this idea more clearly with the idea of the *Encyclopédie* as monument. The precariousness of human existence prompts us to seek out permanence in durable architecture, artefacts, rules, traditions, rituals and even habits.[211] Monuments aim to preserve knowledge and meaning for commemoration. The *Encyclopédie* is itself a monument constituted to protect the realizations of the encyclopædists' time through careful collection, ordering and dissemination:[212] "the goal of an *Encyclopédie* is to gather knowledge scattered on the surface of the earth; to expose its general system … and transmit it to the men who will follow us; so that the works of past centuries have not been useless to the succeeding centuries."[213] But meaning is not static: when we look upon a monument such as the *Encyclopédie*, our "experience can only be understood through the

[210] See also Adam, *supra* note 207 at 24, 136.
[211] *Ibid* at 132-33, 135.
[212] See Ronan Chalmin, *Lumières et corruption* (Paris: Honoré Champion, 2010) at 118, 134.
[213] Denis Diderot, "Encyclopédie" in Jean le Rond d'Alembert & Denis Diderot (eds), *Encyclopédie ou Dictionnaire raisonné des sciences, des arts et des métiers, par une Société de gens de lettres*, vol 5 (Paris: chez Brisasson, David, Le Breton & Durand, 1755) 635 at 635 (translation mine).

mediation of intervening knowledge and historical events."[214] Past events are irreversible, but their meaning is constantly re-created in the present, and is thus hypothetical and revocable.

For example, some historians of the nineteenth century, such as Alexis de Tocqueville, have pointed to the *Encyclopédie* and the other works of the *philosophes* as contributing factors to the French Revolution.[215] However, the *philosophes* were not revolutionaries: like Diderot and Voltaire, most hoped to join the elites of the *Ancien régime*, not to overthrow them. The volumes of *Encyclopédie* sold for such a steep price that only wealthy readers could acquire them, most of who also belonged to this elite class.[216] French historian Roger Chartier argues that the revolutionaries looked back to the writings of the *philosophes* after 1789 to construct a continuity between past and present, explain the intervening events and justify their actions. In other words, the Revolution made revolutionary books, not the other way around.[217]

We may also credit the *Encyclopédie* for creating technology as we now understand it. The son of a knife-maker who held the practical arts in high esteem, Diderot gave them a prominent place in the *Encyclopédie*.[218] Between 1762 and 1772, the associated publishers delivered subscribers eleven volumes of plates illustrating in great detail, among other things, a wealth of practical arts from agricultural to glass techniques. In their depiction of the practical arts (see, for example, in Figure 3), we see "a world without terror."[219] The

[214] See Adam, *supra* note 207 at 143.
[215] See Roger Chartier, *Les origines de la Révolution française* (Paris: Le Seuil, 1990) at 99-101.
[216] *Ibid* at 123-24.
[217] *Ibid* at 17, 126-28, 133, 159.
[218] See Jacques Proust, *Diderot et l'*Encyclopédie (Paris: Armand Colin, 1962) at 190-92.
[219] Chalmin, *supra* note 212 at 147.

workers appear peaceful and satisfied as they toil without pain in pristine, well-ordered and simple workshops as confident masters of their known environment and responsible for their happiness.[220] Published throughout Europe, the *Encyclopédie* and its successive editions offered their readers an optimistic and universal representation of the practical arts, detached from personal and local circumstances. Technology thus became an abstract entity that could be understood in its own right rather than disparate techniques.[221]

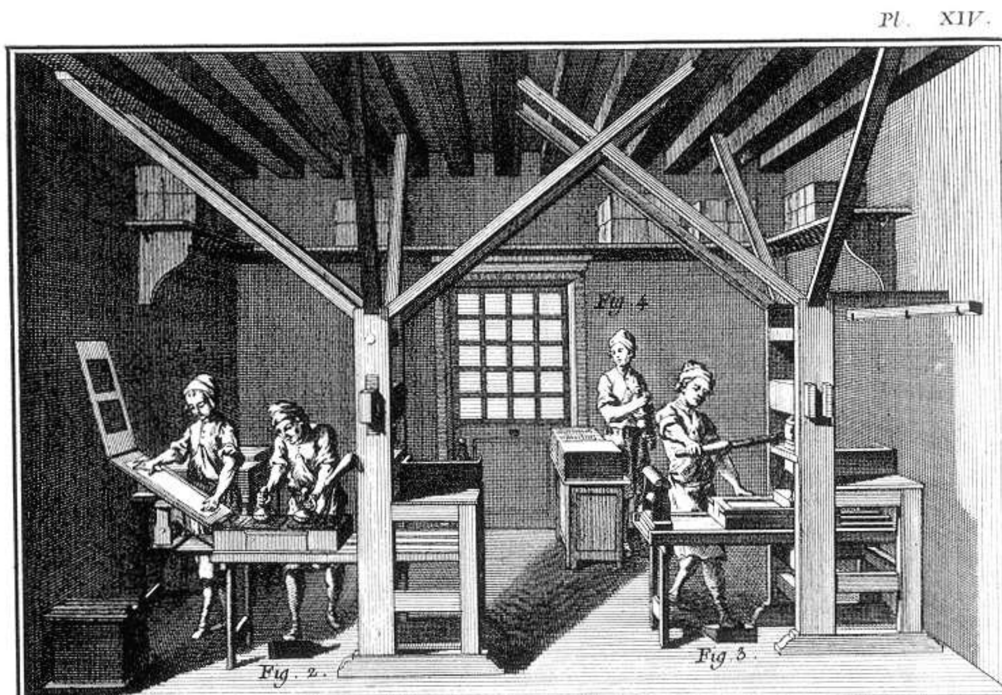

Figure 3. "Planche XIV : Imprimerie en caractères" in *Recueil de planches, sur les sciences, les arts libéraux, les arts méchaniques, avec leur explication*, vol. 7 (Paris: Briasson & Le Breton, 1769)

Tools and techniques may go back to the *homo habilis*, but if it emerged from the pages of the *Encyclopédie* technology is a much more recent invention. Perhaps its recent history

[220] See also Simone Goyard-Fabre, *La philosophie des Lumières en France* (Paris: Librairie C Klincksieck, 1972) at 243.
[221] See Roche, *supra* note 204 at 576.

explains why law and technology literature still relies on the same instrumental use of language employed by the encyclopædists: preservation by appropriation, appropriation by inventory and inventory by naming.[222]

Anxiety, however, has largely displaced the optimism of the French Enlightenment.[223] So it is not knowledge that law and technology literature aims to preserve, but rather the values enshrined in the law. The once-idolized purity of technology now seems dangerously naive. Due to the ambiguity of technology, we seem to be stuck at a crossroad between tradition and progress. Case in point, the problem of law lag designates a situation where legal rules fail to protect society from a new technology and where society cannot benefit from technology because of legal hurdles.

But the dichotomy between tradition and progress stretches only as far as the dichotomy between past and future. While tradition and progress emphasize stability and change, both propose a "synthesis of the past and a prophecy of the future."[224] They form two sides of the same coin, namely time, for "[t]ime is not only a necessary aspect of change but also of stability, since the latter is nothing but an awareness that something has remained stable whist its surrounding environment, and even the components within, have changed."[225]

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[222] See also Chalmin, *supra* note 212 at 128 ("[*i*]*l s'agit d'encercler, et non pas cercler, les connaissances, de les tenir en cercle mais aussi de créer une barrière de protection, pour éviter à la fois toute dissipation et toute intrusion*," at 127; Proust, *supra* note 218 at 205-20 (on the efforts of encyclopædists to develop a language capable of describing techniques).

[223] Robert Nisbet, *History of the Idea of Progress* (New York: Basic Books, 1980) ("the present age of the revolt against reason, of crusading irrationalism, of the almost exponential development and diffusion of the occult, and the constant spread of narcissism and solipsism make evident enough how fallible were and are the secular foundations of modern thought. It is inconceivable that faith in either progress as a historical reality or in progress as a possibility can exist for long, to the degree that either concept does exist at the present moment, amid such alien and intellectual forces," at 355).

[224] JB Bury, *The Idea of Progress: An Inquiry into its Origin and Growth* (London: Macmillan and Co, 1920) at 5.

[225] Adam, *supra* note 207 at 9.

The opposition between tradition and progress is thus better understood as a feature of law rather than as a choice made by legal agents. Legal practice accommodates tradition and progress by making the existing law the starting point of analysis, not its end.[226] "Law" is therefore rightly portrayed "as an 'endless process of testing and retesting,' which is aimed at removing mistakes and eccentricities and preserving 'whatever is pure and sound and fine'."[227] Again, legal agents progress on a path that lies behind them.

One more for my father, who loved music more than anything else: *le droit bat la mesure du temps*. Rhythm is a universal phenomenon:

> Scientists conceptualise atoms as probability waves, molecules as vibrating structures, and organisms as symphonies. Living beings, they suggest, are permeated by rhythmic cycles, which range from the very fast chemical and neutron oscillations, via the slower ones of heartbeat, respiration, menstruation, and reproduction to the very long range ones of climatic changes. Their activity and rest alternations, their cyclical exchanges and transformations, and their seasonal and diurnal sensitivity form nature's silent pulse. Some of this rhythmicity constitutes the organism's unique identity; some relates to its life cycle; some binds the organism to the rhythms of the universe; and some functions as a physiological clock by which living beings 'tell' cosmic time.[228]

Law interacts with, even dictates, the rhythm of our lives in multiple ways. Many of them rely on clock- and calendar-time, such as prescribed procedural time, mandatory holidays or annual general assemblies for corporations. Law's tempo coordinates collective action. But law also offers a way to perceive time. Both models of law lag and technological deviancy, for example, help us experience the passage of time in ways that duration cannot measure. Law provides meaning to past, present and future by accentuating what changes

[226] See Dagan, *supra* note 209 at 652.
[227] *Ibid* at 656, quoting Benjamin N Cardozo, *The Nature of the Judicial Process* (New Haven: Yale University Press, 1921).
[228] Adam, *supra* note 207 at 73.

and what remains stable in a way clocks and calendars cannot capture. Law is thus part of what my father's watch symbolizes.

Contrary to what the substantive theories of technology would have us believe, law is closer to living organisms than it is to machines. Law, like organisms, regenerates, adapts to new environments and renews itself thanks to recurring cycles and motions interlocked with other recurring cycles and motions. Law is always being renewed and, as such, it is not subject to entropy. I cannot accept that law lags with technological change because it implies a static conception of law. 'Legal staticism' is antithetical to understanding law as a practice. This practice continuously carries past legal rules and normative statements in the present to test and reconstruct them through interpretation. Law owes its dynamism to the fact that legal agents of all walks of life share a legal culture. They carry law forward at the frontier of technological development — in real time.

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