

## Legal System as Norm Packaging Platform: from Notion to Decision to Statute

David C. Donald\*

### Abstract

Legal systems assimilate generally accepted notions of right and wrong held in society, package these notions into pointed concepts, and give them back as law to that same society. Law takes two main forms: judicial decision and legislation (statute, whose broader form is a code). A legal system can therefore be viewed as a platform that packages rough norms produced by residents of a jurisdiction into pointed laws for use by those same residents. Understanding legal systems as platforms brings into focus the creation of law as an act of information processing, which lends insight to legal history, comparative law and the modeling of legal development for machine learning.

History teaches us that judicially-driven law can function in an information-poor environment, as it did in the early common law of England and the US states. Increased information flows make it possible to accelerate the formulation of general rules as courts, scholars and lawmakers self-reflectively generalize existing problems and solutions. Critical masses of information allow the creation of culturally-informed statutes and even codes. The transplantation of law (usually in a colonial setting) also shows that when law does not include norms taken from its own social milieu it tends to fail for lack of demand.

Modeling the packaging of cultural notions to legal concepts is the most challenging part of the platform approach. This paper explores three different frameworks to attempt such modeling, drawn from law, economics and sociology. Eisenberg (1988) and Baker (2001) both conceive common law as the processing of informal, often unspoken, notions into judicial proceedings to make the settled law as published decisions. North (1990) understands general social constraints and specific rules to constitute order by nesting in complementary proximity. Luhmann (1993) understands law to interact autopoietically with society, absorbing and yielding information through structural couplings between the society and the legal system.

Viewing legal systems as platform yields insights for legal history, comparative law and the modeling of lawmaking. The paper examines the close-of-century discussion regarding convergence of law and the “legal origins” debate in light of information flows and network effects, finding that the platform perspective lends new insight. Convergence correlates with increased transnational information flows, and the period in which common law enjoyed maximum prestige correlates with the maximum network effects of the Anglo-American tradition. The final contribution of the paper is to provide initial steps toward a model on which “big data” reflection cultural norms could be processed into law through machine learning.

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**I. INTRODUCTION: A PLATFORM FOR PACKAGING LAW***A. Platforms as systems to achieve combinatorial innovation*

“Platform” is a term used to designate an economic model that is not new, but in the 2000s became a dominant market force through the general availability of data transmission via the internet. Examples of platforms in this sense are Amazon, iTunes, Google Play, Airbnb and Uber. Van Alstyne, Parker and Choudary define “platform” as a system that “provides the infrastructure and rules for a marketplace that brings together producers and consumers,” where “producers” are the “creators of the platform’s offerings (for example, apps on android)” and “consumers” are the “buyers or users of the offerings.”<sup>1</sup> The value of a platform is its provision of an architecture “facilitating interactions between external producers and consumers,” so that “ecosystem governance becomes an essential skill” of the platform provider.<sup>2</sup> Effective platform governance seeks to maximize “the total value of an expanding ecosystem in a circular, iterative, feedback-driven process.”<sup>3</sup> The keys to a platform’s success are “demand-side economies of scale, also known as network effects .... The larger the network, the better the matches between supply and

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<sup>1</sup> Marshall W. Van Alstyne, Geoffrey G. Parker, and Sangeet Paul Choudary, “Pipelines, Platforms, and the New Rules of Strategy,” *Harvard Business Review* (April 2016).

<sup>2</sup> *Id.*

<sup>3</sup> *Id.*

demand and the richer the data that can be used to find matches. Greater scale generates more value, which attracts more participants, which creates more value - another virtuous feedback loop.”<sup>4</sup> Platforms thus manage networks that package and distribute information or services in valuable ways within a community of producers and users that benefits from scale.

As Fisman and Sullivan argue, platforms as an economic phenomenon are not without precedent.<sup>5</sup> Platforms contain elements of a multi-lateral market, such as a trade fair or stock exchange, arrangements that also thrive on network externalities.<sup>6</sup> The Champagne fairs of medieval France, to which Fisman and Sullivan refer, were “arguably the most important interregional trading fair in Europe during the twelfth and thirteenth centuries,<sup>7</sup> and were based on a framework of “protection of the territorial lord, who proclaimed a market peace and offered safe conducts to local and foreign merchants travelling to and from the fairs.”<sup>8</sup> Stock exchanges go somewhat further, by not only creating a controlled trading environment, but essentially re-packaging shares of stock issued by individual, relatively obscure companies into “listed securities” whose value is protected from fraud by an entire architecture of supervision and transparency. These stock exchange markets create network effects that are often referred to as “liquidity” through a platform governance designed to facilitate interaction of buyers and sellers at minimum transaction costs.

Yet platforms are not merely markets. Beyond network achieved through information technology, an important characteristic that serves to distinguish platforms from markets is that many platforms take in data, services or assets from persons who are not professional vendors of such items and re-package it in ways that the result is a commodity in circulation, such as consumer preference or search data from Facebook or Google, the family car in use for Uber or an extra room in a house circulated through Airbnb. This is what McAfee and Brynjolfsson call “combinatorial innovation ... putting together in new ways things that were already there (perhaps with a few generally novel ingredients).”<sup>9</sup> This is the key aspect to highlight when examining a legal system from the perspective of its nature *qua* platform. If the values expressed

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<sup>4</sup> *Id.*

<sup>5</sup> Ray Fisman and Tim Sullivan, “Everything We Know About Platforms We Learned from Medieval France,” *Harvard Business Review* (March 24, 2016).

<sup>6</sup> See Hans R. Stoll, “Future of securities markets: consolidation or competition?,” *Financial Analysts Journal* 64:15, 16 (2008).

<sup>7</sup> AVNER GREIF, INSTITUTIONS AND THE PATH TO THE MODERN ECONOMY: LESSONS FROM MEDIEVAL TRADE, 315 (2006).

<sup>8</sup> BAS VAN BAVEL, MANORS AND MARKETS: ECONOMY AND SOCIETY IN THE LOW COUNTRIES 500-1600, 76 (2010).

<sup>9</sup> ANDREW MCAFEE AND ERIK BRYNJOLFSSON, MACHINE, PLATFORM, CROWD: HARNESSING OUR DIGITAL FUTURE 138 (2017).

in law do not reflect those held by residents of the jurisdiction, that law will not be legitimate vis-à-vis the populous. In a jurisdiction with a successfully legitimate legal system, lawmaking will organically reflect those values generally held by residents without them having to demand judgments or enactments with specific content.<sup>10</sup> It is the role of the legal system to re-package sometimes nebulous socio-cultural values into sufficiently sharp concepts of law, and the more law reflects these values, the greater residents of a jurisdiction will demand application of the law. Milhaupt and Pistor call courts “the ultimate demand-driven law producers,”<sup>11</sup> and the courts are a main institution of the platform through which initial norm repackaging occurs.

### *B. The origins of a jurisdiction’s commonly accepted law*

The thing we call “common law” is understood to be a body of decisions reflecting what the recipients of these decisions believe to be just and culturally acceptable rules and principles.<sup>12</sup> Demands for decisions are brought to courts by litigants, filtered by the “writs” (or “causes of action”) available in the court and decided according to the law commonly held. With the passing of time, an ever increasing portion of this law becomes embedded in decisions previously made, and these decisions are accorded a varying degree of respect pursuant to the applicable rules of *stare decisis*.<sup>13</sup> Successful statutory law will also reflect such generally accepted tenets,<sup>14</sup>

<sup>10</sup> Outside of theory on the content of common law decisions, this problem is usually discussed with reference to the theoretical beginning of government in a social contract, but the underlying assumption is that government must continue to fulfil its obligations under the contract. See JOHN RAWLS, *A THEORY OF JUSTICE*, 11-22 (1971), discussed in RONALD DWORKIN, *LAW’S EMPIRE* 192 (1986).

<sup>11</sup> Curtis J. Milhaupt and Katharina Pistor, *Law & Capitalism: What Corporate Crises Reveal about Legal Systems and Economic Development around the World* (The University of Chicago Press 2008) Kindle Location 579.

<sup>12</sup> For Holmes, it is “what is then understood to be convenient.” OLIVER W. HOLMES, *THE COMMON LAW* p. 21 (2009, Kaplan Classics). For Eisenberg, it is that which “substantially satisfies the standards of social congruence and systemic consistency.” MELVIN A. EISENBERG, *THE NATURE OF THE COMMON LAW* 152 (1988). For Baker, it is the interaction of general beliefs and practices that form an amorphous body of law which accompanies and fills the more definite body evidenced in written cases and statutes. JOHN H. BAKER, *THE LAW’S TWO BODIES: SOME EVIDENTIAL PROBLEMS IN ENGLISH LEGAL HISTORY 2* (2001). For Pound, it is “a taught tradition of voluntary subjection of authority and power to reason.” Roscoe Pound, *What is the Common Law?* 4 U. CHI. L. REV. 176, 181 (1936-1937). For Glenn, inchoate common law is essentially non-assertive because it cannot arise without popular backing: “common law in its origin was a relational floating common law.” H. PATRICK GLENN, *ON COMMON LAWS* 27 (2005).

<sup>13</sup> “The doctrine of precedent, under which a court must follow earlier judicial decisions when the same points arise again in litigation.” BLACK’S LAW DICTIONARY, Bryan A. Garner, ed. (10th ed. 2014), “stare decisis”. The degree to which precedent must be followed has changed over time. For example, the law of England saw a particularly large swing in mid-19<sup>th</sup> century. In 1852, the House of Lords could explain in *Bright v Hutton* 3 HLC 343, 388 “You are not bound by any rule of law which you may lay down, if upon a subsequent occasion you should find reason to differ from that rule.” at 388. By 1861, a much more rigid position on precedent was expressed by *Beamish v Beamish* 9 HL Cas 273: “It is my duty to say that your Lordships are bound by this decision ... The law laid down as your ratio decidendi, being clearly binding on all inferior tribunals, and on all the rest of the Queen’s subjects, if it were not considered as equally binding upon your Lordships, this House would be arrogating to itself the right of altering the law, and legislating by its own separate authority.” See the general discussion of strict and relaxed precedent in GLENN, *ON COMMON LAWS*, *supra note* [©], at 30-31, 50-51; DWORKIN, *supra note* [©], at 24-26 (1986). The process of looking more to written products of lawmakers and less to what the public holds as just and convenient corresponds to the increasing size of the legal profession. Fewer primary sources of law are found in open, culturally embraced norms and more are found in documents produced by legal professionals. Glenn refers to a similar process as “appropriation” of the *ius commune*. See GLENN, *supra*, at 49-53.

although the link between generally held notions of justice and written law rests is mediated by the relationship of delegated authority to elected representatives rather than on an organic flow of ideas, history and culture into judicial decision-making.<sup>15</sup>

Theorists of common law<sup>16</sup> thus describe lawmaking as a packaging process in which vaguely held social norms and related notions of justice are taken into the procedural mechanisms of the legal system to construct more definite expressions of justice. These concepts have a conceptual rigor determined by the professional standards of the legal system's managers. The generation of law thus entails as its constructive activity the transition from informal "notions" and "practices" of justice to formal concepts that the population accepts as enforceable by the state. The transition from notion to concept is achieved through reflection upon such notions and practices by professionals engaged in lawmaking and legal theory.<sup>17</sup> Paraphrasing Lincoln,<sup>18</sup> the role of the legal system as platform can be described as repackaging social norms that are of the people to create a working body of rules and decisions for the people.<sup>19</sup>

Any attempt to track the flow of information from unstructured notions to packaged rules within the platform of the legal system requires a robust descriptive model. The transition from notion to concept has often been the object of philosophical study, and this paper employs a standard phenomenological model devised in the work of Hegel, which has the significant advantage that it understands objects of thought to be transformed – even eliminated – as they are raised to a higher level through reflective conception.<sup>20</sup> This process is referred to in German as *aufheben*, which has the meaning that something is both cancelled and preserved as thought "picks it up" and thereby turns it from something immediately present into something mediated by thought into categories.<sup>21</sup> Luhmann reflects this basic conception when he refers to the activity

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<sup>14</sup> See BAKER, TWO BODIES, *supra* note [●], at 26-29. Institutions must also reflect publicly held views of acceptability or there would be no "general habit of obedience" making law-giving institutions into "bodies of persons giving general orders ... and receiving habitual obedience." H.L.A. HART, THE CONCEPT OF LAW 24–25 (3d ed. 2012).

<sup>15</sup> See the theoretical framework developed in EISENBERG, *supra* note [◎], at 9-10 (1988), discussed in detail in Part [●], below.

<sup>16</sup> For example Baker and Eisenberg. See the discussion in Part [◎].

<sup>17</sup> Luhmann refers to this as second-order observation, and is essentially the professional analysis of data that places it within a secondary, conceptual context. See NIKLAS LUHMANN, DAS RECHT DER GESELLSCHAFT 70-71 (1993) [LAW AS A SOCIAL SYSTEM, 101-102].

<sup>18</sup> Abraham Lincoln, "The Gettysburg Address," delivered November 19, 1863 ("government of the people, by the people and for the people.").

<sup>19</sup> Lincoln's "by the people" element can be omitted if the received norms are packaged properly. This element remains very useful as a check on abuse of power in that packaging process.

<sup>20</sup> This discussion is drawn from GWF HEGEL, SCIENCE OF LOGIC (1816). The transition entails knowledge arising through self-conscious negation of something conceived by distinction from its opposite, which creates and understanding of a notion's boundaries.

<sup>21</sup> *Id.* Book I, Section I, Chapter 1, "Note on the Expression *Aufheben*".

of the legal system as “second-order observation”.<sup>22</sup> In the context of law, a court may begin with consideration of a generally held albeit amorphous notion of fairness, but will end with a very specific holding in which the general notion will no longer be visible except as something cancelled and preserved within the conceptual framework of law. This transition from something vaguely conscious to something specifically conceived entails conscious negation of rough notions by distinguishing them from surrounding ideas (e.g., the notion of fairness generating the concept of unconscionability in contract does not generally include a bad deal struck between sophisticated merchants, so the rule on unconscionability excludes such cases). The resulting idea’s insertion into a definite concept within the legal framework occurs via setting boundaries by distinctly different concepts. This dependence on, and yet destruction of, common understanding is expressed in Hegel’s treatment of “public opinion” in his *Philosophy of Right*:

“Public opinion contains ... the eternal substantive principles of justice, the true content and result of the whole constitution, of legislation .... [yet] there is brought forward also the whole range of accidental opinion, with its ignorance and perversion, its false knowledge and incorrect judgment.... Since it has not within itself the means of drawing distinctions, nor the capacity to raise its substantive side into definite knowledge, independence of it is the first formal condition of anything great and reasonable, whether in actuality or in science.”<sup>23</sup>

The distance of this independence allows the jurist (or philosopher) to preserve the substance of notions received while using the tools of a conceptual framework to cancel out opinion’s accidental elements. In this way, public opinion forms the basis of the resulting law but only through mediation of the legal system, which acts as packaging platform with its own operational rules.

### *C. Mapping the transition from notion, to decision to statute: three approaches*

Modeling the process by which cultural notions are packaged into legal concepts is the most challenging part of analyzing the legal system as platform. This paper examines the application, benefits and drawbacks of three prominent analytical approaches to attempt such modeling. They are legal theory, institutional economics and sociological systems theory. The legal approaches examined come primarily from jurisprudence, comparative law and legal history, using work done by Eisenberg, who conceives common law as the processing of informal notions

<sup>22</sup> “A system that turns expectations into norms confirms *itself* by entering a difference *into its environment*, which exists only in this deliberate form and would not be there without the system....If one is concerned with the structural effect of the operations (i.e. stabilizing expectations), reflexive relations come into play.... at the level of second-order observations, which is a typical condition for differentiation and operative closure.” LUHMANN, *LAW AS A SOCIAL SYSTEM*, *supra note* [©], at 157.

<sup>23</sup> Hegel, G. W. F. *Philosophy of Right* (Dover Philosophical Classics) (p. 189). Dover Publications. Kindle Edition.

he calls “social propositions” into concrete judicial decisions,<sup>24</sup> Baker, who similarly understands “unspoken assumptions” well known to the legal profession as moving into settled law through courts,<sup>25</sup> and Glenn, who analyzes the appearance of law as being evidence of a broader “tradition”.<sup>26</sup> The institutional economics studied comes primarily from North and a number of other scholars, who investigate the complementary nesting of general social constraints and specific rules to create an commercial order that reduces transaction costs,<sup>27</sup> and try to map change within such institutions.<sup>28</sup> The final theoretical framework examined is the sociological systems theory developed by Luhmann. This systems theory understands law and society as interdependent systems, and applies the biological term autopoiesis to figuratively capture the dynamic interaction between social norms and legal concepts, with a bridging formed by legal concepts he calls “structural couplings”.<sup>29</sup>

Each of these approaches have strengths and weaknesses, which will be examined in detail in Part [©]. As one would expect, the legal scholars bring a detailed analysis of the various components of the legal system, including law’s origins, evolution, function and interdependence with society. They contribute an understanding of law that goes far beyond what is documented in written accounts, adding the actual thought processes and training of persons – like judges or legal counsel – who shape the law through their professional activity. What the legal scholars lack is the distance from law allowing second-order reflection that places law in a conceptual context beyond that actually used in operating the legal system. That is, legal scholarship tends to restrict itself to a perspective and vocabulary quickly transferable into policy application (by a judge, a legislator or a regulator) when studying the origin and evolution of law. Institutional economists apply a rich theoretical framework for second-order reflection, attempting to inventory every enduring habit and formal institution that guides human behavior as interlocking components in a system of transacting. This perspective is richly inclusive, and brings to light many sources of ordering that had been omitted by legal studies, but its core analysis remains static. Perhaps due to a deficit of information about the actual operation of legal systems, the institutional view fails to account for the flow of information and influence between softer guidance in the culture and harder guidance taking the form of law. Luhmann’s

<sup>24</sup> See Eisenberg, *supra note* [©], and the examination of his theory in Part [©].

<sup>25</sup> See BAKER, TWO BODIES, *supra note* [©], and the examination of his work in Part [©].

<sup>26</sup> See H. PATRICK GLENN, LEGAL TRADITIONS OF THE WORLD 140-141 (4<sup>th</sup> ed., 2010), and the examination of his theory in Part [©].

<sup>27</sup> See North, *supra note* [©], and the examination in Part [©].

<sup>28</sup> See the discussion of Mahoney and Thelen in Part [©].

<sup>29</sup> See Luhmann, *supra note* [©], and the examination in Part [©].

sociological systems theory of law focuses mainly on how the legal system exists *qua* system. A significant contribution is Luhmann's focus on sporadic interaction between the legal and social systems through an interaction of information processing he calls "autopoiesis" (using the term from biology). This view combines a robust second-order conceptual framework of the kind lacking in most legal scholarship and the dynamic element that institutional studies fail to include. The weakness of this theory for our purposes is that it seeks to establish the systematic nature of law as system, and spends much less time on the continuing interaction between a fully constituted legal system and the norms found in its social environment.

Although none of these three theoretical approaches provide a perfect model for the processing and packaging of social information in the legal system, they do make clear what is needed to map the packaging of vague cultural notions into precise legal concepts. To map the transition from notion to decision, to statute within the legal system it will be necessary to account for all the elements, both formal and informal, as well as their relationship to each other, in terms of complementary support, causal impact and transformation from one to the other. The model should therefore be complete, contextually informed, conceptually enriching and dynamic.

#### *D. Application of the platform model*

Even an imperfect model of how information is processed in legal systems considered as platforms yields very useful insights for the study of law. It facilitates an understanding of the legal system's interaction with its environment through information flows, as well as of each legal system as *network* competing with other networks. When applied to the difficult problems of competition and convergence of the common law and civil law systems (the "legal origin" debate), the results are illuminating.

Part [©] will show that during the modern history of law, information available to lawmakers increased from the 16<sup>th</sup> century onward thanks to printing and transportation,<sup>30</sup> and then even more dramatically during the 20<sup>th</sup> century thanks to data transfer, and these information flows are correlated to significant legal changes. Both common law and modern civil law took their initial shape in the 12<sup>th</sup> and 13<sup>th</sup> centuries,<sup>31</sup> and then significantly accelerated their development after printed books became available in the 16<sup>th</sup> century, as the periods of codifications and statutes began. Toward the close of the 20<sup>th</sup> century, many legal scholars

<sup>30</sup> See JÜRGEN OSTERHAMMEL AND NIELS P. PETERSSON, GLOBALIZATION: A SHORT HISTORY 46 (2005).

<sup>31</sup> See RAOUL C. VAN CAENEGEM, THE BIRTH OF THE ENGLISH COMMON LAW 89-91 (2<sup>nd</sup> ed., 1988) and GLENN, LEGAL TRADITIONS, *supra* note [©], at 140-141.

asserted that some level of convergence was taking place between legal systems,<sup>32</sup> and this was correlated to a sharp acceleration in communication and transnational commerce referred to as “globalization”.<sup>33</sup> During this most recent period of globalization, the United States of America was the only surviving “superpower” and English was the global language of science and business. At this time, the so-called<sup>34</sup> Anglo-American legal tradition enjoyed enormous network effects that were not factored into evaluations undertaken by scholars examining the success of law and regulation, so that assertions of superior common law “legal origins” arose that legal scholars largely rebutted on the basis of substantive law.<sup>35</sup> This debate failed to take account of network effects of legal systems as platforms, and doing so yields significant insights regarding why “Anglo-American” law dominated at the close of the Cold War.

Information flows and network effects strongly affect the shape and competitiveness of legal systems, and this can only be seen clearly when the platforms packaging aspect of legal systems is highlighted. As more information about generally accepted ideas and norms becomes available, the transition into concepts and rules can accelerate, and as the network of such concepts increases in scope, the network effects of legal systems can become systematically efficient. The advent of “big data” dwarfs even the massive information flows experienced in the early years of the internet. Today, networks like Facebook reduce to generalized data the preferences of a billion users on everything from the shape of a birthday cake to the preferred manner of dealing with crime and financial regulation. When information flows are regulated by the algorithmic guidance in systems like Facebook or Google searches, it becomes possible to take the next step to an algorithmic model of how human preferences should be brought into the legal system. A conscious use of “big data” to improve the legal system by channeling

<sup>32</sup> See the overview in Louis F. Del Duca, *Developing Global Transnational Harmonization Procedures for the Twenty-First Century: The Accelerating Pace of Common and Civil Law Convergence*, 42 TEX. INT’L L.J. 625 (2007).

<sup>33</sup> “Globalization took a leap forward in the early 1800s, when steam power and global peace lowered the costs of moving goods. Globalization made a second leap in the late twentieth century when ICT radically lowered the cost of moving ideas.” RICHARD BALDWIN, *THE GREAT CONVERGENCE: INFORMATION TECHNOLOGY AND THE NEW GLOBALIZATION* 1 (2016). On the most recent phase of globalization as only the most recent stage of this process, also see OSTERHAMMEL AND PETERSSON, *supra note* [©], generally.

<sup>34</sup> The differences between the laws and regulatory philosophies in the United States and the United Kingdom are very significant, even in the areas of corporate law and securities regulation, where they are assumed to be so similar. See the discussion of corporate law in ANDREAS CAHN & DAVID C. DONALD, *COMPARATIVE COMPANY LAW: TEXT AND CASES ON THE CORPORATE LAWS OF GERMANY, THE UK AND THE USA* (2<sup>nd</sup> ed. 2018, forthcoming); differences in regulatory approach are discussed in Howell E Jackson, and Mark J Roe, *Public and Private Enforcement of Securities Laws: Resource-Based Evidence*, 93 JOURNAL OF FINANCIAL ECONOMICS 207 (2009).

<sup>35</sup> Two legal scholars who argued against the assumptions proffered on Anglo-American legal origin are Roe and Coffee. See Mark J. Roe, *Legal Origins, Politics, and Modern Stock Markets*, 120 HARV. L. REV. 460 (2006); John C. Coffee, Jr., *Law and the Market: The Impact of Enforcement*, 156 U. PA. L. REV. 229 (2007). These articles are discussed in David C. Donald, *Law in Regression? Impacts of Quantitative Research on Law and Regulation*, 2015:2 COLUMBIA BUSINESS LAW REVIEW 520 (2015).

citizen/user preference would be to polls what a Google search is now to use of a library card catalogue. This paper also serves as the foundation for such future study.

Following this introduction, the paper will proceed as follows. Part II will review the flow of information in law, examining the generally understood relationships between socio-cultural notions of justice, judicial decisions and legislative acts. Part III will then critically assess the utility of three models for mapping the actual flow of information from notion to law. The models are found in legal, institutional economic, and systems theory scholarship. Drawing the best available analytical tools from this assessment, Part IV will study information flows in law on the example of the development and convergence of common law and civil law systems, as well as with respect to the surging prominence of the common law system at the close of the 20<sup>th</sup> century. Part V offers conclusions and points toward a modeling of legal platform information processing for the use of newer (and bigger) data flows in the service of lawmaking.

## II. THE ROLES OF INFORMATION PROCESSING IN LAWMAKING

### A. Law is information-dependent

In this paper, reference to “law” and “legal system” means law or a legal system that enjoys some level of legitimacy among the populous, in what Rawls refers to as “a well-ordered society.”<sup>36</sup> It is understood that this conceives the legal system to entail a kind of ongoing social contract which might have no specific historical origin when a contract was struck but does have an ongoing, “organic” community in the present.<sup>37</sup> For the purposes of studying information flows, “community” is understood as participants contributing information to the platform and receiving rules from it. It is of course possible that something called “law” can exist in either judicial or legislative form without such a community of information sharing between the populous and the mechanisms of enforcement. Similar arrangements are found in primitive regimes,<sup>38</sup> colonial rule,<sup>39</sup> and modern authoritarian governments.<sup>40</sup> However, this paper leaves

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<sup>36</sup> “Thus it is a society in which everyone accepts and knows that the others accept the same principles of justice, and the basic social institutions satisfy and are known to satisfy these principles.” Rawls, *supra note* [©], at 453-454.

<sup>37</sup> DWORKIN, *supra note* [©], at 188 (“recognized public standards can expand and contract organically”).

<sup>38</sup> Summary writs used in early Norman England were essentially purchased from the king, and entailed an order to do whatever the plaintiff requested without provision for finding of fact. Van Caenegem remarks that such “writs based on one-sided complaints led to contradiction and injustice and to the very disorder which they were supposed to combat.” VAN CAENEGEM, BIRTH, *supra note* [©], at 38-39.

<sup>39</sup> Although some forms of colonial rule did incorporate elements of local law existing when a territory is subjugated, that would have been the exception. On the imposition of English law on Chinese Hong Kong, see DAVID C. DONALD, A FINANCIAL CENTRE FOR TWO EMPIRES: HONG KONG’S CORPORATE, SECURITIES AND TAX LAWS IN ITS TRANSITION FROM BRITAIN TO CHINA 23-32 (2014).

such arrangements out of consideration as the serious lack of legitimacy presented by such “law” is widely understood to place it in a different qualitative category from the generally understood concept of law studied here.<sup>41</sup> As Dworkin observes:

the best defense of political legitimacy – the right of a political community to treat its members as having obligations in virtue of collective community decisions – is to be found not in the hard terrain of contracts or duties of justice or obligations of fair play that might hold among strangers ... but in the more fertile ground of fraternity, community and their attendant obligations.<sup>42</sup>

Community can describe users of a given platform because the network radiating out from the platform holds the users together, and each participant gains from the participation of the others.

Although this paper does not enter into the debate on what makes a legitimate legal system, the view of legal system as platform would tend to legitimate legal systems in which users have no direct control over the shape of platform architecture (one that excludes Lincoln’s “of the people” component), provided the information input is fully incorporated into the output rules.<sup>43</sup> When seen as a platform, the “legitimacy” of a legal system would not expressly require checks and balances through user control of the system architecture if the system accepts all relevant information tendered by the persons subject to it and processes that information in a way that receives common support from them. This would fall within the theory of legitimacy as social contract in its modern forms developed by Rawls and Dworkin, in which a “well-ordered” or “community” oriented society and legal system provides ordering rules with the ongoing acceptance of the duties imposed. In this framework, the values incorporated in law have an assumed “publicity”, as citizens “suppose that everyone will know about these principles all that he would know.”<sup>44</sup> This position is consistent with the definition of the “common law” discussed

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<sup>40</sup> In North Korea, for example, the relationship of government to the public and their preferences can be characterized as “control”, “conditioning” and “regimentation” rather than responsiveness. *See e.g.*, Marcus Noland, *Why North Korea Will Muddle Through*, 76 FOREIGN AFFAIRS 105, 110 (“North Koreans have been conditioned by nearly two generations of extreme regimentation”) (1997).

<sup>41</sup> *See e.g.*, Joseph Raz, *The Authority of Law: Essays on Law and Morality* 30 (2d 2009) (“it is an essential feature of law that it claims legitimate authority”).

<sup>42</sup> DWORKIN, *supra note* [©], at 206.

<sup>43</sup> This in particular might refer to the Peoples Republic of China, in which citizens do not have a right to determine the members of government, but this government – by most accounts – considers a very comprehensive stream of data coming from Chinese citizens, including through social media, in order to guide its legislative activity and policy initiatives.

<sup>44</sup> RAWLS, *supra note* [©], at 133, also noting that the “publicity condition is clearly implicit in Kant’s doctrine of the categorical imperative.”

in Part I.<sup>45</sup> The community sharing the platform of a legitimate legal system is privy to the information flows on that platform regarding both input notions of justice and output legal rules.

Without the flow of information among users, law would lose its legitimacy. The platform of the legal system consists, in substance, of information and the methods used to process and apply it: notions of justice translated into formal institutions and notions of justice translated into the procedures and rules applied by those formal institutions. This processing of information expressing notions of justice into formal law is achieved through two general types of institutions: courts and legislatures.<sup>46</sup> Each of these institutions analyze existing data within their own operational parameters to obtain notions of justice and acceptable solutions, and these solutions are formed into express rules, with the court's rule being in origin specific and the legislature's rule being in origin general. These two institutions receive through different channels their information about social expectations on justice, and process the information received in different ways, with different kinds of staffing, at different levels of generality. The following subsections summarize the characteristics of these distinct channels.

#### *B. Judicial decisions absorbing the content of pleadings and precedent*

Courts, their procedures and their institutions, such as a jury, are designed to process information, which is why a trial court is referred to as a *finder or trier of fact*.<sup>47</sup> Courts hear facts and law as argued by the parties, and have little if any duty or right to explore information not brought to them by the parties in dispute.<sup>48</sup> This is acceptable because, although the court's decision will have some level of effect on the community as precedent, its rule will have immediate binding effect only on the parties in dispute with respect to case in dispute. The impact a judicial decision will have on future cases in controversy will be limited by rules of jurisdiction,

<sup>45</sup> See note [©], *supra*. In particular, Eisenberg's analysis of "the standards of social congruence and systemic consistency" are very similar, as are Baker's view of an unwritten body of law feeding into the written body.

<sup>46</sup> These can be understood narrowly within the framework of a given legal system. See Roscoe Pound, *Common Law and Legislation*, 21 HARV. L. REV. 383 (1908); GUIDO CALABRESI, *A COMMON LAW FOR THE AGE OF STATUTES* (1982); BAKER, *TWO BODIES*, *supra* note [●]. It can also be understood in a broad form to include civil law systems, including any form of tribunal that hears a dispute between two or more parties and issues a binding order – regardless of whether that order will bind the same court on comparable facts in the future (*stare decisis*) – and a body that following deliberation enacts or issues generally applicable rules with the force of law, without requiring a dispute as prerequisite to the creation of the rule.

<sup>47</sup> BLACK'S LAW DICTIONARY, Bryan A. Garner, ed., "trier of fact" (10th ed. 2014).

<sup>48</sup> "Under the common law system, the parties present for the court's consideration rival versions of the evidence relevant to the controversy or issue. [The body of newer rules on procedure] has not altered the court's essentially 'responsive' role with respect to evidence, although the judge must control proceedings in the interests of efficiency and prevent them becoming unduly prolonged or complicated." Neil Andrews, *Civil Procedure*, in ENGLISH PRIVATE LAW, Andrew Burrows, editor, 1320, 1325 (3<sup>rd</sup> ed. 2013). The extent to which a court must passively "respond" to information presented by counsel is an important distinction between systems originating in the English common law and those originating in the Continental European civil law systems, which are sometimes referred to as "inquisitorial". See, e.g. KONRAD ZWEIGERT AND HEIN KÖTZ, *AN INTRODUCTION TO COMPARATIVE LAW*, Tony Weir trans., §18V (1998); RAOUL C. VAN CAENEGEM, *EUROPEAN LAW IN THE PAST AND THE FUTURE*, 52-53 (2002).

subject to the current understanding of *stare decisis* and open to argument about the case's *ratio decidendi* as such cases arise.<sup>49</sup> While it is conceivable that a court can set out to create a generally applicable rule rather than settle the dispute at hand, this is a rare exception in judicial decision-making.<sup>50</sup>

The procedures and rules of evidence used in court are designed to control the flow of information, including its objective reception and processing. Information is pushed into the proceedings through the written pleadings and evidence presented in the trial, and information is also pulled into the proceedings through concepts designed to fine tune law to social expectations (e.g., the “reasonable person”) and through the personal experience the judge and (when used) jury bring to their deliberations.

The resulting decisions, “case law” in common law jurisdictions, are specific, and need address only the questions raised by the parties in dispute. Unlike statutory law, the decision in a case need not be designed to all foreseeable instances of a given legal problem that could arise in the future, although such universal applicability would certainly lend weight to a judicial decision when considered as precedent.

### *C. Legislation absorbing judicial decisions, public opinion and social science*

While statutory law could be written by an executive or a single member of legislature isolated from society and relying on their private understanding of justice, such instances are not only rare, but probably illegitimate, given the accountability that comes with elected appointment. Statutes are more likely assembled by large teams of legislators and their assistants, drawing on information presented by an even larger body of people. The lawmaking activity of legislatures is arranged institutionally to receive data from a broad variety of sources, process that data using varied and powerful tools, and hammer out draft legislation under the eyes and the comments of many people. Unlike courts, legislatures need not place procedural restrictions on the presentation of information to the legislative decision-making process, and the goal of a legislature is to produce workable rules that are general in application.

Because legislation is meant to be general, it takes more data to create a rule of true generality than to provide a culturally balanced solution to a specific case in controversy. One source of data is case law itself. There are various ways to collect the information and problems and their solutions presented in cases over time, including restatements of the law, law reform

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<sup>49</sup> CITE CROSS

<sup>50</sup> The “guiding cases” of the Supreme People’s Court of China are examples of such general guidelines issued by a court with little regard to the specific, underlying controversy. *See* the Stanford Law School China Guiding Case Project, at <https://cgc.law.stanford.edu/>.

commissions, and legal scholarship. In the United States, the process of writing a “restatement” of the law brings the available judicial decisions together in a theoretical framework so as to allow formulation of a general rule, and these restatements make an appropriate and efficient bridge between case law and statute.<sup>51</sup> Indeed, the family of law referred to as “civil law” took its origin from an end product of Roman legal culture— the Code of Justinian – that itself included restating elements, as it followed centuries of judicial decisions and professional commentary by jurists.<sup>52</sup> Law reform commissions, often used in the United Kingdom, meet for the specific purpose of revisiting a designated area of law and making decisions as to whether law reform is advisable and if so, how.

The interim stage of accumulating rules from judicial decisions is of course not a necessary prerequisite to the creation of a statute. A legislative team can consult data in the form of reports and studies from any reputable source for any legislative project. The history of financial regulatory legislation shows a strong correlation between market crashes and legislative reform,<sup>53</sup> indicating that the public will created by investment loss leads the public to demand legislative action. Social science scholarship is also often considered in the lawmaking process,<sup>54</sup> whether in connection with a perceived public problem or on initiative of an expert body. The explosion of data on a global scale and increasingly sophisticated analytical tools for processing it has created a very short window from the appearance of a problem to the extraction of its generalized character. In an environment of efficient government, this can lead to rapid legislative response to generally perceived problems, without the intervening stage in which courts address new problems by filling in gaps left by older legislation, creating new common law.

With regard to content it is important to note that because legislatures operate on mandate – usually by popular election – to produce generally applicable rules, their ground for legitimacy exists separately from the content of the rules they produce. While many acts of legislation are responses to concrete cases of abuse, leading to rules shaped around such cases,<sup>55</sup> the generally prospective enforceability of legislation means that by definition, rules are created to address a

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<sup>51</sup> See e.g., the optimistic verdict in the early days of the American Law Institute: Mitchell Franklin, *The Historic Function of the American Law Institute: Restatement as Transitional to Codification*, 47 HARV. L. REV. 1367 (1934).

<sup>52</sup> Peter Stein, *Roman Law in European History* [●] (1999).

<sup>53</sup> STUART BANNER, *ANGLO-AMERICAN SECURITIES REGULATION: CULTURAL AND POLITICAL ROOTS, 1690-1860* [●] (1998).

<sup>54</sup> RICHARD P. NATHAN, *SOCIAL SCIENCE IN GOVERNMENT: THE ROLE OF POLICY RESEARCHERS* [©] (2000).

<sup>55</sup> For example, sec. 401 of the Sarbanes-Oxley Act of 2002 specifically targeted a technique used by Enron Corp. chief financial officer Andrew Fastow, by requiring disclosure of transactions previously off-balance sheet and an official report on the extent that special purpose entities are used to facilitate off-balance sheet transactions.

general set of problems. Thus public expectations might be more clearly communicated to a legislature given the lack of procedural rules and the probably absence of a specific, framing dispute, but the model of accountability could allow the legislature to stray from expectations enjoying support of the community.

### III. THREE VIEWS ON THE INCLUSION OF INFORMAL CONTENT IN FORMAL LAW

#### A. *Legal theory on the social content of law*

Legal scholars representing a broad range of specializations agree that vaguely articulated notions of justice find their way into the legal system for processing into hard law. Here, three examples will be used for analysis. The theory of the common law developed by Melvin Aron Eisenberg, who is primarily known as a corporate and contract law scholar, the history of English law developed by Sir John H. Baker, an historian of law, and the theory of legal tradition developed by H. Patrick Glenn, a prominent comparative law scholar. The work of these scholars presents articulated theories on the content of law that are representative of a generally accepted view: law combines a processional, conceptual system that processes much less professionally honed notions of justice. For example, in 1881, Holmes characterized law as a two-part cultural aggregation in which cultural contents are processed by an enduring professional platform: “The substance of the law at any given time pretty nearly corresponds, so far as it goes, with what is then understood to be convenient; but its form and machinery, and the degree to which it is able to work out desired results, depends very much upon its past.”<sup>56</sup> Van Caenegem, in his history of common law’s “birth”, finds that the institutional platform (as Holmes puts it, “machinery”) – in particular the “general eyre” circuit court<sup>57</sup> – was formed by culture and history in England, and then presents how this machinery processed and applied notions of justice that were “essentially autochthonous, based on known rule and familiar practice.”<sup>58</sup>

Eisenberg’s work, *The Nature of the Common Law*, agrees with both Holmes and Van Caenegem in that it presents the common law as coming into view (but not into existence) at the moment a court discerns it and memorializes it in a decision: “The common law does not consist of doctrinal propositions found in binding official texts. Rather, it consists of the rules that *would be generated at the present moment* by application of the institutional principles that govern adjudication.”<sup>59</sup> These institutional principles of adjudication are divided – to use Holmes’ terminology – between what is deemed “convenient” and how the “machinery” should operate.

<sup>56</sup> OLIVER W. HOLMES, *THE COMMON LAW* p. 21 (2009, Kaplan Classics).

<sup>57</sup> VAN CAENEGEM, *BIRTH*, *supra note* [©], at 20-28.

<sup>58</sup> *Id.* at 91.

<sup>59</sup> EISENBERG, *supra note* [●], at 3 (emphasis added), also see 154.

Just and legitimate law consists of achieving a “consistent” and “congruent” balance of key elements taken from the legal system, social beliefs, science and accepted routines, and institutional restrictions on the court’s action.<sup>60</sup>

Eisenberg refers to the law’s component of social beliefs or commonly held notions of justice as “social propositions,” and this term includes the categories of “moral norms” (characterizing “conduct as right or wrong”),<sup>61</sup> “policies” (characterizing choices as “conductive or adverse to the general welfare”),<sup>62</sup> and “experiential propositions” (understandings about “the way the world works”).<sup>63</sup> Moral norms are for Eisenberg, “moral standards that claim to be rooted in aspirations for the community as a whole, and that ... can fairly be said to have substantial support in the community.”<sup>64</sup> Eisenberg demonstrates how moral norms enter law to impose liability on manufacturers in landmark products liability cases and changed the view of childbirth in malpractice allegations for a failed vasectomy.<sup>65</sup> The biggest problem with incorporating moral norms into written law is understanding when such norms are truly “rooted in aspirations for the community” and where courts should look to find this out. Eisenberg explains that courts can look to existing cases and legislation, news media, and their own common knowledge,<sup>66</sup> but this remains ultimately unsatisfying. Eisenberg identifies a number of policies, including with respect to social gravity, private autonomy, opportunism and information asymmetry.<sup>67</sup> A court would refrain from exercising its power over a matter considered not socially important (e.g., donative promises) or one of private autonomy (e.g., bargains on allocations of tasks in a marriage), a court would not enforce an agreement if that would encourage opportunism (e.g., a fee for premium police protection), and a court would use presumptions to force someone in control of necessary information to divulge it (e.g., strict product liability).<sup>68</sup> The last group of influences on courts when making decisions is what Eisenberg refers to as “experiential propositions,” which are mainly currently held science and

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<sup>60</sup> EISENBERG, *supra* note [●], at 44.

<sup>61</sup> EISENBERG, *supra* note [●], at 15.

<sup>62</sup> EISENBERG, *supra* note [●], at 26.

<sup>63</sup> EISENBERG, *supra* note [●], at 37.

<sup>64</sup> EISENBERG, *supra* note [●], at 15.

<sup>65</sup> The cases Eisenberg analyzes are *MacPherson v. Buick Motor Co.* 217 NY 382 (1916) and *Donoghue v. Stevenson* [1932] LR App Cas. 562 with regard to a liability of negligent manufacture even absent privity of contact; and *Christensen v. Thornby*, 225 N.W. 620 (1977), regarding the value of childbirth in connection with a breach of contract for sterilization.

<sup>66</sup> EISENBERG, *supra* note [●], at 16-17.

<sup>67</sup> EISENBERG, *supra* note [●], at 26-29.

<sup>68</sup> EISENBERG, *supra* note [●], at 26-29.

currently assumed practices (usages),<sup>69</sup> and “mediate between policies (and to a lesser extent moral norms)... and legal rules.” Examples he provides are theories about behavior from psychology and sociology on expected response to incentives and deterrence, and the assumed usages in particular industries or commercial activities.<sup>70</sup>

As the common law is not found (only) in the printed texts, and rather in the moral norms and experiential propositions known to the litigants when the behavior leading to dispute occurs, the problem of retroactive effectiveness of judicially crafted law is significantly reduced.<sup>71</sup> Eisenberg argues that these social propositions enjoying community support should be applied together with existing law in a manner that respects the allocation of authority within the legal system and achieves a congruent balance that is objectively universal (in the Kantian sense), obviously reproducible (e.g., by legal counsel advising clients), and responsive to community (particularly legal community) criticism.<sup>72</sup> Change occurs as one element of the complementary congruence constructing the law swells to cause imbalance (such as a shift in morality or in science), causing the court to adjust its interpretation of precedent and take the law in a new direction.<sup>73</sup> Such changes could also lead to expansion or contraction of law, as matters previously thought best left to private autonomy or thought to have social gravity expand or contract. Courts thus work within existing written law, their own procedural framework, the needs and expectations of the legal profession, and the currents of “social propositions” held by the community to achieve results that are in congruent balance with all these pressures.

Baker is a legal historian concerned with where to look for the law, and like, Eisenberg, finds that law exists in very large part outside of written texts: “The law today is not what particular courts or parliaments in the past have said it is, but what lawyers at present think the relevant courts would do in a given case.”<sup>74</sup> When studying the early development of English common law, he finds it in how court procedure channeled the general norms and usages of the community,<sup>75</sup> but his project is not to develop a theory of common law, but rather to accurately

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<sup>69</sup> EISENBERG, *supra* note [●], at 37-38.

<sup>70</sup> EISENBERG, *supra* note [●], at 37-38.

<sup>71</sup> EISENBERG, *supra* note [●], at 10.

<sup>72</sup> EISENBERG, *supra* note [●], at 8-13.

<sup>73</sup> *Id.* at 104-145.

<sup>74</sup> BAKER, TWO BODIES, *supra* note [©], at 4.

<sup>75</sup> J.H. BAKER, AN INTRODUCTION TO ENGLISH LEGAL HISTORY, 8, 22 (4<sup>th</sup> ed. 2002) (“We do not hear of the king’s law or the lord’s law, but of communal justice or the justice of the people.” at 8) (Even in the 12<sup>th</sup> and 13<sup>th</sup> centuries, “Communal justice and its ancient methods of proof were too deep-rooted for anyone to think about abolition.” at 22).

present its historical development.<sup>76</sup> As such, he focuses on the manner in which the entire legal profession acts as a living archive of social expectations on what justice means: “the law may be perceived as being what the courts ought to do, in the opinion of the best legal minds of the day, even if those are not the minds currently controlling the decisions of the highest appellate court.”<sup>77</sup> The social content of law – particularly including the sub-society of the legal system’s caretakers – is as important as the logical and doctrinal content of texts. Baker explains that as used in English law, the maxim “*communis error facit jus*” (common error makes law) has meant that usage will take precedence over doctrine, and thus innovative usages technically breaching law have become law themselves.<sup>78</sup> Social action eventually becomes the content issued by the platform of the legal system:

People sometimes manage their affairs on the basis that they do not mind whether the law protects them or not. Sometimes they may explicitly avoid the forms and the protection of the law .... Far more often, people will follow practices or enter into arrangements with complete disregard of their legal consequences. They rely on other kinds of security, such as trust and reputation, or the fact that everyone else does the same, and simply do not contemplate the possibility of litigation. Such practices may in time become so widespread that to deny legal protection begins to seem perverse. The trust of land is an obvious example.<sup>79</sup>

Baker goes on to provide an example from Lord Coke in which “common assurances” are given force of law in the conveyancing of property.<sup>80</sup>

Glenn grounds his theory of comparative law in a history of the decisive social conventions, expectations and usages in society that shape law. In his *Legal Traditions of the World*, Glenn defines the tradition defining law as a hub of data engaged in self-processing:

A given tradition emerges as a loose conglomeration of data, organized around a basic theme or themes, and variously described as a “bundle”, a “tool-box”, a “language”, a “playground”, a “seedbed”, a “ragbag” or a “bran-tub”. In the language of modern information theory, a tradition will always include a great deal of noise .... The fate of present information, and its effect on the future course of a tradition, will depend on the working and processes of the tradition itself.<sup>81</sup>

Glenn emphasizes the similarity between the legal system as part of a tradition and the legal system as platform by finding that “adherents to a tradition ... constitute a local area network

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<sup>76</sup> BAKER, TWO BODIES, *supra note* [©], at 90.

<sup>77</sup> BAKER, TWO BODIES, *supra note* [©], at 5.

<sup>78</sup> BAKER, TWO BODIES, *supra note* [©], at 6.

<sup>79</sup> BAKER, TWO BODIES, *supra note* [©], at 25.

<sup>80</sup> BAKER, TWO BODIES, *supra note* [©], at 73.

<sup>81</sup> GLENN, LEGAL TRADITIONS, *supra note* [©], at 15-16.

[LAN] of information ... and it is a network because the exchange of information is a constant and ongoing process.”<sup>82</sup>

In full agreement with all historical and comparative accounts of the English common law, Glenn understands it as “composed of a series of procedural routes (usually referred to as remedies) to get before a jury and state one’s case.”<sup>83</sup> The political-economy of the social setting in which the common law arose determined both this structure and the remedies it provided. As Glenn remarks, available remedies in the form of “writs ... reflected, above all, an agrarian, non-commercial, even chthonic society.”<sup>84</sup> The shape of the system architecture was also socially determined, as Norman kings needed to take firm control of England without provoking unmanageable reactions, so the procedural (rather than substantive) nature of royal law that left ultimate decisions to the jury served to “co-opt the population to their work, so if actual decisions were left to the local folks ... the judges could just get the right questions asked ... and be off to another town.”<sup>85</sup> As the legal system matured, it went the way of other legal systems, placing more power in the system architects who “appropriated” the authority of social expectations, so that law from institutions of positive power was achieved as ideas about a single, “binding” law were developed, existing cases were restated into general studies so that principles could be discerned, national territories of law were strictly laid down, and the idea of the legal system as positive source of law was reinforced in scholarship.<sup>86</sup>

### *B. New institutional economics mapping forms of order*

Economists generally approach the legal system as a body of positive written law, what Glenn would call “appropriated” law. Institutional economists brought fresh insight to economic analysis by including both constraining social expectations and formal law among the ordering institutions they studied.<sup>87</sup> The coexistence of such informal constraints and formal ordering systems, as two subsets of institutions, allows the various components of normative order to be conceived in a collaborative balance. North explains how the two levels of order work together:

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<sup>82</sup> GLENN, LEGAL TRADITIONS, *supra note* [©], at 21.

<sup>83</sup> GLENN, LEGAL TRADITIONS, *supra note* [©], at 243.

<sup>84</sup> GLENN, LEGAL TRADITIONS, *supra note* [©], at 245.

<sup>85</sup> GLENN, LEGAL TRADITIONS, *supra note* [©], at 239.

<sup>86</sup> GLENN, ON COMMON LAWS, *supra note* [©], at 45-47.

<sup>87</sup> Ostrom defines “institutions” as “the sets of working rules that are used to determine who is eligible to make decisions in some arena, what actions are allowed or constrained, what aggregation rules will be used, what procedures must be followed, what information must or must not be provided, and what payoffs will be assigned to individuals dependent on their actions.” ELINOR OSTROM, GOVERNING THE COMMONS: THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION (POLITICAL ECONOMY OF INSTITUTIONS AND DECISIONS) 50-51 (1990).

In the modern Western world, we think of life and the economy as being ordered by formal laws and property rights. Yet formal rules, in even the most developed economy, make up a small (although very important) part of the sum of constraints that shape choices; a moment's reflection should suggest to us the pervasiveness of informal constraints. In our daily interaction with others, whether within the family, in external social relations, or in business activities, the governing structure is overwhelmingly defined by codes of conduct, norms of behavior, and conventions.<sup>88</sup>

Much of North's work demonstrates the complementary collaboration of formal and informal constraints in various mixtures that reduce transaction costs to acceptable levels and allow trade to exist.<sup>89</sup> As economies evolve, both the nature of these constraints and the will change to allow transacting, but – particularly when compared to the legal scholars – it is clear that North does not examine the endogenous process within law that allows this to take place,<sup>90</sup> although exogenous economic reasons for the changes are clearly laid out.

When expressly examining common law, North sees a text based interaction between existing precedent and newly arising cases: “Common law is precedent based .... Past decisions become embedded in the structure of law, which changes marginally as new cases arise involving new, or at least in terms of past cases unforeseen, issues; when decided these become, in turn, a part of the legal framework. The judicial decisions reflect the subjective processing of information in the context of the historical construction of the legal framework.”<sup>91</sup> North does see a “contribution of changing informal constraints” to overall institutional change, and thinks the process “may arise as a result of the uncoordinated actions of individuals,” but offers no analysis of causality comparable to that of Eisenberg or Luhmann in their different ways.<sup>92</sup>

More recently, Mahoney and Thelen set out to move beyond what they saw as a shortcoming in “the literature on institutional change”: “most scholars point to exogenous shocks that bring about radical institutional reconfigurations, overlooking shifts based on endogenous developments.”<sup>93</sup> However, their endpoint resembles what both Eisenberg and Baker refer to as text-based analysis. They find that the rules of the institution must be “gappy” so that this

<sup>88</sup> DOUGLASS C. NORTH, INSTITUTIONS, INSTITUTIONAL CHANGE AND ECONOMIC PERFORMANCE (POLITICAL ECONOMY OF INSTITUTIONS AND DECISIONS) 36 (1990).

<sup>89</sup> NORTH, INSTITUTIONS, INSTITUTIONAL CHANGE, *supra* note [©], at 41-42, 46, 55, 57,

<sup>90</sup> NORTH, INSTITUTIONS, INSTITUTIONAL CHANGE, *supra* note [©], at 68 (“changes in both formal rules and informal constraints will gradually alter the institutional framework over time, so that it evolves into a different set of choices than it began with”).

<sup>91</sup> *Id.* at 96-97.

<sup>92</sup> DOUGLASS C. NORTH, UNDERSTANDING THE PROCESS OF ECONOMIC CHANGE, Kindle Location 1327-1330 (2005).

<sup>93</sup> James Mahoney & Kathleen Thelen, *A Theory of Gradual Institutional Change*, in EXPLAINING INSTITUTIONAL CHANGE 1, 2 (James Mahoney & Kathleen Thelen eds. 2010).

ambiguity can be exploited: “[W]here we expect incremental change to emerge is precisely in the “gaps” or “soft spots” between the rule and its interpretation or the rule and its enforcement. This is an analytic space that other conceptions of institutions (as behaviors in equilibrium, or as scripts) essentially rule out by definition, but as a practical matter this is exactly the space in which contests over – and at the same time within – institutions take place.”<sup>94</sup>

### *C. Systems theory and the guiding figure of autopoiesis*

Luhmann explores in great detail the interaction between expectations based on social norms and the creation of legal rules, and this overlaps with both work by common law scholars and that done by institutionalists on informal constraints and formal rules. Like legal scholars, Luhmann sees disputes as a driving force in the development of law, but unlike institutionalists Luhmann’s focus is not on the resulting order and its constituent parts. Rather, Luhmann focuses on the operation of the system *qua* system. His theory embraces the Darwinian concept of evolution<sup>95</sup> because he finds that it allows system boundaries to be conceived as porous and systemic change to be understood as unplanned, rather than evidencing some unified teleology.<sup>96</sup> Luhmann understands the legal system to be operating (existing, evolving) within the environment of the social system, constantly receiving requests to resolve disputes about right and wrong according to social expectations.

Such “expectations” arise within the social system, as Luhmann explains: “The term ‘norm’ refers to a certain form of factual expectation, which has to be observable either psychologically or as the intended and understandable meaning of communication.”<sup>97</sup> When differing expectations lead to conflict, they “irritate” the legal system by challenging it to settle the matter: “The system itself registers the irritation – for instance, in the form of the problem of who is right if there is a conflict.”<sup>98</sup> If the legal system does not already contain a solution for the conflict between expectations, it may be forced to evolve:

The decisive variation, as far as the evolution of law is concerned, relates to the communication of unexpected normative expectations.... which – with hindsight – turns out to be a disappointment. This disappointment brings to mind the norm, which did not exist as a structure for communication in society before this occurred.... Such events happen as soon as there are normative expectations .... It

<sup>94</sup> Mahoney & Thelen, *supra* note [©], at 12-14.

<sup>95</sup> “We shall use the concept of evolution in accordance with Darwin’s theory which ... must be counted as among the most important achievements of modern thought.” LUHMANN, LAW AS SOCIAL SYSTEM, *supra* note [©], at 230-231.

<sup>96</sup> LUHMANN, LAW AS SOCIAL SYSTEM, *supra* note [©], at 231.

<sup>97</sup> LUHMANN, LAW AS SOCIAL SYSTEM, *supra* note [©], at 71.

<sup>98</sup> LUHMANN, LAW AS SOCIAL SYSTEM, *supra* note [©], at 383.

is sufficient for one to see a reason to reject certain conduct and to be successful in having this rejection accepted by others.<sup>99</sup>

The attention Luhmann gives to the formation of a “structure for communication” in response to an expectation takes him beyond the point reached by Eisenberg, who having singled out “social propositions” such as “morality” as influential for law, must then face the fact that judges do not simply point to a specific moral principle and apply it, but must discern and structure something they find to be sufficiently influential in the environment. For Luhmann, this act of creating a new structure, essentially a legal concept, will mean that the legal system’s reaction to this expectation is evolution. That is, in the face of the variation made by the new expectation, if a selection is made to include the new normative expectation, the legal system will use its own conceptual framework to stabilize the law in a new form.<sup>100</sup>

This evolutionary interaction is conceived in the same way as physical evolution, with the significant qualification that the interaction between social environment and operatively closed legal system occurs through medium of language. Luhmann characterizes the interaction as an “autopoiesis”,<sup>101</sup> which “shifts the idea of self-referential make-up to the level of the elementary operations”<sup>102</sup> (i.e., to individual concepts formed in judicial or legislative decisions and away from central planning). This interaction of the operationally closed legal system and its social environment is capable of adjusting both the contents of the legal system and the procedure the legal system uses to determine such contents: “Autopoietic systems ... not only ... produce and eventually change their own *structures* but their self-reference applies to the production of other *components* as well.”<sup>103</sup>

The self-referential autopoiesis is the activity that turns notions (expectations) into legal concepts, and it occurs through the systematic processing of an information flow. This “requires a synthesis of three selections: namely, information, utterance and understanding,” and the synthesis is produced “by the network of communication, not by some kind of inherent power of

<sup>99</sup> LUHMANN, LAW AS SOCIAL SYSTEM, *supra* note [©], at 243-244.

<sup>100</sup> LUHMANN, LAW AS SOCIAL SYSTEM, *supra* note [©], at 258-259.

<sup>101</sup> The term originated in biology: “The autopoietic organization is defined as a unity by a network of productions of components.... Consider for example the case of a cell: it is a network of chemical reactions which produce molecules such that (i) through their interactions generate and participate recursively in the same network of reactions which produced them, and (ii) realize the cell as a material unity.” Humberto R. Maturana, Francisco J. Varela & Ricardo Uribe, *Autopoiesis: The Organization of Living Systems, Its Characterization and a Model*, 5 BIOSYSTEMS 187, 188 (1974).

<sup>102</sup> LUHMANN, LAW AS SOCIAL SYSTEM, *supra* note [©], at 81.

<sup>103</sup> Niklas Luhmann, “The autopoiesis of social systems,” in SOCIOCYBERNETIC PARADOXES: OBSERVATION, CONTROL AND EVOLUTION OF SELF-STEERING SYSTEMS 174, Geyer & Van Der Zouwen, eds. (1986).

consciousness, or by the inherent quality of the information.”<sup>104</sup> This hybrid or collaborative activity creating the synthesis closely resembles the traditional platform, in that the information coming into the legal system is necessary but not sufficient to make law, and must be structured as understood by the legal platform before consumption as law. It is “a general form of system-building using self-referential closure”<sup>105</sup> that is also necessarily open to its environment. The information processed is already part of the system processing it: “[p]ieces of information don’t exist ‘out there’, waiting to be picked up by the system. As selections, they are produced by the system itself.”<sup>106</sup> This creation of concepts in the destruction of the raw material provoking their creation resembles the Hegelian *aufhebung* discussed in Part I, above. The ongoing activity of the system leads to a self-referential knowledge of the information that it itself contains:

“Automatically, the selection of further communication is either an acceptance or rejection of previous communication or a visible avoidance or adjournment of the issue....To take one course is not to take another. This highly artificial condition structures the self-reference of the system; it makes it unavoidable to take other communications of the same system, and every communication reviews the same condition within a varied context... it is designed to reproduce itself by submitting itself to self-reproduced selectivity.”<sup>107</sup>

At the points where “irritating” interaction occurs between the legal system and the social system (and other systems), the legal system develops interfaces with in response to expectations presented to the legal system. Luhmann calls these interfaces “structural couplings”.<sup>108</sup> They are concepts and formal institutions that straddle the line between the legal system and another system in the environment. “Property”, “contract” and “capacity” are important structural couplings that allow the legal system to arbitrate over right/wrong, win/lose, legal/illegal in important and problematic social interactions.<sup>109</sup> The contents of the concepts “property” and “contract” adjusted from the medieval to the modern period as private autonomy and commercial flexibility moved forward in the social and economic systems.<sup>110</sup> “The coupling turns operations of the economic system into irritations of the legal system and operations of the legal system into irritations of the economic system.”<sup>111</sup> The manner in which these structurally coupling

<sup>104</sup> Luhmann, “The autopoiesis of social systems,” at 174.

<sup>105</sup> Niklas Luhmann, “The autopoiesis of social systems,” in *SOCIOCYBERNETIC PARADOXES: OBSERVATION, CONTROL AND EVOLUTION OF SELF-STEERING SYSTEMS* 172, Geyer & Van Der Zouwen, eds. (1986).

<sup>106</sup> Luhmann, “The autopoiesis of social systems,” at 175.

<sup>107</sup> Luhmann, “The autopoiesis of social systems,” at 176.

<sup>108</sup> LUHMANN, *LAW AS SOCIAL SYSTEM*, *supra note* [©], at 265.

<sup>109</sup> LUHMANN, *LAW AS SOCIAL SYSTEM*, *supra note* [©], at 266, 388-392.

<sup>110</sup> LUHMANN, *LAW AS SOCIAL SYSTEM*, *supra note* [©], at 392-397.

<sup>111</sup> LUHMANN, *LAW AS SOCIAL SYSTEM*, *supra note* [©], at 392.

“applications” function in the legal system will be determined by the architecture of the legal system, but the content of each of the legal platform’s concepts will be under continued “irritation” by the any changes in the expectations of the social and economic environment.

Luhmann’s systems theory thus presents an operationally closed legal system with porous openings to its environment in the shape of “structural couplings”. The content of law is adjusted by the “irritation” that social expectations present in the form of demands for a declaration of right/wrong, win/lose, legal/illegal. The social and legal systems exist in the same language, but the professionally crafted technical coherence (programs)<sup>112</sup> of law controls the ultimate form of the concept it will select in its evolutionary adjustment. In this theory, expectations become rules through formal requests in connection with disputes,<sup>113</sup> and no account is made for “social propositions” or general social institutions continuously affecting legal decision-making. This is likely the result of Luhmann’s need to present the concrete operations of an operationally closed system that has defined boundaries separating it from its environment.

#### IV. COMMON LAW, CIVIL LAW AND INFORMATION FLOWS

##### A. *The common law for information poor environments*

Each of the approaches discussed in Part III show formal law and expectations or constraints in the environment working together. The history of law shows how legal systems interact with changing environments, particularly changes in the quantity and networked quality of information processed by a platform. Periods of relatively sparse information and networking of solutions are periods in which judge-made law tends to constitute the dominant lawmaking institution.<sup>114</sup> A judge does not need a broad network of information or significant analytical infrastructure to make a ruling. As discussed in Part II.B, judges receive the information they require about a dispute from the parties in dispute, and if there is a precedent decision or other

<sup>112</sup> “We will call the rules for allocation (with whatever margin for interpretation) programmes. We are thinking of legislative acts here but also of other premises for decisions in the legal system, such as a commitment to precedents in court practice. The operative closure of the legal system is secured by coding [of legal/illegal]. But at the level of programming it can be determined on which grounds and in which respects the system has to process cognitions.” LUHMANN, LAW AS SOCIAL SYSTEM, *supra note* [©], at 118.

<sup>113</sup> That courts are considered the primary portals to process social expectations as “irritations” is not declared expressly, but is found in Luhmann’s treatment of the evolution of law, the position of courts, and legal argumentation. *See* LUHMANN, LAW AS SOCIAL SYSTEM, *supra note* [©], at Chapters 6-8.

<sup>114</sup> While extensive, global networking of information is a relatively new phenomenon, even in the 18<sup>th</sup> century cosmopolitan centers like Paris were able to achieve an efficient network of information. Schama, in a chapter entitled “The Cultural Construction of a Citizen,” shows Paris as a highly networked platform of art, philosophy and political commentary in the years leading to the Revolution. Simon Schama, *Citizens: A Chronical of the French Revolution* 123-182 (1989).

rule that provides advantage to one party or the other, the party expecting gain can be relied on to bring the information to the judge's attention.

In circuit courts, one or more judges can travel through a sparsely populated area, constitute local juries when appropriate, and hear arguments from parties in dispute. The court can make decisions on the basis of the arguments heard, commonly held principles of justice, and the verdict of a local jury. Judges riding a circuit were important parts of the first legal systems in both Medieval England and the Western US territories.<sup>115</sup> In England, a lack of records on precedent did not prevent an English common law court at the close of the 12<sup>th</sup> century from producing rules on the basis of commonly accepted notion of justice and information provided by the parties pursuant to the applicable writ.<sup>116</sup> The court can therefore operate as a local platform processing information specific to the litigants. They also allow this litigant-specific information to be increased. Modern litigation, which can become extremely complex in some commercial cases, also demonstrates that the trial format can process enormous quantities of information placed in evidence and an awareness of solutions reached by courts flung across the globe.<sup>117</sup> That both ancient and modern litigation was generally found to serve its expected purpose in very different environments shows that lawmaking by judicial decision is relatively information-neutral. The creation of socially informed legislation is not.

Another type of information-poor environment exists on the frontier of social and technological evolution. The information-neutral aspect of case law is also useful in this context, where a new social development or technology creates a situation regarding which information is absent or sparse. Similarly to the overall evolution of law, cases also usually precede statutory law in areas subject to technological change, where little is known about the general ramifications of an evolving process or technology (such as in 1990s e-commerce<sup>118</sup> and 2010s big data systems like Google<sup>119</sup> or Facebook). This case-focused aspect of judicial activity is what some

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<sup>115</sup> Regarding the U.S. *see e.g.* Tenth Circuit Historical Society, *The Federal Courts of the Tenth Circuit: A History (up to 1992)*, Chapter III.B (“In the huge chunk of southern Colorado that formed the third district, the judge road circuit with an entourage of officials, lawyers, Spanish interpreters, and prisoners for trial.”), available at <http://www.10thcircuithistory.org/court-history-up-to-1992/>.

<sup>116</sup> *See* Van Caenegem, *Birth*, *supra note* [©], at 20-28.

<sup>117</sup> On problems presented by and initiative taken to manage complex litigation, *see* Francis E. McGovern, *Toward a Functional Approach for Managing Complex Litigation*, 53 *UNIV. CHICAGO L. R.* 440 (1986).

<sup>118</sup> *See e.g.* the “Survey of the Law of Cyberspace” published regularly in *The Business Lawyer*, which discusses solutions reached in cases and efforts to update legislation and model acts. Julia Gladstone, *Survey of the Law of Cyberspace: Introduction*, 53 *BUS. LAW.* 217 (1997), and following years.

<sup>119</sup> A search of the Thomson Reuter database, WestNext, conducted on September 8, 2017 in the “Data Privacy” category of that service, reports 32 cases in which Google Inc. is a party and 15 cases in which Facebook is a party.

might think of as the flexibility of common law.<sup>120</sup> Case law is, however, a result of making decisions based on case-specific information rather than the fruit of savvy leniency or embrace of innovation. Once a critical mass of judicial decisions has been gathered by hearing one case at a time, the threads can be pulled together by a restatement, a model law or scholarly study that provides the generalized knowledge necessary for creating legislation.

*B. The critical mass of information necessary for codification*

There is considerable evidence that the history of law leads from less formal judicial lawmaking to statutory law.<sup>121</sup> This was the case in both the in the Roman Empire and the British Empire.<sup>122</sup> At the most basic level, judicial decisions accumulate and become information on possible solutions which inductive reasoning can use to derive generally applicable solutions.<sup>123</sup> With increasing connectivity of population centers through communication and transportation links, the mass of information available to any one member about social problems, disputes arising and potential solutions to them, multiplies so as to allow comparative synthesis.<sup>124</sup> When access to the information produced by a platform is available to neighboring legal systems, solutions produced are borrowed. One aspect of this process is referred to as “convergence”.<sup>125</sup>

In 18<sup>th</sup> century Europe, the information relevant to justice and government not only became more plentiful, but also found a philosophy of “enlightenment” that thrived on the rational processing of the increasing amounts of available information,<sup>126</sup> making theories about rights, government and law abundant. Bentham begins his 1776 critique of judicial lawmaking as

<sup>120</sup> Rafael La Porta, Florencio Lopez-de-Silanes, Andrei Shleifer & Robert W. Vishny, *Legal Investor protection and corporate governance*, 58 J. FIN. ECON. 3, 9 (2000).

<sup>121</sup> This is different in forcefully colonized territory, when little or no attempt is made to have the law reflect social expectations of the community, statues and codes have been initially imposed at the outset. This was the case in the British colony of Hong Kong. See DAVID C. DONALD, A FINANCIAL CENTRE FOR TWO EMPIRES: HONG KONG’S CORPORATE, SECURITIES AND TAX LAWS IN ITS TRANSITION FROM BRITAIN TO CHINA 22-33 (2014).

<sup>122</sup> With regard to Rome, see MARÍA JOSÉ FALCÓN Y TELLA, CASE LAW IN ROMAN, ANGLOSAXON AND CONTINENTAL LAW, trans. Stephen Churnin, 7-9 (2011). Regarding Britain, see Glenn, *Legal Traditions*, *supra* note [©], at 254-255. This is also the developmental path assumed with respect to law’s evolution in LUHMANN, LAW AS A SOCIAL SYSTEM, *supra* note [©], at chapter 6.

<sup>123</sup> Glenn explains that in “1747, just 57 years before the codification of French civil law, Bourjon published his treatise on ‘the common law of France and the custom of Paris reduced to principles.’” GLENN, ON COMMON LAWS, *supra* note [©], at 37.

<sup>124</sup> It is also, of course, possible that increased information, particularly from varied and diverging cultures, would lead to *less* rather than more synthesis into general principles. Cultural relativity is often put forward as a cause of the decline of Christian’s morality in Europe. Political factors seem to be necessary in combination with increased information, so that the English and French systems were refined along general principles as they were imposed upon colonial subjects, and the US legal system reached its surest form as US political influence reached new heights following the collapse of the Soviet Union.

<sup>125</sup> David Cabrelli & Mathias Siems, *Convergence, Legal Origins, and Transplants in Comparative Corporate Law: A Case-Based and Quantitative Analysis*, 63 AM. J. COMP. L. 109 (2015).

<sup>126</sup> See PETER GAY, THE ENLIGHTENMENT: THE SCIENCE OF FREEDOM 320-332 (1969).

presented in the *Commentaries* of Blackstone with an assertion that the time is a “a busy age; in which knowledge is rapidly advancing towards perfection ... The most distant and recondite regions of the earth traversed and explored ... analyzed and made known to striking evidences.”<sup>127</sup> This “rapid advance toward perfection” that combined abundant information with firmly held guiding principles led into the period of great codifications, from France in 1804 to Germany in 1900.<sup>128</sup> It also was fed by and in turn reinforced the later stages of European colonization, so that while political philosophy benefited from knowledge regarding “distant and recondite regions of the earth,” the laws of the colonial powers were imposed through global networks on those regions, with some adaption to new circumstances.<sup>129</sup> The spread of the network of English law was in every case initiated by military power, but then greatly assisted by ingenious platforms like the Privy Council, which processed and homogenized norms on a global scale. The Privy Council accepted appeals from courts located throughout the British Empire, all of which had statutes deriving from English origin with various alterations and the common law, and then adjudicated with sensitivity for local circumstances thanks to a staff of judges seconded from courts in all corners of the Empire.<sup>130</sup>

When Jeremy Bentham pushed for increasingly codified law in 19<sup>th</sup> century London, information from a far-flung Empire was flowing into that city and being processed by a number of central administrations, business headquarters and the House of Lords itself.<sup>131</sup> The Victorian reforms area built on an increase of information from another source – the initial stages of empirical social science research about urban problems, bringing legislation into the modern era.<sup>132</sup> In the United States, both the Progressive<sup>133</sup> and the New Deal<sup>134</sup> periods saw the rapid

<sup>127</sup> JEREMY BENTHAM, A FRAGMENT ON GOVERNMENT; BEING AN EXAMINATION OF WHAT IS DELIVERED, ON THE SUBJECT OF GOVERNMENT IN GENERAL IN THE INTRODUCTION TO SIR WILLIAM BLACKSTONE'S COMMENTARIES, preface (1776).

<sup>128</sup> See the discussion in RENE DAVID & JOHN E.C. BRIERLEY, MAJOR LEGAL SYSTEMS IN THE WORLD TODAY 61-69 (3<sup>rd</sup> ed. 1985).

<sup>129</sup> GLENN, ON COMMON LAWS, *supra note* [©], at 54-55.

<sup>130</sup> See e.g., Ivor Richardson, *The Privy Council as the Final Court for the British Empire*, 43 VICTORIA UNIVERSITY OF WELLINGTON LAW REVIEW 103 (2012).

<sup>131</sup> Many law lords were seconded to the Privy Council, which gathered together appeals from the entire British Empire, and included judges from India and other colonies and legal scholars on the civil law formerly governing captured French possessions and the Islamic law formerly governing Ottoman possessions. See Ivor Richardson, *The Privy Council as the Final Court for the British Empire*, 43 VUWLR 103 (2012).

<sup>132</sup> For example, “Charles Booth, driven by religious-philanthropic motives and a desire for political reforms, tried to achieve greater analytical clarity in his detailed descriptions of the London poor, which he published in 1889–91 after seventeen years of research.” JÜRGEN OSTERHAMMEL, THE TRANSFORMATION OF THE WORLD: A GLOBAL HISTORY OF THE NINETEENTH CENTURY (AMERICA IN THE WORLD), trans. Patrick Camiller, 19 (2014).

<sup>133</sup> See e.g. MELVIN I. UROFSKY, LOUIS D. BRANDEIS AND THE PROGRESSIVE TRADITION (1981).

<sup>134</sup> See e.g. WILLIAM J. BARBER, FROM NEW ERA TO NEW DEAL: HERBERT HOOVER, THE ECONOMISTS, AND AMERICAN ECONOMIC POLICY, 1921-1933 (1985); THEODORE M. PORTER, TRUST IN NUMBERS: THE PURSUIT OF OBJECTIVITY IN SCIENCE AND PUBLIC LIFE, Kindle Locations 6537-6538 (1995).

increase in data-fed lawmaking follow increase in social science studies and the administrative agencies that based expert opinions on such studies. While available networked information is not the only reason why statute will be chosen above judicial lawmaking – legitimacy and transparency have also been historically documented reasons<sup>135</sup> – increases in information have correlated strongly with increased use of statutes, as uncertainty is reduced and general principles become more visible. The course of modern history has brought an increasing amount of law into statutory form, and this is measurable.<sup>136</sup>

Thus the legal system can be seen adapting to its environment in order to process the information available, first from parties in dispute and later from an increasing assortment of sources. As this platform increases in size, it can be brought into new contexts, by force (transplantation) or voluntary acceptance (convergence), but cannot be expected to thrive unless it incorporates to some acceptable level the social expectations of the new jurisdictions attached to the original platform. The most recent case of platform expansion was that of U.S. law (often gratuitously expanded to “Anglo-American” law) throughout the world’s financial and commercial networks at the close of the 20<sup>th</sup> century.

### *C. Anglo-American law as the platform for a superpower network*

The transition to the 21<sup>st</sup> century displayed history’s largest confluence of information and influence, and it was flowing through the platform of the United States economy and legal system. One contributing factor was technological: technologies for storing, reproducing and communicating information expanded dramatically during the 20<sup>th</sup> century,<sup>137</sup> and this expansion approached nearly incredible dimensions at turn of millennium.<sup>138</sup> This allowed information flows necessary for multinational supply chain, financial investment and entertainment – among other things – to be networked globally from a central platform. Another contributing factor was political: The United States, which became the world’s dominant economy and moved toward

<sup>135</sup> The popular revolt in Rome leading to the creation of the Twelve Tables to replace the decisions of the Praetors as the sole source of law is an example of a political economic cause of statutory law, one repeated to some extent in the creation of the Napoleonic Code and the German Civil Code (whose name is actually Citizen’s Law Book – *Bürgerliches Gesetzbuch*. See GLENN, *supra* note [●].

<sup>136</sup> In 1982, Calabresi pointed out that “the last fifty to eighty years have seen a fundamental change in American law. In this time we have gone from a legal system dominated by common law, divined by courts, to one in which statutes, enacted by legislatures, have become the primary source of law. Calabresi, *supra* note [●] at 1. See also Tom Cummins, *Code Words*, 5 JOURNAL OF LEGAL METRICS 89 (2015), noting that the average annual growth rate of the size of the US Code between 1926 and 2012 was 30%.

<sup>137</sup> See e.g. Richard L. Nolan, *Information Technology Management Since 1960*, in A NATION TRANSFORMED BY INFORMATION: HOW INFORMATION HAS SHAPED THE UNITED STATES FROM COLONIAL TIMES TO THE PRESENT, A. Chandler & J. Cortada, eds., 217-227 (2000).

<sup>138</sup> “For example, the amount of information transmitted by telecommunications during the whole of 1986 could be transmitted in just two-thousandths of a second in 1996. The increase in the volume of information between 2006 and 2007 was vastly greater than the sum of all information transmitted in the previous decade. (More precisely, the increment is  $1.06 \times 1036$  times bigger than the sum.)” BALDWIN, *supra* note [©], at 82.

becoming its leading culture after World War II then became the world's only superpower and primary model for economic prosperity following the collapse of the Soviet Union.<sup>139</sup> The platform that was the US legal system and economy became so powerful that historians could see no viable outside, and announced with Hegelian certainty that world history had reached its pinnacle in capitalism and liberal democracy, and then simply stopped, an end of history.<sup>140</sup> As the general patterns found in US law became industry standards, actively carried forward by U.S. multinationals, international bodies dedicated their energy to making recommendations and drafting model legislation and treaties incorporating US solutions for developing countries.<sup>141</sup>

During this period the ubiquitous acceptance of US law was not examined in terms of platform dominance in scope and scale. Rather than including the combined impact of the platform effects in legal and economic analysis, arguments were made that US law was inherently superior in substance. The most famous example was made by a team of economists focusing on corporate and securities laws. Their argument was that common law, originating in the United States and the United Kingdom, was the key to financial market development, and thus economic development. This “legal origin” theory argued that countries using common law could better protect investors, which was a precondition for healthy capital markets, which were a precondition for economic development.<sup>142</sup> The argument that the common law enjoyed substantive superiority was well-received, as it supplied a concrete, neutral explanation for the palpable dominance of the United States economic model and legal system.

The substantive arguments made in favour of common law superiority for investor protection were few, and were limited to general assertions and some point-by-point comparisons to “civil law, and particularly French civil law,” which was asserted to “have both the weakest investor protections and the least developed capital markets, especially as compared to common law countries.”<sup>143</sup> The primary reason for this was the generally asserted open flexibility of U.S., court-centred, common law.<sup>144</sup> These arguments were then fleshed out by their insertion in a quantitative rating index.

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<sup>139</sup> See e.g. TONY JUDT, *POSTWAR: A HISTORY OF EUROPE SINCE 1945* [©] (2005).

<sup>140</sup> FRANCIS FUKUYAMA, *THE END OF HISTORY AND THE LAST MAN* 338-339 (2<sup>nd</sup> ed. 2006).

<sup>141</sup> See the discussion of the “Washington Consensus” in JOSEPH STIGLIZ, *GLOBALIZATION AND ITS DISCONTENTS* (2003).

<sup>142</sup> See Rafael La Porta et al., *Legal Determinants of External Finance*, 52 *J. FIN.* 1131, 1149 (1997).

<sup>143</sup> LaPorta et al., *Legal Determinants*, *supra* note 142, at 1133.

<sup>144</sup> As LLSV remarks: “Legal rules in the common law system are usually made by judges, based on precedents and inspired by general principles such as fiduciary duty or fairness.... In contrast, laws in civil law systems are made by legislatures, and judges are not supposed to go beyond the statutes and apply ‘smell tests’ or fairness

However, paper by paper, legal scholars showed that the “legal origin” theory had almost no support in the law. Far from being flexible and court-cantered, U.S. securities regulation derives from hundreds of pages of statutes and thousands of pages of rules,<sup>145</sup> with judicial decisions playing a secondary role. Coffee explained that, pursuant to the “legal origin” “interpretation, small and (to lawyers) inconsequential legal differences were assigned great weight and presented as the minority shareholders’ shield against exploitation by the majority.”<sup>146</sup> The “legal origin” thesis also ignored the historical events that had made the Anglo-American platform dominant. Roe explained that the two world wars fought in Continental Europe strongly skewed European development.<sup>147</sup> Following each war, the rebuilding of public and private infrastructure was naturally financed by banks rather than equity markets,<sup>148</sup> and the division of Germany led West Germany to champion the rights of labour over capital for obvious political reasons.<sup>149</sup> The causal relationship asserted between common law and capital market creation is also refuted by history: William III of Orange transplanted Dutch financial infrastructure from The Netherlands to after becoming the English king.<sup>150</sup> The market institutions were developed in civil law rather than common law. Moreover, Britain’s insular protection from Continental wars

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opinions. As a consequence, a corporate insider who finds a way not explicitly forbidden by the statutes to expropriate outside investors can proceed without fear of an adverse judicial ruling.” Rafael La Porta, Florencio Lopez-de-Silanes, Andrei Shleifer & Robert W. Vishny, *Legal Investor protection and corporate governance*, 58 J. FIN. ECON. 3, 9 (2000).

<sup>145</sup> A very compact version of just the Securities Act of 1933 (regulating primary market sales of securities) and the Securities Exchange Act of 1934 (regulating secondary market sales of securities) before the enactment of the 850 page Dodd Frank Wall Street Reform Act of 2010 consisted of over 300 pages. The rules written for the ’33 and ’34 Acts (again prior to amendment pursuant to the Dodd Frank Act) consisted of about 2,000 pages on densely packed regulations.

<sup>146</sup> John C. Coffee, Jr., *Law and the Market: The Impact of Enforcement*, 156 U. PA. L. REV. 229, 242–43 (2007).

<sup>147</sup> Mark J. Roe, *Legal Origins, Politics, and Modern Stock Markets*, 120 HARV. L. REV. 460 (2006).

<sup>148</sup> *Id.*, at 502.

<sup>149</sup> *Id.*, at 501.

<sup>150</sup> See Larry Neal, *The Integration and Efficiency of the London and Amsterdam Stock Markets in the Eighteenth Century*, 47 J. ECON. HIST. 97, 98–99 (1987) (“To aid him in raising money for his War of the League of Augsburg against Catholic France, William brought with him numerous financial advisors and military contractors from Holland. Many were Jews and Huguenots who were eager to apply in a relatively backward England the financial techniques and institutions that had been developed over the past century in Amsterdam.”); Eric S. Schubert, *Innovations, Debts, and Bubbles: International Integration of Financial Markets in Western Europe, 1688-1720*, 48 J. ECON. HIST. 299, 300–04 (1988) (“After the Glorious Revolution of 1688 England made important changes in its underdeveloped system of public finance and credit .... the administration of William III imported Dutch techniques of finance .... founding of the Bank of England in 1694 .... The modernization of the financial system gave London the opportunity to develop into a major financial center on par with Amsterdam.”); Douglass C. North & Barry R. Weingast, *Constitutions and Commitment: The Evolution of Institutional Governing Public Choice in Seventeenth-Century England*, 49 J. ECON. HIST. 803, 822 (1989) (“[A]t a time when Holland was borrowing £5 million long term at 4 percent per year, the English Crown could only borrow small amounts at short term, paying between 6 and 30 percent per year. The [Glorious] Revolution radically altered this pattern.”). The origin of modern European finance in The Netherlands is also described at some length in NIALL FERGUSON, *THE ASCENT OF MONEY*, ch. 3 (2008).

consistently made it a safe haven for capital and the recipient of Continental funds,<sup>151</sup> and this later applied to New York as well.<sup>152</sup> There really is no “legal origin” argument for the development of capital markets in the United States (and the United Kingdom).

Seen as a platform, with economics of scale, scope and efficiency, the dominance of the U.S. legal system at the turn of the millennium is obvious. With the largest economy, U.S. firms were present everywhere in the world, and found it efficient to bring their law with them where possible. Counterparties dealing with those firms would find membership in their platform attractive. With the strongest military, the United States and the U.S. dollar became the obvious choice as safe haven investments in the face of any political instability. This contributed significantly to making the U.S. capital markets the largest and most liquid, both a point of reference for global transactions and important points of linkage in global financial. The entire package offered by a U.S. centred legal system thus included circular aspect in which one strength fed back on the other. The platform’s network externalities alone would have been sufficient to attract users. However, the management of its architecture was also very efficient for some users. In the area of finance, the U.S. legal system strongly accommodated the expectations of its users during the period in question. For example, the emerging market in derivatives received extraordinary protection from the U.S. government and regulators were highly sympathetic to the desires of industry for altering existing business models. As governments around the world strove to increase the dynamism of their economies to emulate the leading power that was the United States, it was not unusual that they attempted to make themselves compatible with the U.S. platform standard.

If it is correct to see the rise of the U.S. legal system as being a function of platform rather than substantial superiority of law, moves away from the platform should become visible as various points in the network of its combinatorial strength are diminished. Political and military prestige decreased following the various setbacks connected with the U.S. invasions of Afghanistan and Iraq. Reputation for regulatory leadership decreased in the wake of the global financial crisis that began in 2007, and American policy positions have suffered significant reversals under the Trump Administration, particularly with respect to reversals in environmental protection and human rights. The loss of network effects in connection with such erosion would

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<sup>151</sup> Such capital flight caused the birth of the London Stock Exchange. See RANALD MICHIE, *THE LONDON STOCK EXCHANGE: A HISTORY* 23-25 (2001); Ann M Carlos and Larry Neal, *Amsterdam and London as financial centers in the eighteenth century*, 18 *FINANCIAL HISTORY REVIEW* 21, 37 (2011).

<sup>152</sup> The flow of funds into New York during the Second World War is discussed in ERIC HELLEINER, *STATES AND THE REEMERGENCE OF GLOBAL FINANCE: FROM BRETTON WOODS TO THE 1990'S* 39 (1996).

be quite different than a loss of quality because, say, a given law was codified or the “savvy flexibility” of law-making judges were to be otherwise hampered.

## **V. CONCLUSION: TOWARD A PLATFORM ARCHITECTURE FOR LAWMAKING**

### *A. Components and performance of legal system platforms*

The three theoretical models of law in society discussed in Part III and the concrete examples of developing law examined in Part IV support taking an approach that understands legal systems as platforms packaging raw social expectations into definite legal norms. Platforms facilitate interactions among their users by means of “combinatorial innovation,” to use a term from McAfee and Brynjolfsson, performed by the platform architecture. Each of legal theory, institutional economics and systems theory understand the social order for which legal systems claim responsibility to be achieved through a blend of informal and formal elements. For legal and systems theories, the informal elements are processed into the formal elements through pressure exerted by litigation and other requests for lawmaking and the legal system’s attempt to maintain equilibrium (harmony or congruence) with the social environment. The “combinatorial innovation” achieved in this processing is the heart of the platform, and as historical circumstances within society change, legal system have tended to adjust their balance of law-making from the information-neutral institution of adjudication to the promulgation of statutes and codes, which requires densely networked information.

History also shows that like any other network, a legal platform will dominate other platforms once its network effects (the “liquidity” of its concepts) reach sufficient scale. Thus a U.S. legal system that is associated with a dominant economy, a dominant currency, a dominant language and a dominant military power will attract users in order to transact with its native members, benefit from the stability of its national currency and gain the connectivity and reputational value that comes with being members of the leading network. Any rule partaking of U.S. legal concepts and solutions gains the “liquidity” of instant recognition and reputational glow through association with the dominant platform. This understanding is supported by the fact that a “legal origin” theory asserting the fundamental superiority of the U.S. legal system could enjoy great prestige despite having little or no basis in fact about differences in legal systems. Indeed, the arguments made by legal scholars to refute “legal origins” assertions included observations on the various systemic elements (actual components of applicable law, actual practice of applying and enforcing law, political circumstances, and historical evolution, among others) that would be seen as important inputs for a platform packaging social values into legal norms. The centripetal pull of the network effects generated by a leading platform and the

incentives connected with affiliation to that platform also explain much of the process of legal “convergence” toward the end of the 20<sup>th</sup> century as minor platforms adopted the “industry standard” offered by the leading platform.

### *B. Modelling legal system platforms*

Any attempt to model the processing of information from unstructured notions to packaged rules within the platform of the legal system should account for all actual ‘infrastructure’, the interaction of their components, and the manner in which information arrives and is altered by interacting with each component. For example, in litigation, ‘infrastructure’ would include at least the availability of counsel and causes of action (writs), operation of legal proceedings (types of evidence, activity of judges), the relationship of decision-making to past decisions (concept of *stare decisis*), and the culture of the legal profession (such as the level of doctrinal or political coherence expected). Institutional Economics is useful in isolating the various elements that could be understood to be *loci* of order. Legal theorists – jurisprudential, historical and comparative – are in the best position to name exact ‘infrastructural’ components and the way that they can be expected to interact. Systems theory provides the best view of the overall dynamic balance that should be expected as necessary in a functional legal system.

Cameron and Kornhauser have recently sketched a path to the mathematical modelling of judicial action in a way comparable to what is being discussed here.<sup>153</sup> Their model covers all litigation, both common law and constitutional law, including the review of administrative agency decisions, which adds complexity to the project. Moreover, they do not rely on pre-existing descriptive models of legal activity, other than a definitional quotation from Richard Posner, which points out that judicial decisions can focus on dispute settlement or the generation of rules for future use.<sup>154</sup> In addition, the model is not designed to track the processing of information as rules are packaged by the court from informal ordering norms, but rather seeks to account for outcomes, such as the fact that a given decision will give victory to either the plaintiff or the defendant.<sup>155</sup>

Backing away from some of the complexities taken into the model created by Cameron and Kornhauser and building on the descriptive models offered by Eisenberg and Luhmann, the project of modeling becomes less complex. Using Luhmann’s concept of the structural coupling,

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<sup>153</sup> Charles M. Cameron and Lewis A. Kornhauser, Chapter 2: What Courts Do . . . And How to Model It (June 2, 2017). NYU Law and Economics Research Paper . Available at SSRN: <https://ssrn.com/abstract=2979391> or <http://dx.doi.org/10.2139/ssrn.2979391>.

<sup>154</sup> Cameron & Kornhauser, *supra note* [©], at 2.

<sup>155</sup> Cameron & Kornhauser, *supra note* [©], at 8-9.

it is possible to isolate the specific legal concept, or group of concepts, on which pressure would be placed is a certain cause of action. Then, using the “social propositions” (morals, policies and experiential propositions) isolated by Eisenberg it should be possible to trace the influence of a given social norm on any adjustment of the structural coupling. For example, the increasing social importance of consumers together with an increasingly active state leads and accompanying notions of protective paternalism feed into the rule on careful manufacture developed in New York and the United Kingdom in the early twentieth century.<sup>156</sup> The existing balance of informal and formal constraints in the society at the time could be assessed using tools from institutional economics, and the pressures within the court to adopt a given norm within its formal rules could be estimated using the legitimizing forces Eisenberg schematizes with the concepts objectivity, support, replicability and responsiveness.<sup>157</sup> Within this feedback loop, information regarding popular notions of justice carried forward in a culture is communicated to government institutions, which apply it according to their own institutional framework and information about preexisting hard law, fixing the received notions into determinate legal concepts and bringing them back to the population as positive law.

The resulting model would project how judicial machinery allows pressure from a changing society to reach the court, and then how the information received is processed into a rule. A similar exercise would be possible for legislation, adjusting for the differences in institutional framework and methods of data processing. Once the flow of information is properly modeled, it should be possible to experiment with potential law changes based on actual data received from citizens of a given jurisdiction. The data on social preferences and expectations becoming available in very measurable form through “big data” portals like Facebook, Google and Twitter makes polls look like the very early “pipe roles” on which decisions were occasionally recorded and stored in Medieval England. We are entering an area when both the entire body of existing law evidenced textually and hard evidence of generally accepted community norms are present with near simultaneity for very large territorial expanses in any location where decisions might be made.<sup>158</sup> We only lack the models that can take the packaging process of law out of the rough and

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<sup>156</sup> See *MacPherson v. Buick Motor Co.* 217 NY 382 and *Donoghue v. Stevenson* [1932] LR App Cas. 562.

<sup>157</sup> EISENBERG, *supra* note [●], at 8-13. See the discussion in Part [●].

<sup>158</sup> This acceleration of systematic data on social preferences joins that already available on legal texts. As early as 1995, Bernstein remarked that “[t]oday legal information technology, especially electronic data storage and retrieval, offers the single most powerful cure for Corbin's problem of unintended variation in case law.” Courts “can transmit opinions to one electronic publisher minutes after handing them down, and the opinions are loaded into databases within twenty minutes of receipt.” Anita Bernstein, *Book Review of Restatement Redux: Product Liability*, 48 VAND. L. REV. 1663, 1670 (1995). Harvard's Caselaw Access Project (<http://lil.law.harvard.edu/projects/caselaw-access-project>) is creating an electronic database of all existing US caselaw that could allow high speed machine processing of the law in a way never seen before.

vague intuition of judges and legislators into transparent, repeatable process. While such analytical models should never ultimately replace the intuition of experienced lawmakers with ‘robot governance’, a clear view of how the platform architecture brings together the various norms that have meaning in law should raise levels of transparency and accountability in law-making and ultimately assist lawmakers improve the quality of rules they offer their users for consumption and use.