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Economics of Legal History

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Abstract

This essay surveys economic analyses of legal history. In order to make sense of the field and to provide examples that might guide and inspire future research, it identifies and discusses five genres of scholarship.

1) Law as the dependent variable. This genre tries to explain why societies have the laws they do and why laws change over time. Early economic analysis tended to assume that law was efficient, while later scholars have usually adopted more realistic models of judicial and legislative behavior that take into account interest groups, institutions, and transactions costs.

2) Law as an independent variable. Studies of this kind look at the effect of law and legal change on human behavior. Examples include analyses of the Glorious Revolution, legal origin, and nineteenth-century women's rights legislation.

3) Bidirectional histories. Studies in the first two genres analyze law as either cause or effect. In contrast, bidirectional histories view law and society as interacting in dynamic ways over time. Laws change society, but change in society in turn leads to pressure to change the law, which starts the cycle over again. So, for example, the medieval communal responsibility system fostered international trade by holding traders from the same city or region collectively responsible. Nevertheless, the increase in commerce fostered by the system undermined the effectiveness of collective responsibility and put pressure on cities and nations to develop alternative enforcement institutions.

4) Private ordering. A significant body of historical work investigates the ability of groups to develop norms and practices partly or wholly independently of the state. Such norms include rules relating whaling, the governance of pirate ships, and, more controversially, medieval commercial law (the "law merchant").

5) Litigation and Contracts. Law and economics has developed an impressive body of theories relating to litigation and the structure of contracts. These theories often shed light on legal behavior in former times, including contracts between slave ship owners and captains, and the suit and settlement decisions of medieval private prosecutors.

Economics of Legal History

Dan Klerman[1]

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I. Introduction

Legal history has been an important part of law and economics from its inception. In his seminal "Problem of Social Cost," Coase (1960) chose to illustrate his new theory using nineteenth-century nuisance cases. Soon thereafter he published a detailed legal history of messenger companies, and his later "Lighthouse in Economics" again revealed his view that basic economic principles are often best approached through historical analysis. (Coase 1961, 1974). Similarly, Demsetz (1967) turned to history to understand the economics of property rights, and one of Posner's first applications of economics to a legal field other than antitrust was his analysis of nineteenth-century tort law. (Posner 1972a). In his *Economic Analysis of Law* (1972), Posner generalized the thesis of that article into the positive analysis of law, the idea that legal rules can be explained as reflecting efficiency. Positive economic analysis was one of the two main branches of Posner's conception of the field of economic analysis of law, and it attempted to explain not only current law, but also legal history all the way back to the law of "primitive" societies. (Posner 1981).

Subsequent generations of law and economics scholars have continued to be fascinated by history, seeing in its institutions and laws a vast database for testing and illustrating their theories. Less commonly, but at least as importantly, historians have seen economic analysis as a helpful tool with which to analyze legal institutions. As a result, a vibrant field has emerged in which persons trained in law, economics, history, and/or political science have all made significant contributions.[2]

Like law and economics more generally, economic analysis of legal history is a sprawling field characterized by a wide range of subjects, multiple methodologies, and diverse participants. Some economically influenced legal historians analyze women's rights in the nineteenth-century United States, while others analyze medieval trade or ancient contracts. Economic tools can be used to analyze the effect of law on society, the determinants of law and legal change, or the way groups used private ordering to govern themselves with little or no support from the state. Sometimes scholars use modern econometric tools to tease out cause and effect, while often analytic narratives are appropriate or the only workable method given data limitations.

Those who practice economic legal history have eclectic backgrounds and institutional affiliations. Prominent contributors include economists, law professors who taught themselves economics and history, and persons with dual degrees in law and history or economics. Few, if

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[2] For surveys of the field, see Harris (2003, 2003a, and 2011) and Klerman (2002). For a collection of some of the articles cited in this chapter, see Klerman (2014).

any, devote their scholarship exclusively to economic analysis of legal history, which may contribute to the diversity of subjects and methods.

Economic analysis of legal history is a field with no firm boundaries. In one sense, any empirical work in law and economics is economic analysis of legal history, because empirical work necessarily deals with data from the past, and thus with history. We do not generally think of empirical work analyzing recent events as legal history, but there is no clear distinction between Litvak's (2007) analysis of the Sarbanes-Oxley Act, which few would categorize as legal history, and Harris's (2000) treatment of the Bubble Act of 1720, which undoubtedly would be so classified. And what about Mahoney's (2001) study of the Securities Act of 1933? Is it historical because it analyzes events that are nearly one hundred years old and uncovers political coalitions that are significantly different from those that characterize the modern politics of securities regulation? Or is it ordinary, non-historical law and economics, because it investigates legislation that, with some changes, remains in force today?

Similarly, the boundary between economic analysis of legal history and other kinds of legal history is porous. While some legal history boldly declares its affiliation with law and economics through explicit references to economic concepts (such as transactions costs), its use of economic methods (such as game theory or econometrics), or publication in journals devoted to economic analysis, the influence of economics is so pervasive that even conventional legal histories sometimes make use of ideas – such as the collective action problem – that are closely associated with economic analysis and related disciplines, such as rational-choice political science. The lines between economic analysis of legal history, economic history, and political history are similarly ill-defined.

In this essay, I will not attempt to define the field with any precision, but instead will celebrate its openness by discussing works that shed light on the use of economics to elucidate legal history, even if their authors might not consider themselves as doing economic analysis of legal history. Several of the most important twentieth-century works of legal history could be characterized as economic analysis of legal history, because they were centrally concerned with the relationship between law and economic growth. See, e.g., Hurst (1956, 1964), Horwitz (1977). Nevertheless, in order to keep this chapter manageable, it will focus on more recent works that were influenced by the pioneers of modern economic history and law and economics—Ronald Coase, Douglass North, and Richard Posner.

The study of legal history provides opportunities for empirical analysis that would be impossible using modern data. Many institutions that would be unimaginable, impractical, or taboo in modern western societies can be studied historically. Consider, for examples, the organization of pirate ships, slave manumission, the creation of property rights in sparsely-settled or newly-colonized areas, the sale of children, the private enforcement of criminal law, or profit-maximizing judging. (Leeson 2009, Dari-Mattiacci 2013, Banner 2002, Ramseyer 1996, Friedman 1979, Klerman 2007). In addition, time lags in the transmission of information, which have all but disappeared in the last two hundred years, can be exploited when analyzing former times. See Klerman and Mahoney (2005)

In order to make sense of the field and to provide examples that might guide and inspire future research, this essay is organized around five genres of scholarship:

> **Law as the dependent variable.** This genre tries to explain why societies have the laws they do and why laws change over time. Early economic analysis tended to assume that law was efficient, while later scholars have usually adopted more realistic models of judicial and

legislative behavior that take into account interest groups, institutions, and transactions costs. Part 2 is devoted to this genre.

Law as an independent variable. Studies of this kind look at the effect of law and legal change on human behavior. Examples include analyses of the Glorious Revolution, legal origin, and nineteenth-century women's rights legislation. This genre will be discussed in Part 3.

Bidirectional histories. Studies in the first two genres analyze law as either cause or effect. In contrast, bidirectional histories view law and society as interacting in changing ways over time. Laws change society, but change in society in turn leads to pressure to change the law, which starts the cycle over again. So, for example, the medieval communal responsibility system fostered international trade by holding traders from the same city or region collectively responsible. Nevertheless, the increase in commerce fostered by the system undermined the effectiveness of collective responsibility and put pressure on cities and nations to develop alternative enforcement institutions. Work in this genre is relatively rare, but it is the most promising and is discussed in Part 4.

Private ordering. A significant body of historical work investigates the ability of groups to develop norms and practices partly or wholly independently of the state. Such norms include rules relating to whaling, the governance of pirate ships, and, more controversially, medieval commercial law (the "law merchant"). Part 5 explores these studies of norms and related phenomena.

Litigation and Contracts. Law and economics has developed an impressive body of theories relating to litigation and the structure of contracts. These theories often shed light on legal behavior in former times, including contracts between slave ship owners and captains, and the suit and settlement decisions of medieval private prosecutors. Such works are discussed in Part 6.

While this classification of economic legal histories is helpful, other classifications are, of course possible. One could, for example, classify by time and place (e.g. nineteenth century America, medieval England or ancient Rome), by legal subject matter (e.g. property, contract, or criminal law), by methodology (price theory, game theory, econometrics, positive political theory, or informal economic reasoning), or historiographically (seminal works by Demsetz, North, and Posner, later works by others). Unfortunately, classification schemes tend to marginalize works which do not fit into the scheme. Consider, for example, Henry Smith's (2000) article explaining the scattering of strips in the medieval open fields system as a method of curbing strategic behavior. Is it an example of law as a dependent variable (because it describes a property rights regime as an efficient response to economic conditions), private ordering (because the property regime at issue was not organized by the state) or legal behavior (because scattering was, at least sometimes, adopted and maintained by contract). Similarly, some work on Roman law seems primarily concerned with uncovering how commercial law and contracts worked, rather than with exploring their efficiency, political determinants, or consequences. (Harris 2014; Friedman 2014; Silver 2014). Nevertheless, it is hoped that the focus on genres adopted here helps clarify the achievements of the field, as well as its challenges and opportunities.

2. Law as the dependent variable

From its inception, economic analysis has tried to understand why societies have the laws they do. There are two primary approaches to this problem—those that emphasize efficiency and those that emphasize politics and institutions. The most famous early approaches to economic analysis of legal history took the efficiency approach. Demsetz (1967) argued that property rights emerge when conditions make them efficient. Property rights reduce the externalities that might otherwise be caused by overuse (e.g. the tragedy of the commons), because the owner has an incentive to maximize the profitability of land and other thing that she owns. On the other hand, property rights are costly to define and enforce. As a result, property rights are efficient only when the benefits (reducing overuse and improving management) exceed the costs of the rights themselves. Thus, when things are abundant, the externalities caused by overuse are minimal, so property rights will not emerge, because they would be too costly. Conversely, when populations rise or new technologies emerge that increase demand, things become scarce and property rights become efficient and emerge. Similarly, technologies that decrease the cost of enforcing property rights, such as barbed wire fencing in places where natural fencing material is scarce and, therefore, expensive, make property rights both more efficient and more common. Demsetz applied his insights to the emergence of property rights among Native Americans when trade with Europeans increased the demand for fur and thus increased the danger of over-hunting.

Posner (1972, 1986) developed a more general theory of the "positive economic analysis of law." Posner argued that law, especially, but not exclusively, the common law, "bear[s] the stamp of economic reasoning" and "rest[s] on inarticulate gropings toward efficiency." (Posner 1986). In his 1977 treatise, Posner opined that positive analysis was "even more important" than normative analysis, although he later retreated from that position. (Posner 1977 p. 18, 1986, pp. 20-21). While Posner may have intended positive analysis primarily as a "tool of legal study" for law teachers and students, he also used it for sustained historical analysis, including an article on nineteenth-century American tort law and several book chapters on the "primitive law" of ancient societies with weak states. (Posner 1972a, 1981).

A number of scholars took up the challenge of finding evidence of efficient law in various times and places ranging from property rights in the American west and post-plague England (Anderson & Hill 1975, Libecap 1978, Libecap, Lueck & O'Grady 2011, Haddock & Kiesling 2002) to contract law in ancient Rome and Biblical Israel (Frier 1989, Miller 1993), property and tort law in imperial Japan (Ramseyer 1996, Chapters 2-4), and criminal law in early modern England (Allen and Barzel 2011, Garoupa and Klerman 2010). In this vein, Geddes & Lueck (2002) argued that women gained economic rights in marriage in the nineteenth century because increases in wages and human capital made it efficient for women to have incentives to work outside the home and more difficult for their husbands to monitor them. Similarly, Rose (1990) argued that differences in water rights regimes that arose in nineteenth-century America could be explained as efficient responses to the different uses of water in eastern and western states. In an interesting twist on the efficiency hypothesis, Jenny Bourne Wahl (1998) found that the judge-made law that governed slavery in the U.S. was efficient if one considered "only the effects of law upon parties with legal standing." (p. 3). That is, slave law was efficient from the perspective of slave owners and other free people, but it obviously did not take account the "costs to slaves" themselves. (p. 3).

Some research on Roman law has claimed it was efficient. For example, Libecap and Lueck (2014) conclude that the Roman practice of centuriation (dividing newly conquered lands into rectangular parcels when the land was valuable enough and flat enough to make the cost of doing so reasonable) "is consistent with a wealth maximizing model." Similarly, Epstein (2014) asserts that Roman pleading "tended toward efficient legal solutions…" On the other hand, many scholars have been more cautious. The most ambitious application of economics to Roman law is Dennis Kehoe's, *Law and Rural Economy in the Roman Empire* (2007). Kehoe's goal was to explore whether the Roman law that regulated agriculture "served primarily to foster the interest of the elite, or rather … helped to offer the vast majority of the empire's subjects some protection against exploitation by the powerful and well connected." (p. vii). Kehoe concludes that Roman law generally protected small farmer's rights and thus "facilitate[d] the type of investment and cooperation that could lead to economic growth." (p. 194). Nevertheless, he acknowledges that fiscal imperatives and the path dependency of the Roman tax system led to inefficient legal changes in the late Empire, such as binding small cultivators (*colonii*) to the land and limiting occupational mobility. Similarly, Ellickson (2014) concludes that "measured against the practices of other ancient civilizations, Rome's land institutions were relatively growth promoting," because they protected private property and "conferred on an owner broad discretion to transfer an asset by contract or will" (p. 46). Nevertheless, Roman law fell short by not allowing condominiums or instituting land recordation. (p. 45). The failure to institute land recordation is especially surprising, given that Egypt had land records before its conquest by Rome, and that system persisted after the Roman conquest. Egyptian history thus shows that land recordation was possible given ancient technologies of writing and administration, and that Romans were aware of its feasibility. Eric Posner and Verhagen similarly hedge their conclusions, asserting that Roman political and secured credit institutions had beneficial aspects, without claiming that those institutions brought Roman society to the Pareto frontier. (E. Posner 2014; Verhagen 2014). Of course, it is not hard to find aspects of Roman law that were misguided and inefficient. See Silver (2011).

The attempt to explain legal history in terms of efficiency has been subjected to trenchant criticism by both economists and historians. (Hadfield 1992; Gordon 1984). A fundamental problem is that legal change must emerge from institutions, and, as a result, legal change always involves transactions costs. Even common law judges must act within a governmental framework, and that framework provides no obvious incentive to generate efficient legal rules. While sometimes the gains to legal change are so large that even inefficient political institutions find ways to implement them, at other times interest groups that dominate the government push through rules that benefit themselves but not society as a whole. Similarly, interest groups often block changes that would benefit society as a whole, but that would undermine the economic or political interests of the dominant coalition. (North, Weingast and Wallis's 2009; Acemoglu and Robinson 2012). For these reasons, Douglass North emphasized the importance of institutional structure for economic performance (North & Thomas 1973), and George Stigler argued that regulation was likely to be supplied by government in response to demand from well-organized parties. (Stigler 1971). Posner himself was sympathetic to Stigler's position (Posner 1974) and embraced the interest-group theory of regulation, which is one reason he tended to emphasize the efficiency of the judge-made law rather than statutes. Nevertheless, Posner was never able to develop a convincing theory of why common law judges would generate efficient doctrine. In the second edition of his treatise, he endorsed Paul Rubin's (1977) view that inefficient rules were more likely to result in litigation, so, even if judges had no preference for efficiency, doctrine would evolve toward efficiency, because efficient rules would be stable while inefficient rules would be more likely to be changed. (Posner 1977 pp. 439-40). Nevertheless, in later editions, Posner noted "several objections" to this theory, including the long time the system would need to generate efficient rules, the collective action problem that those disadvantaged by inefficient rules face in challenging them, and the way stare decisis might solidify frequently litigated inefficient rules. (Posner 1992, pp. 559-60; see also Posner 1986, pp. 527-28). In later editions of his treatise, Posner explained the common law's tendency toward efficiency as reflecting the *laissez faire* ideology of the late nineteenth century when key common law doctrines were shaped, the limited ability of judges to redistribute, and the economic foundations of ordinary thinking about justice. (Posner 1986 pp. 232-33; Posner 2011 pp. 318-19). Perhaps the most telling criticism of Rubin's evolutionary theory of common law efficiency is that its proponents have not been able to point to a single doctrine that evolved in accordance with its predictions.[3] Rubin's own later work put more emphasis on interest groups and politics than efficiency. (Rubin 1982; Rubin & Shepherd 2013).

As discussed above, there is a substantial body of scholarship supporting the general efficiency of law. Nevertheless, it is notable that these studies tend to examine either legal change over long periods of time or the law of a particular time and place as a static (unchanging) body of rules and institutions. When historians analyze particular legal changes in detail, the efficiency hypothesis becomes much less helpful, while the dynamics of interest group politics become inescapable. In such detailed studies, the failure of the legal system to achieve efficient outcomes is often apparent. So, for example, while early work on property rights (cited above) tended to confirm the Demsetz efficiency hypothesis, later work told a more complicated story. Although western lands were converted to private property, as Demsetz would predict, Zeynep Hansen and Gary Libecap (2004, 2004a), building on the work of prior historians, showed that the Homestead Acts, through which much Western land was distributed, were horribly inefficient. The law required homesteads on the Great Plains to be too small, which led to extensive farm failure. Small holding were also cultivated too intensively, which caused environmental degradation, most famously the Dust Bowl of the 1930s. Hansen and Libecap attribute the small size required by the Homestead Act both to ignorance of climatic conditions and to self-interested western politicians who thought higher population would lead to statehood and thus to increased political opportunities for themselves. As Coase would predict, since land was freely alienable after a few years and transactions costs were not prohibitive, small homesteads were eventually consolidated through market transactions. Nevertheless, that

[3] For example, Paul Rubin edited a book containing twenty-two articles on the *Evolution of Efficient Common Law* (2007). None, not even the five articles in Part V "Specific Applications," traces the development of a common law doctrine showing high litigation rates when inefficient rules were chosen, doctrinal change to efficient law, and subsequent lower litigation rates. The closest is Jeffrey Stake's (2005) article on "differential litigation of the fee tail and other perpetuities." (reprinted in Rubin 2007). Stake shows that judges generally favored free alienability, but does not present any statistics on litigation rates. As a result, he cannot show that the efficiency of common law rules favoring alienation was caused by high litigation rates under inefficient rules restricting alienation, nor can he show that the efficient free-alienability rule was stable because of low litigation rates.

process took decades, and the human, environmental, and financial consequences of the poor initial allocation were large.[4]

Similarly, although the history of oil and gas rights shows a generally efficient movement toward unitization to address the common pool problem, Gary Libecap and James Smith (2002) show that, to this day, efficiency is often blocked by the divergent interests of those owning gas and oil in the same field. Although the Coase Theorem would predict that the parties would find ways to maximize their joint welfare, even sophisticated parties, like British Petroleum and Atlantic Richfield, could negotiate for over eight years without reaching agreement on how to exploit Prudhoe Bay, Alaska, the largest petroleum reservoir ever discovered in North America (pp. S603-4).

A powerful illustration of the importance of politics comes from legal responses to the Black Death or bubonic plague, which killed one-third to one-half of the European population in the mid-fourteenth century. As noted above, Haddock & Kiesling (2002) argued that the plague caused a labor shortage which put pressure on feudal institutions and led to the abolition of serfdom in England. Acemoglu and Robinson (2012), building on the work of Brenner (1976), argue that whether plague-induced labor shortages resulted in greater freedom or greater subjugation depended on political institutions and the distribution of power. In Western Europe, where peasants had greater rights and power, labor shortages led to greater freedom. In contrast, in Eastern Europe, where landowners had greater power, labor shortage led to greater repression and an intensification of serfdom. While the differences in the relative power of lords and peasants between east and west might have been relatively small before the plague, the divergent responses to the plague magnified and entrenched those differences and thus set patterns of development for more than five hundred years, with consequences that can still be seen in the politics and economics of eastern and western Europe.

Interest group theories have also had considerable success in explaining the design of securities regulation. Jonathan Macey and Geoffrey Miller (1991) explored the origin of the early twentieth-century Blue Sky Laws enacted by Kansas and other states. These laws required sellers of new issues to register and provide financial information about their offerings. While usually justified as necessary to curb fraud, Macey and Miller argue that fraud was not nearly as common as previously supposed. Instead, Macey and Miler suggest that the regulation was enacted because of the influence of small banks, farmers, and small businessmen. Small banks favored curbs on securities in order to "stifle[] competition for the funds of potential depositors." Farmers and small businessmen also favored the legislation, because they saw it as a means of "enhancing their access to credit by excluding competition from out-of-state borrowers." (pp. 365, 367). In similar fashion, Mahoney (2001) argued that while the full disclosure mandated by the Securities Act of 1933 was welfare enhancing, provisions forbidding discount pricing and pre-offering publicity were inefficient attempts to reduce competition. Major investment banks and retail dealers feared competition from integrated wholesale/retail firms and used their political influence to blunt the advantage that integrated firms would otherwise have.

[4] Nevertheless, Douglas Allen (1991) argued that homesteading was, in fact, efficient, when one takes into account the cost of enforcing property rights. Native Americans violently opposed granting property rights to white settlers, so efficiency calculations need to take into account the cost of defending white settlers and their property. Smaller plots, although inefficient from a narrowly economic point of view, increased the density of white settlers, who could then more effectively cooperate to protect themselves and their property. This increased the security of property rights and reduced the need for costly military protection.

While most studies that abandoned the efficiency paradigm have examined legislation, Daniel Klerman (2007) focused on common law decisionmaking in the period 1600-1872. Because judges, especially those with life-tenure, are generally insulated from interest-group pressure, interest-group explanations have relatively little explanatory power. Nevertheless, Klerman looked to the institutional structure of the English judiciary to understand judicial incentives. During the period 1600-1799, the English judiciary had two peculiar features. First, court fees were distributed among the judges rather than going to the treasury. As a result, judges had an incentive to hear more cases. Second, the plaintiff had nearly complete jurisdictional choice. For nearly any case of significance, the plaintiff could choose to bring suit in any of the three common law courts (King's Bench, Common Pleas, and Exchequer). As a result, the best way for judges to attract more cases and increase their incomes was to make their courts more attractive to plaintiffs. In part, this resulted in faster, cheaper procedures which benefited everyone. It also led to a pro-plaintiff bias in legal doctrine, because, all other things being equal, plaintiffs prefer courts that provide high recoveries with high levels of certainty. The primary constraint on the pro-plaintiff bias of the common law courts was the ability of Parliament to overturn decisions. An examination of legislation overturning common law doctrine shows that, as predicted, in the period when judges received per-case fees, Parliament was more likely to replace pro-plaintiff decisions with more neutral or pro-defendant legislation than vice versa. In 1799, Parliament redirected most court fees to the treasury. With the pro-plaintiff incentives removed, the courts produced doctrines, such as privity of contract and the fellow servant rule, which restricted the ability of consumers and workers to sue employers and manufacturers. One result was that Parliament replaced the courts as the dominant source of new rights.

3. Law as an independent variable

The impact of legal change can be evaluated using standard econometric techniques. As a matter of theory, there is little difference between examining the effect of recent laws (such as the death penalty or the legalization of abortion) and the effect of older laws. Difference-in-difference regressions, for example, are standard techniques in both. In fact, as noted in the introduction, the most famous recent empirical work in law and economics, such as Donohue & Levitt's (2001) study of the effect of abortion on crime and Donohue & Wolfer's (2006) analysis of the death penalty, could be characterized as historical. More generally, work that examines the effect of law fits into recent work in economic history, which emphasizes the importance of institutions, including law, for economic growth. See, e.g., North & Thomas (1973) and Acemoglu and Robinson (2012).(Donohue & Levitt 2001; Donohue & Wolfer's 2006).

The non-existent boundary between econometric policy analysis and economic legal history is powerfully illustrated by James Heckman and Brook Payner's classic article, "Determining the Impact of Federal Antidiscrimination Policy on the Economic Status of Blacks: A Study of South Carolina" (1989). Using county-level data from South Carolina, which disaggregated black wages and employment by sector, the authors found that federal antidiscrimination policy had a significant beneficial effect on African Americans in the textile industry, but not in newer manufacturing industries or in government. The analysis was difficult, because there were competing explanations for African American advancement, including increases in schooling. Nevertheless, by carefully controlling for these and other factors, Heckman and Payner can convincingly attribute increases in African American employment and wages to civil rights.

Going back farther in time, among the most important legal changes of the last two centuries was the extension of rights to women. In the U.S., for example, women gained control over their earnings and property and won the right to vote in the late nineteenth and early twentieth centuries. Scholarship using standard econometric techniques has helped to identify and measure the effects of these changes. A pioneering study by John Lott and Lawrence Kenny (1999) showed that granting women the right to vote increased state government spending by between fourteen and twenty-eight percent. Because different states granted women the right to vote at different times, Lott and Kenny could show that spending increases were more likely the result of the expansion of suffrage rather than of more general trends or other factors. In addition, because seven states did not extend women the right to vote until they were forced to do so by the Nineteenth Amendment in 1919, it is possible to be more confident about causation. For states that voluntarily extended suffrage and increased spending, it is possible that both the extension of suffrage and subsequent increases in spending were caused by some unidentified factor, such as the spread of progressive attitudes among the population. Nevertheless, since states that were forced to give women the vote by federal constitutional amendment also showed a subsequent increase in spending, the possibility of an unidentified factor, such as progressive attitudes, can be excluded.

Building on Lott and Kenny's results, Grant Miller (2008) showed that the extension of women's suffrage had a particularly large and immediate effect on public health spending, which rose by roughly thirty-five percent within a year after women were given the right to vote. Because it coincided with the new understanding of the bacteriological causes of disease, this increase in spending had a dramatic effect on childhood mortality, which fell by between eight and fifteen percent.

Under the common law of coverture, a husband owned his wife's earnings and owned or controlled any property she brought into the marriage. Between 1850 and 1920, nearly all states passed laws giving women rights over their earnings and property. Zorina Khan (1996) and Rick Geddes, Dean Lueck, and Sharon Tennyson (2012) explored the effect of greater economic rights for women. Khan argued that statutes that gave women economic rights increased their incentive to invent and secure patents, and in fact, led to a jump in the number of successful patent applications by women. Geddes, Lueck, and Tennyson hypothesized that giving women greater control over earnings and property would increase incentives to acquire human capital, because human capital is necessary to manage property and because the prospect of increased earnings would motivate women and their parents to invest in education. They showed that when women gained the right to control their earnings and property, the percentage of 15-19 year old girls in school increased by two to three percentage points. While this may not seem dramatic, even before these laws 15-19 year old girls' school attendance was only twelve percentage points lower than boys, so the liberalization of women's economic rights may have contributed to closing a quarter of the gender gap in education. Geddes, Lueck and Tennyson focused on 15-19 year old girls, because compulsory school laws didn't generally apply to them, so the attendance rates of such girls reflected genuine choice. In addition, as in Lott, Kenny, and Miller's work on women's suffrage, Khan, Geddes, Lueck and Tennyson can exploit the fact that property laws were generally a matter of state regulation, and thus laws changed at different times in different states. Again, this helps differentiate between the effect of legal change and broader societal trends. Unfortunately, all relevant states granted women rights over earnings and property voluntarily. As a result, the possibility that positive effects on patenting and education were not caused by the granting of economic rights to women, but rather by some other factor, such as changing ideas of women's roles and capabilities, which caused both the granting of the rights and increased schooling, cannot be definitely excluded.

Standard econometric techniques can also be used to examine the effect of legal changes in the more distant past. One of the most ambitious of such projects has been the attempt to understand the economic consequences of the Glorious Revolution. While the political significance of the Glorious Revolution is relatively obvious, recent historians have attempted to link the Glorious Revolution to England's leading role in the Industrial Revolution. The modern literature on this topic starts with Douglass North and Barry Weingast's 1989 article, "Constitutions and Commitment." Their primary goal was to show that the Glorious Revolution enabled the government to "commit credibly to upholding property rights." As evidence of that credible commitment, the authors pointed to developments in capital markets, both the dramatic expansion of government borrowing at moderate interest rates and the expansion of private capital markets. At the end of their article, the authors speculated that the Glorious Revolution also laid the institutional foundation for the Industrial Revolution.

Subsequent research on financial markets provides only mixed evidence in support of North and Weingast's arguments. See Coffman, Leonard & Neal (2013). Nathan Sussman and Yishay Yafeh (2006) showed that interest rates on English government borrowing remained high for decades after the revolution, and that, throughout the eighteenth century, England could borrow at rates no lower than Austria, an absolute monarchy with few of the institutional features that North and Weingast praised. Similarly, David Stasavage (2007) argued that it was the supremacy of the Whig party starting in 1715, not institutional reforms going back to the revolution of 1688, that lowered governmental interest rates. On the other hand, Stephen Quinn (2001) found that the risk premium that the government paid on its debt declined immediately after the Glorious Revolution. Whereas prior to 1688, the government paid higher interest rates than private borrowers; after the revolution it paid slightly less. Cox (2012) challenged the use of interest rates as evidence of change. Instead, he argued that creditors before 1688 responded to the Crown's credibility problem by rationing credit, so if the Glorious Revolution enhanced the government's ability to commit, interest rates would not fall, but government borrowing would increase after 1688, which it did.

Evidence of the effect of the Glorious Revolution on private finance is mixed. Quinn (2001) found that interest rates on private loans increased substantially after the Revolution. For the first decade after the Revolution, Quinn attributes the increase to crowding out. The government's increased demand for loans to finance war crowded out private borrowing. Later, when peace came, interest rates remained high, perhaps because demand for private loans increased. The increased demand for loans could have been a positive effect of the Glorious Revolution and the security of property rights. Gregory Clark (1996) examined land prices and returns to capital from the sixteenth to nineteenth centuries and concluded that property rights had been secure in England for more than two hundred years prior to 1688 and that the Glorious Revolution had no significant economic impact. Daniel Klerman and Paul Mahoney (2005) tried to disaggregate the various institutional reforms that followed the Glorious Revolution by looking in particular at the effect of judicial independence. Judges were granted security of tenure in a series of steps, most importantly, a 1701 statute fixing judicial salaries and allowing removal only upon Parliamentary vote. Using an event study methodology, Klerman and Mahoney found that judicial independence had significant and immediate positive effects on stock prices, suggesting that this institutional reform was perceived to be good for the economy. Although Klerman and Mahoney used event study techniques borrowed from modern financial economics, they also showed the way in which older data can present opportunities unavailable to modern empiricists. For the last century and a half, since the invention and diffusion of the telegraph and subsequent advances in communication technology, information relevant to securities prices has moved almost instantaneously throughout the world. Before the mid-nineteenth century, however, market information could take days to travel from one market to another. Klerman and Mahoney exploited that delay and the fact that English securities were traded in both Amsterdam and London, to show that the rise in equity prices associated with movements to judicial independence could not have been the result of military or other news from the continent, because price increases occurred in London several days before they appeared in Amsterdam. If the news that moved the market had come from the continent, markets in Amsterdam would have reacted first.

Through a series of creative articles, Dan Bogart and Gary Richardson have pursued other pathways connecting the Glorious Revolution to the Industrial Revolution. Whereas the works discussed so far have focused on a link through financial markets, Bogart and Richardson trace the effects of the Revolution through Parliamentary acts reorganizing property rights and authorizing transportation improvements. One of their key insights is that property rights can be *too* secure. Economic growth often requires flexible property rights. Sometimes that flexibility can be achieved through private transactions. Often, however, hold-outs and idiosyncratic proprietors block efficient transfers, especially when the number of affected owners is large. As a result, government action is frequently necessary, whether to enclose common land or to assemble parcels necessary to build a turnpike road. Bogart and Richardson (2011) show that, after the Glorious Revolution, Parliament became very responsive to requests to reorganize property rights, while simultaneously compensating those harmed and protecting rights against later expropriation. The right combination of flexibility and security of property rights was particularly important for the transport sector. So, for example, Bogart (2011) shows that investments in road and river improvements spiked after 1690. Private investment in such projects was incentivized by allowing the investors to collect tolls and other fees. Such investments had, of course, existed even before the Glorious Revolution, but they were very risky, because the right to collect tolls could be and was, not infrequently, revoked for political reasons. After the Revolution, as North and Weingast suggested, Parliament demonstrated a much more solid commitment to such rights and almost never revoked them.

Bogart and Oandasan (2013) also complicate the North and Weingast story through a more sophisticated understanding of post-revolutionary politics. Whether a particular river navigation project was approved by Parliament depended, in part, on whether the Whigs or Tories were in power, and on whether the constituency that would benefit was represented by the majority party. In this respect, England fit North, Weingast and Wallis's (2009) idea of a limited-access order, in which the ruling coalition used its power to favor itself, rather than to establish neutral rules that benefited everyone. Nevertheless, since Whigs and Tories alternated regularly in power, Bogart and Oandasan conclude that politics did not substantially impede transportation improvements. Worthy projects might be delayed a few years, but would eventually be approved. In addition, even when it was rewarding loyal constituencies, Parliament was careful to safeguard the general welfare by limiting the tolls that could be charged. As a result, turnpike and other transportation improvements led to substantial declines in shipping costs, as well as improvements in speed. (Bogart 2005). By showing a link between the Glorious Revolution and transportation improvements, Bogart provides a plausible causal pathway through which the

Glorious Revolution influenced the Industrial Revolution, because cheap, fast transportation has long been recognized as an essential precondition to industrialization.

Another important research program has been investigation of the influence of legal origin. In an influential set of papers, Rafael La Porta, Florencio Lopez-de-Silanes, Andrei Shleifer and other co-authors argued that countries with legal systems derived from the English common law have better laws and better economic outcomes. For example, such countries have better protection for shareholders and deeper capital markets, freer labor markets and lower unemployment, judiciaries with more independence and more secure property rights. La Porta et al. (2008). Although these papers were motivated by modern policy considerations, they also make an important historical claim – that the legal system that a country had a century or more ago exerts a continuing and important influence on economic development today. The claim of common law superiority has been quite controversial. Some later work has confirmed it. For example, Paul Mahoney (2001a) found that common law countries grew faster, on average, in the period 1960-92 than civil law countries. Daniel Berkowitz and Karen Clay (2012) used the United States as a natural experiment, because thirteen states originally had legal systems based on the civil law, while the other thirty-seven always had common law systems. Although all but one of the civil law states remodeled their law on common-law lines, Berkowitz and Clay show that legal origin has had a persistent effect on the balance of power between state legislatures and courts. States with civil law origins established and maintain to the present day courts with less independence, and this, in part, is responsible for the fact that those states generally have lower per capita income. Other studies attribute less influence to common law origins. Daniel Klerman, Paul Mahoney, Holger Spamann and Mark Weinstein (2011) revisit Mahoney (2001a)'s claim that common law countries, on average, grow faster, and show that higher growth rates in common law countries more likely reflect investments in education and public health, rather than legal institutions such as judicial independence, reliance on case law, or the use of juries. Similarly, Naomi Lamoreaux and Jean-Laurent Rosenthal (2005) and Timothy Guinnane, Ron Harris, Lamoreaux and Rosenthal (2007) show that a civil law country (Germany) was the principal innovator with respect to the law of small and medium-sized businesses. Germany introduced the private limited-liability company well before the US, a common law country. Rajan and Zingales (2003) similarly question the alleged long-run superiority of the common law by pointing to evidence that civil law countries had more robust equity markets in the early twentieth century. But see LaPorta, Lopez-de-Silanes and Shleifer (2008) pp. 315-19.

Studies of legal origin are related to the broader research program that often goes under the name of "Law and Finance." This type of work examines the effect of corporate and securities laws on economic performance. Although most work of this type has examined contemporary data, several scholars have extended the analysis historically in ways that question conclusions draw from more recent data. See Cheffins, Bank and Wells (2013 and 2014); Franks, Mayer and Wagner (2006); Cheffins (2001); Masacchio (2008).

So far, this section has highlighted three areas in which scholars have used economic theory and econometric methods to investigate the influence of law – the extension of economic and political rights to women in the nineteenth-century U.S., the Glorious Revolution in England, and the continuing influence of legal origin. Other researchers have used economic tools to investigate the effect of a wide array of other legal phenomena. It is not possible to list them all here, but notable examples include Gavin Wright (2006) on the impact of slavery on the economic development of the American south, Mark Weinstein (2003, 2005, 2008) on the unimportance of corporate limited liability, Gary Libecap and Dean Lueck on the effect of land demarcation systems (2011), and David Bernstein (2001) on the benefit to minorities of the pre-New Deal Supreme Court's protection of economic rights.

4. Bidirectional histories

The works discussed so far have examined either the effect of law on society or the effect of society on law. Of course, the fact that causation in these works runs only one way does not reflect a unidimensional view of the relationship between institutions and behavior. In fact, an attentive reader will have noticed that some authors – including Geddes, Klerman, Libecap, Lueck, Mahoney, North, and Weingast – have written works showing both directions of causation. Rather, the fact that works discussed so far emphasize one causal channel or another primarily reflects the dominance of articles as the unit of publication. It is hard to tell a complex story about the reciprocal relationship between law and society in thirty pages. Nevertheless, the richest legal histories tell precisely such stories.

Perhaps the most ambitious exposition of bidirectional effects is Avner Greif's theory of endogenous institutional change. A particular institution reflects an equilibrium, and that equilibrium is made possible by certain parameters. Sometimes, however, the institution slowly changes the parameters. Greif calls these slowly changing parameters "quasi-parameters." Changes in the quasi-parameters can, over time, become so large that they no longer support the equilibrium that sustained the institution. The institution then collapses, adapts, or is replaced. (Greif 2006, Ch. 6).

Grief provides the following example. International trade in twelfth and thirteenth-century Europe was sustained by the community responsibility system. Because governments were weak and merchants moved themselves and their assets frequently, it was difficult to enforce contracts. By the time a contract was breached, the breaching party and his assets had probably left the jurisdiction. Anticipating the difficulty of contract enforcement, merchants might have been reluctant to engage in non-simultaneous trade. Nevertheless, European courts developed a mechanism that enabled merchants to have confidence that long-term contracts would be fulfilled. If a merchant from one community (perhaps Genoa) defaulted on his obligations, the aggrieved party (perhaps an Englishman) could sue in Genoese court. One might have expected a Genoese court to be biased in favor of its own resident and to rule against the Englishman. Nevertheless, under the community responsibility system, if the Genoese court refused to do justice toward the English merchant, an English court could confiscate the property of any and all Genoese merchants then in England, even if those merchants were in no way responsible for (or even aware of) the breach by their fellow Genoese trader. Although this mechanism facilitated trade, disputes were bound to occur, because English and Genoese courts could easily disagree about whether breach had occurred or about the appropriate remedy. If the English court confiscated the property of Genoese merchants, this could entail a significant disruption of trade, detrimental to both English and Genoese. Nevertheless, when the number of traders was small, disputes were relatively infrequent, so the cost of the system was low. The very success of the community responsibility system, however, caused trade to grow, which increased the frequency of disputes and the cost of any disruptions. In Greif's terms, the volume of trade was a quasi-parameter, and by the late thirteenth century it had taken values that meant that the costs of the communal responsibility system outweighed the benefits. That put pressure on the relevant governments to abolish the system. The systems that replaced collective responsibility varied depending on the strength of governmental institutions. In England, legislation in 1275 abolished collective responsibility, and subsequent statutes set up more effective debt -collection procedures, which seem to have substituted for collective responsibility. In Italy, however, city governments were unable or unwilling to establish similarly effective legal remedies. Instead, firms expanded their operations and stationed permanent agents and assets in far-flung substantial trading locales. These larger firms could credibly commit to honor their contracts, because, if they breached, they had local agents, who could be sued locally, and local assets, which could be seized. This system worked well for successful merchants who could establish large family firms. Smaller merchants, however, were left without the ability to make binding commitments in long -distance trade. For a critique of this account of the community responsibility system, see Ogilvie 2011 pp. 270-85.

Claire Priest's (2006) work on property and credit also illustrates the bi-directional relationship between law and economic conditions. In response to the demands of English merchants, Parliament in 1732 passed a statute that eliminated common-law distinctions between land and chattels as collateral for debt. In England, land was exempt from the claims of unsecured creditors, but the 1732 statute made American land subject to such claims. This law had far-reaching consequences, including a more dynamic land market, lower interest rates, and probably higher economic growth. Nevertheless, the law meant debtors were more likely to lose their land in economic downturns. As a result, in response to the recession of 1817-18 and the Panic of 1837, state legislators enacted laws exempting some property from the claims of creditors and providing other protections for debtors.

Perhaps the most sustained history illustrating the complex relationship between law and economic activity is Ron Harris's *Industrializing English Law* (2000). This book traces the evolution of business organization in the period between the Bubble Act (1720) and general incorporation (1844). A dominant theme is the failure of English law to provide adequate organizational structures for business during the first phase of the Industrial Revolution. The corporate form required a Parliamentary Act, but Parliament seldom granted incorporation, and its processes were so slow that entrepreneurs usually started their operations before they knew whether incorporation would be granted. Most firms during this period were sole proprietorships or family firms. A substantial portion of businesses were organized as *unincorporated* joint stock companies. The creation of unincorporated joint stock companies was an ingenious response to the inadequacy of the law. These companies were created by lawyers using contract, trust, and partnership law. Nevertheless, all the ingenuity of lawyers could not allow these companies to function smoothly. There was no effective way for shareholders to select or monitor managers, and disputes, when they arose, were resolved in Chancery, which, during this period was plagued with delays and high costs. This unsatisfactory but not disastrous situation might have continued for some time, had it not been for an anonymous individual with a grudge against two unincorporated companies. In 1808, this individual brought a private criminal complaint (information) against the companies for violating the Bubble Act of 1720. The Bubble Act had ambiguous provisions that could be interpreted as outlawing unincorporated companies with transferrable shares. Although the law had been on the books for almost a century, these provisions had been ignored. Nevertheless, the anonymous informer gave them new importance. Judges, although they did not broadly interpret the Act to ban the hundreds of existing unincorporated companies, caused sufficient concern and uncertainty through their decisions in a few cases that Parliament was flooded with hundreds of requests for incorporation. Parliament had neither the desire nor the institutional competence to deal with so many petitions; so, in 1825, it repealed the Bubble Act and authorized the king to grant incorporation, albeit without limited liability. The royal administration also proved itself inadequate to the task of granting incorporation, so Parliament, in 1844, with little debate or fanfare, allowed companies to incorporate simply by registration. The fact that more than a thousand companies registered in the first fourteen months after the Act went into effect suggests pent-up demand for incorporation. It also suggests that business law up to that point had acted as a significant brake on economic activity, because so many firms would not have taken advantage of the Act unless it provided substantial advantages. While the story has a happy ending – widespread availability of a more efficient form of business organization – the fact that it took so long, and that a key actor was an anonymous informer with a private dispute, undermines any simple story about the efficient response of law to economic conditions.[5] The creation of unincorporated joint stock companies was a creative and effective response by lawyers and businessmen to the inadequate state of the law, but it also shows the limits of private ordering.

Acemoglu and Robinson's (2012) provide a particularly instructive paradigm for bidirectional histories. They explore the way repressive political and legal institutions both create and are sustained by exploitative economic systems, while egalitarian political and legal institutions create pressure for and tend to be created by freer economic systems. Acemoglu and Robinson's ideas are vividly illustrated by Claire Priest and Justin duRivage's (2014) recent work on the Stamp Act. Generations of American schoolchildren have viewed the colonists' opposition to the Act as reflecting the principle of "No taxation without representation." While it is true that the colonists were concerned about taxation more generally, Priest and duRivage point out that the taxes in the Act were targeted at property and contract institutions that were crucial to the American economy. As discussed in Priest (2006), the abundance of land and the scarcity of specie had, in the seventeenth and eighteenth centuries, led to colonial laws that facilitated land transactions and the extension of credit. The vibrant land and credit markets supported by these legal conditions generated political support for their continuation. The Stamp Act would have increased the cost of transferring real property and collecting debts and thus would have undermined both land and credit markets. In fact, hobbling the economic and demographic growth of the American colonies may be been a motivating factor for the British, "lest the colonies challenge Britain's economic supremacy within the empire." That is, in order to sustain the unequal distribution of political power within the empire, the British realized they needed to restrain the growth of the colonies. To do so, they taxed property and contractual institutions essential to the American economy. In contrast, the American colonists realized that their economic prospects depended on local control, because only locally elected politicians would share their interest in growth and the institutions necessary to support it. The protests against the Stamp Act and the ensuing revolt against Britain thus reflected not just a desire for autonomy and low taxation, but also an appreciation of the institutions that made the eighteenth-century American economy so dynamic. And, of course, the success of the American Revolution created political conditions conducive to further legal changes relating to land and capital.

[5] The extent of the inefficiency, however, is disputed. Cheffins (2009) and Bubb (2014) argue industrialization was not significantly retarded by barriers to incorporation because factories required relatively little capital, unincorporated companies worked better than Harris asserts, and partnerships were more effective than corporations at reducing managerial agency costs. In addition, Bubb argues that the large number of registrations after the 1844 Act does not indicate pent-up demand for incorporation, because the Act also required registration by large partnerships and unincorporated companies with transferable shares.

Although rich, bi-directional economically informed legal histories are relatively rare, other prominent examples include North, Weingast and Wallis's broad history of the relationship between political structure and organizational freedom (2009); Daniel Berkowitz and Karen Clay's book (2012) on the interaction between legal origin, occupational homogeneity, and judicial independence; and Timur Kuran (2011) on the way Islamic legal institutions and middle eastern economies influenced each other.

5. Private Ordering

An important strain of economic analysis emphasizes private ordering. Writers in this genre tend to argue that law is not as important as it may seem, and groups, especially small groups, can generate effective solutions to social problems without governmental assistance.

The most influential work of this type is Ellickson's (1989) article, which used the whaling industry to criticize "legal centralism" and to propose "a hypothesis of wealth-maximizing norms." In the eighteenth and nineteenth centuries, whalers resolved disputes over whales pursued by multiple ships with little litigation, and when litigation occurred, courts tended to resolve the cases in accordance with whaling custom rather than state-generated rules. Ellickson argued that whaling custom maximized the welfare of the small, tight-knit group of people who engaged in hunting whales. This group developed property rights "anarchically out of social custom," in ways that minimized transactions costs and maximized the catch. Doing so required careful balancing of the costs of ambiguous standards (which lead to costly disputes) against the inefficiency that would be caused by bright-line rules (which might give suboptimal incentives to find, kill, and/or capture whales). Since different species of whales inhabited different locations and had different characteristics, efficient norms varied from place to place. In the eighteenth-century Greenland fishery, where right whales dominated, the "fast-fish, loose-fish" norm predominated. Under this rule, whalers had rights to a whale only if it was attached by a line to their ship. This rule made sense, because right whales were reasonably docile, so whalers could use a harpoon with a line attached to the ship. In other fisheries, where the more aggressive sperm whale predominated, the "iron-holds-the-whale" rule prevailed. Attaching a line from the ship to a whale that fought and dove deeply when harpooned risked sinking a ship, so efficient custom could not require attaching a rope between the whale and the ship. Instead, if the harpoon stuck to the whale, the ship that harpooned it had rights, as long as it maintained fresh pursuit. Of course, a fresh pursuit rule is somewhat ambiguous, so it increased transactions costs (disputes). Nevertheless, simpler rules (such as fast-fish, loose fish) would have reduced total wealth by reducing the catch or imperiling ships.

Although in this and other work, Ellickson generally emphasized the efficiency of privately-generated norms, even he acknowledged their limitations. Such norms maximize the welfare of the group that generated them, but they may disadvantage outsiders and thus be inefficient from a global perspective. In addition, Ellickson acknowledged that the decentralized process of norm generation cannot deal with certain problems, such as the rapid depletion of whales through excessive whaling. Only centralized solutions, such as a quota system, could address such issues. In addition, it should be noted that Robert Deal (2013) argued that Ellickson overstated the clarity of custom and understated the extent to which lawyers and judges created the whaling rules.

Among the most persuasive examples of private ordering are accounts of the gold rush. For the first years of the gold rush, California lacked effective government. The miners themselves established codes and dispute resolution systems, which were remarkably successful in minimizing violence. (Umbeck 1977; Zerbe & Anderson 2001; Clay & Wright 2005; McDowell 2012; Hadfield & Weingast 2013). Governance in the gold fields was significantly different than that of whaling in that the miners did not rely on "anarchically" generated norms, but rather deliberated and promulgated rules. The efficiency of these rules is a matter of some debate. Clay & Wright (2005) argued that the rules allowed an inefficient race, which dissipated possible rents. Although some miners grew fabulously wealthy, the average miner earned barely $2 a day, which was less than the wage of an unskilled laborer in California at that time. A more efficient scheme of exploitation might have involved larger claims worked by well-organized hired labor. In addition, while miner self-governance may have served white American miners reasonably well, these same miners often violently excluded minorities and foreigners. As in Ellickson's whaling example, private ordering favored a first-possession rule, because it was easier to enforce in decentralized fashion, but such rules resulted in inefficient races and overexploitation.

A very different example of private ordering comes from Avner Greif's (1989 and 1993) study of medieval trade. Eleventh-century Maghribi traders (Jews from Tunisia and surrounding areas) carried on extensive international trade through agents well before governments had an interest in or the capacity to enforce commercial contracts. These merchants relied primarily on reputation. If an overseas agent embezzled funds or failed to exert sufficient effort, he would not only be dismissed by the principal who employed him, but he would be boycotted by all other Maghribi traders. By raising the stakes, the collective boycott more effectively deterred misbehavior than the mere threat of dismissal.

More recently, some business historians have argued that private ordering may be more important than law for the protection of minority investors. While early work in "law and finance" emphasized statutory protection of minority interests, more recent work suggests that legislation may not be essential. In England, Cheffins (2001) argues that the London Stock Exchange, a self-governing non-governmental body, played a key role until the mid-twentieth century. Similarly, in Brazil and the United States, Musacchio (2008) and Hilt (2008) present evidence that corporate by-laws and charters may have been more important sources of protection for minority shareholders than statutes.

The extent of private ordering in particular contexts has also generated considerable controversy. Claims about the non-governmental creation of medieval commercial law ("the law merchant") have been greeted skeptically by historians. (Compare Benson 1989 and 2011 to Kadens 2012 and Klerman 2009). In addition, the extent to which Coase's famous discussion of private lighthouses should be viewed as an example of private ordering has been questioned by those who point out, as Coase himself acknowledged, that private lighthouses were usually supported by legally mandated fees ("light dues") collected by government officials. (Compare Coase 1974 to van Zandt 1993). Even Greif's claim that Maghribi traders did not rely on state enforcement has been challenged. (Edwards and Ogilvie, 2012; but see Greif 2012). On the importance of law to shareholder protection before the late twentieth century, see La Porta, Lopez-de-Silanes and Shleifer (2008) pp. 315, 319-21. Nevertheless, the idea that groups can develop private solutions to problems ordinarily handled by government has been confirmed in a wide array of contexts, including the governance of pirate ships (Leeson 2009), the formation of prosecution associations in early modern England (Koyama 2012), and non-governmental law enforcement in medieval Iceland (Friedman 1979).

6. Litigation and Contracts

Economic models of litigation and contracting have also proved useful for historical investigation. For example, Claire Priest (2001) used economic theories of litigation to question modernization theories of colonial New England. Others had argued that increased litigation rates in early eighteenth-century New England were caused by the shift from an informal neighbor-based economy to a more commercialized society that routinely used formal credit instruments. Instead, Priest linked trends in litigation to the introduction of paper money. Colonial governments were unable to manage their paper currencies effectively, so the colonial economy was marked by money of fluctuating value and by currency-induced booms and busts. The unstable currency resulted in uncertainty (which hindered the settlement of disputes), financial distress (which caused defaults), and strategic behavior by debtors and creditors (which influenced the decision to sue). Thus currency fluctuations, not modernization per se, were the principal determinants of litigation rates.

Daniel Klerman (2001, 2012) used economic theories of suit and settlement to understand thirteenth-century criminal litigation. Because criminal cases could be pursued by private prosecutors who could and did settle cases, modern models of civil litigation have substantial explanatory power. So, for example, when judges disregarded settlements and referred settled private accusations to juries, rates of private prosecution plummeted, because prosecutors could no longer use prosecution to procure settlement. Why would a defendant settle if he was going to be tried and punished anyway? In fact, because, for a short period in the thirteenth-century, English judges secured jury verdicts even in settled cases, these cases provide a unique dataset with which to test theories of the selection of suits for litigation (Priest and Klein 1984; Shavell 1996). Modern tests of selection theories generally must draw inferences only from litigated cases, whereas the medieval data allow direct comparison of litigated and settled cases. This analysis confirms that litigated cases were much different from settled cases and that defendants with weak cases were more likely to settle than those with strong cases. Cases in which the defendant was innocent are therefore overrepresented in the cases that were not settled.

Other scholars have used economic models of contract to explain transactions. Brian Silverman and Paul Ingram (2012) used a unique database of contracts between slave ship owners and captains to show that the parties used both contract terms and ownership shares to induce captains to behave efficiently. In wartime, when ships were more likely to be captured, captains were given an ownership stake in the ship in order to motivate them to resist privateers. Such ships were, in fact, less likely to be captured than those in which captains had no equity interest.

Mark Ramseyer (1996, Chapter 4) used economics to explain the decline in the "market" for children in Tokugawa Japan. In the seventeenth century, poor parents sometimes hired out their children, most commonly by an indenture contract in which the child worked and his parents received the wages in advance. As opportunities for urban work expanded in the eighteenth century, these indentured children could run away and take work with employers who paid them directly. This removed the profit that employers could make from indentures, and the practice of parental hiring out of children disappeared.

Other scholars have used modern contract theory to explain direct management or leasing of medieval estates (Volokh 2009), to dispute the story told in *Chinatown* of the acquisition of water rights in the Owen's Valley (Libecap 2009), and to analyze contracts between prostitutes and brothel owners in pre-World War II Japan (Ramseyer 1996, Chapter 6).

7. Economic Analysis and Critical Legal Histories

Anyone who does economic analysis of legal history should also be familiar with Robert Gordon's "Critical Legal Histories" (1984). Although that article criticized nearly all previous legal history, not just economic analysis, it has particular importance for those who examine the relationship between law, economics and history. In addition, because Gordon's article is read by nearly every history graduate student who writes about law, those who use economics to analyze legal history need to be familiar with Gordon's ideas in order to understand the language and ideas their critics are likely to use.

Robert Gordon criticized legal historians for implicitly or explicitly assuming "evolutionary functionalism," the idea that "there is a process of social development common to most 'advanced' or 'dynamic' societies, culminating in … liberal-capitalist forms of economic organization," and that "law and legal institutions are best understood as facilitative technologies that are adaptive responses to social needs and demands resulting from these modernizing processes" (Gordon 2012, pp. 200, 201). Although Gordon praised "early work in law and economics" as "refreshing" because of its emphasis on the "real world consequences of legal rules and decisions," (Gordon 2012, p. 204), he criticized some of the work discussed in this article, including Rubin's evolutionary theory of efficient common law and Stigler's work on regulatory capture, as examples of evolutionary functionalism. (Gordon 1984, pp. 69, 72.)

There is definitely some truth to this criticism, especially as applied work on the Glorious Revolution and legal origin discussed above. Nevertheless, most work in law and economics (whether historical or not), draws primarily on microeconomic theories of equilibrium behavior. It thus neither presumes nor implies any grand theory of long-term evolution. For example, most economic analysis of legal history in the first genre discussed in this essay – law as dependent variable -- either looks at discrete laws as a response to societal conditions or analyzes discrete changes in law as a response to changes in economic or social conditions. Whether those changes culminate in "liberal capitalist forms of economic organization" or whether they are "common to most 'advanced' or dynamic' societies" is neither discussed nor presumed. Whether legal changes are generally "adaptive" or "facilitative" is a subject of dispute between those who favor efficiency explanations and those who take a darker, more political view.

In place of evolutionary functionalism, Gordon suggested that legal historians view law and society as "mutually constitutive." (Gordon 1984 pp. 103-7; Gordon 2012 p. 203). On this view, one cannot separate the influence of law on society from the influence of society on law, because society and law exist only because of each other. Society cannot be described or analyzed without law, and neither can law be described or thought about independently of society. That view, of course, undermines an organizing principal of this essay, which classifies much economically influenced legal history as analyzing law either as a dependent or independent variable. Nevertheless, some more recent economically-influenced work in legal history can be seen as consistent with the idea that law and society are mutually constitutive. Acemoglu and Robinson's (2012) argument about the mutually reinforcing nature of economic institutions and legal/political institutions is a sustained analysis of the intertwined nature of law and society (although it also advocates the view that all societies which experience long-term economic growth do so on account of similar institutions, a view that could be described as evolutionary functionalism). Similarly, Avner Greif's 2006 equilibrium models of legal institutions and economic behavior can be seen as formalizations of the idea that law and society are mutually constitutive. When institutions and behavior are in equilibrium, both depend on each other: institutions structure economic and political behavior, but economic and political behavior are also what sustain the institutions.

Some work, such as Harris (2000) and Klerman (2007), also take seriously Gordon's plea for historians to take into account the "relative autonomy" of law by exploring doctrinal constrains on innovative legal forms and the structural incentives built into the legal system. Because of the importance of these internal factors, law "can't be explained completely by reference to external political/social/economic factors." (Gordon 1984, p. 101).

8. Conclusion

While the stunning variety of works using economic analysis to understand legal history suggests a vibrant field, there remain a myriad of unexplored possibilities and some dangers.

Legal history should be a promising area for the application of insights from behavioral economics. In times before widespread literacy or numeracy, heuristics probably played a larger role and non-optimizing behavior was surely more common. Douglass North (2005) has argued that cognitive limitations have an important impact on the design of institutions generally, and it seems doubtful that legal institutions are an exception. Nevertheless, economically minded legal historians have not made use of behavioral insights. Similarly, political scientists have generated powerful models to explain judicial voting, but such methods have been applied only to recent cases. It is also startling that, to my knowledge, there are no serious economic analyses of Chinese legal history.

In addition, economic analysis of legal history too often reflects the training of those who do it. Those trained in economics often produce sophisticated analyses that try to explain stylized facts, but do not explore the complicated reality that lies behind the generalizations. Conversely, those trained in history often make only peripheral use of economic insights. As the field matures, one hopes that more scholars will combine rigorous economic analysis with deep historical scholarship.

Reference List

Acemoglu, D. and J.A. Robinson (2012). *Why nations fail: the origins of power, prosperity, and poverty*. London, Profile.

Allen, D. W. (1991). "Homesteading and Property Rights; Or, 'How the West Was Really Won.'" Journal of Law and Economics 34(1): 1-23.

Allen, D. W. and Y. Barzel (2011). "The Evolution of Criminal Law and Police during the Pre-modern Era." Journal of Law, Economics & Organization 27(3): 540-567.

Anderson, Terry L. and P.J. Hill (1975). "The Evolution of Property Rights: A Study of the American West." Journal of Law and Economics 18(1): 163-80.

Banner, S. (2002). "Transitions between property regimes." Journal of Legal Studies 31(2): S359-S371.

Benson, Bruce. L. (1989). "The Spontaneous Evolution of Commercial Law." Southern Economic Journal 55(3): 644-661.

Benson, Bruce L. (2011). "The Law Merchant's Story: How Romantic Is it?" In Peter Zunbansen & Gralf-Peter Calliess eds., *Law, Economics and Evolutionary Theory*. Cheltenham, UK; Northampton, Mass., E. Elgar.

Berkowitz, Daniel and Karen. B. Clay (2012). *The evolution of a nation: how geography and law shaped the American states*. Princeton, N.J., Princeton University Press.

Bernstein, D. E. (2001). *Only one place of redress: African Americans, labor regulations, and the courts from Reconstruction to the New Deal*. Durham, Duke University Press.

Bogart, D. (2005). "Turnpike trusts and the transportation revolution in 18th century England." Explorations in Economic History 42(4): 479-508.

Bogart, D. (2011). "Did the Glorious Revolution contribute to the transport revolution? Evidence from investment in roads and rivers." Economic History Review 64(4): 1073–1112.

Bogart, D. and R. Oandasan (2013). "The Politics of Development in the Aftermath of Britain's Glorious Revolution." (unpublished draft)

Bogart, D. and G. Richardson (2011). "Property Rights and Parliament in Industrializing Britain." Journal of Law & Economics 54(2): 241-274.

Brenner, R. (1976). "Agrarian Class Structure and Economic Development in Pre-Industrial Europe." Past & Present 70: 30-75.

Bubb, Ryan (2014). "Choosing the Partnership: English Business Organization During the Industrial Revolution" (unpublished)

Cheffins, Brian R. (2001). "Does Law Matter? The Separation of Ownership and Control in the United Kingdom." Journal of Legal Studies 30: 459-84.

Cheffins, Brian R. (2009). "Law, the Market, and Corporate Enterprise: The Case of the Industrial Revolution" in *Rationality in Company Law: Essays in Honor of D.D. Prentice*, eds. John Armour and Jennifer Payne. Oxford: Hart Publishing, 297-318.

Cheffins, Brian R., Steven A. Bank, and Harwell Wells (2013). "Questioning 'Law and Finance'". Business History 55: 598-616.

Cheffins, Brian R., Steven A. Bank, and Harwell Wells (2014). "Law and History by the Numbers: Use, But With Care." University of Illinois Law Review (forthcoming).

Clark, G. (1996). "The Political Foundations of Modern Economic Growth: England, 1540-1800." Journal of Interdisciplinary History 26(4): 563-588.

Clay, K. and G. Wright (2005). "Order without law? Property rights during the California gold rush." Explorations in Economic History 42(2): 155–183.

Coase, R. H. (1960). "The Problem of Social Cost." Journal of Law & Economics 3: 1-44.

Coase, R. H. (1961). "The British Post Officer and the Messenger Companies." Journal of Law & Economics 4: 12-65.

Coase, R. H. (1974). "The Lighthouse in Economics." Journal of Law & Economics 17(2): 357-376.

Coffman, D'Maris, Adrian Leonard & Larry Neal, eds. (2013). *Questioning Credible Commitment: Perspectives on the Rise of Financial Capitalism*. Cambridge, Cambridge University Press.

Cox, Gary W. (2012). "Was the Glorious Revolution a Constitutional Watershed?" Journal of Economic History 72(3): 567-600.

Dari-Mattiacci, Giuseppe (2013). “Slavery and Information.” Journal of Economic History 73:79-116.

Deal, R. (2013). “The Judicial Invention of Property Norms: Ellickson’s Whalemen Revisited.” University of Toronto Law Journal 63(1): 73-96.

Demsetz, H. (1967). "Toward a Theory of Property Rights." American Economic Review 57(2): 347-359.

Donohue, J. J. and S. D. Levitt (2001). “The Impact of Legalized Abortion on Crime.” Quarterly Journal of Economics 116(2): 379-420.

Donohue, J. J. and J. Wolfers (2005). “Uses and Abuses of Empirical Evidence in the Death Penalty Debate.” Stanford Law Review 58(3): 791-846.

Edwards, J. and Sheilagh Ogilvie (2012). “Contract Enforcement, Institutions, and Social Capital: The Maghribi Traders Reappraised.” Economic History Review 65(2): 421-44.

Ellickson, R. C. (1989). "A Hypothesis of Wealth-Maximizing Norms - Evidence from the Whaling Industry." Journal of Law, Economics & Organization 5(1): 83-97.

Ellickson, R.C. (2014). “Ancient Rome: Legal Foundations of the Growth of an Indispensible City” in *Roman Law and Economics*, ed. Giuseppe Dari-Mattiacci (unpublished).

Epstein, R. (2014). “One Step at a Time in Roman Law: How Roman Pleading Rules Shape the Substantive Structure of Private Law” in *Roman Law and Economics*, ed. Giuseppe Dari-Mattiacci (unpublished).

Friedman, D. (1979). "Private Creation and Enforcement of Law: A Historical Case." Journal of Legal Studies 8(2): 399-415.

Friedman, David (2014). “Private Prosecution and Enforcement in Roman Law” in *Roman Law and Economics*, ed. Giuseppe Dari-Mattiacci (unpublished).

Frier, Bruce W. (1989-1990). “Law, Economics, and Disasters Down on the Farm: ‘Remissio Mercedis’ Revisited.” Bullettino dell’Istituto di diritto romano 31-32: 237-270.

Garoupa, Nuno and Daniel Klerman (2010). “Corruption and Private Law Enforcement: Theory and History,” 6 Review of Law & Economics 75-96.

Geddes, Rick D. & Dean Lueck (2002). “The Gains from Self-Ownership and the Expansion of Women’s Rights.” 92(4) American Economic Review 1079-1092.

Geddes, Rick, Dean Lueck, and S. Tennyson (2012). “Human Capital Accumulation and the Expansion of Women's Economic Rights.” Journal of Law & Economics 55(4): 839-868.

Gordon, R. W. (1984). "Critical Legal Histories." Stanford Law Review 36(1-2): 57-125.

Gordon, R. W. (2012). “‘Critical Legal Histories Revisited’: A Response.” Law & Social Inquiry 37(1): 200-215.

Greif, A. (1989). “Reputation and Coalitions in Medieval Trade: Evidence on the Maghribi Traders.” Journal of Economic History 49(4): 857-882.

Greif, A. (1993). “Contract Enforceability and Economic Institutions in Early Trade: The Maghribi Traders' Coalition.” American Economic Review 83(3): 525-548.

Greif, A. (2006). *Institutions and the path to the modern economy: lessons from medieval trade*. Cambridge ; New York, Cambridge University Press.

Greif, A. (2012). “The Maghribi Traders: A Reappraisal?” Economic History Review 65 (2): 445-69.

Guinnane, T., R. Harris, N. R. Lamoreaux, and J. Rosenthal (2007). “Putting the Corporation in its Place.” Enterprise & Society 8(3): 687-729.

Haddock, D. D. and L. Kiesling (2002). "The Black Death and property rights." Journal of Legal Studies 31(2): S545-S587.

Hadfield, G. K. (1992). "Bias in the Evolution of Legal Rules." Georgetown Law Journal 80(3): 583-616.

Hadfield, G. K. and B. R. Weingast (2013). “Law without the State: Legal Attributes and the Coordination of Decentralized Collective Punishment.” Journal of Law and Courts 1(1): 3-34.

Hansen, Zeynep K. and Gary D. Libecap (2004). “The allocation of property rights to land: US land policy and farm failure in the northern great plains.” Explorations in Economic History 41: 103-129.

Hansen, Zeynep K. and Gary D. Libecap (2004a). “Small Farms, Externalities, and the Dust Bowl of the 1930s.” Journal of Political Economy 112(2): 665-694.

Harris, Ron. (2000). *Industrializing English law: entrepreneurship and business organization, 1720-1844*. Cambridge England ; New York, Cambridge University Press.

Harris, Ron (2003). “The Uses of History in Law and Economics,” Theoretical Inquiries in Law 4: 659-96.

Harris, Ron (2003a). “The Encounters of Economic History and Legal History.” Law and History Review. 21: 297-346.

Harris, Ron (2011). “Legal Scholars, Economists, and the Interdisciplinary Study of Institutions.” Cornell Law Review 96: 789-810.

Harris, Ron (2014). “The Organization of Rome to India Trade: Loans and Agents in the Muziris Papyris” in *Roman Law and Economics,* ed. Giuseppe Dari-Mattiacci (unpublished).

Hilt, Eric (2008). “When did Ownership Separate from Control? Corporate Governance in the Early Nineteenth Century.” Journal of Economic History 68: 645-85.

Horwitz, Morton J. (1977). *The transformation of American law, 1780-1860*. Cambridge, Mass., Harvard University Press.

Hurst, J. Willard. (1956). *Law and the conditions of freedom in the nineteenth-century United States*. Madison, WI, University of Wisconsin Press.

Hurst, J. Willard. (1964). *Law and economic growth: the legal history of the lumber industry in Wisconsin, 1836-1915*. Cambridge, Mass., Belknap Press of Harvard University Press.

Heckman, James and Brook Payner. (1989). “Determining the Impact of Federal Antidiscrimination Policy on the Economic Status of Blacks: A Study of South Carolina.” American Economic Review 79: 138-77.

Kadens, E. (2012). “The Myth of the Customary Law Merchant.” Texas Law Review 90(5): 1153-1206.

Kehoe, Dennis (2007). *Law and Rural Economy in the Roman Empire*. Ann Arbor: University of Michigan Press

Khan, B. Z. (1996). “Married Women’s Property Laws and Female Commercial Activity: Evidence from United States Patent Records, 1790-1895.” Journal of Economic History 56(2): 356-388.

Klerman, Daniel. (2001). “Settlement and the Decline of Private Prosecution in Thirteenth Century England,” 19 Law and History Review 1.

Klerman, Daniel. (2002). “Statistical and Economic Approaches to Legal History.” University of Illinois Law Review 2002: 1167-76.

Klerman, Daniel, and Paul Mahoney. (2005). “The Value of Judicial Independence: Evidence from Eighteenth-Century England,” 7 American Law & Economics Review 1-27

Klerman, Daniel. (2007). “Jurisdictional Competition and the Evolution of the Common Law,” 74 University of Chicago Law Review 1179.

Klerman, Daniel (2009). Review of A. D. Kessler, *A Revolution in Commerce: The Parisian Merchant Court and the Rise of Commercial Society in Eighteenth-Century France*. Journal of Economic History 69(2): 601-602.

Klerman, Daniel, Paul Mahoney, Holger Spamann, and Mark Weinstein (2011). “Legal Origin or Colonial History?” 3 Journal of Legal Analysis” 379-409

Klerman, Daniel. (2012). “The Selection of Thirteenth-Century Disputes for Litigation,” 9 Journal of Empirical Legal Studies 320-46

Klerman, Daniel, ed. (2014). *Economics of Legal History* in *Economic Analysis of Law*, eds. Francesco Parisi and Richard Posner. Elgar Publishing (forthcoming)

Koyama, M. (2012). “Prosecution Associations in Industrial Revolution England: Private Providers of Public Goods?” Journal of Legal Studies 41(1) 95-130.

Kuran, T. (2011). *The long divergence: how Islamic law held back the Middle East*. Princeton ; Oxford, Princeton University Press.

Lamoreaux, N. R. and J. Rosenthal (2005). “Legal Regime and Contractual Flexibility: A Comparison of Business’s Organizational Choices in France and the United States during the Era of Industrialization.” American Law and Economics Review 7(1): 28-61.

La Porta, R., F. Lopez-de-Silanes, and A. Shleifer (2008). “The Economic Consequences of Legal Origin.” Journal of Economic Literature 46(2): 285-332.

Leeson, Peter. T. (2009). *The invisible hook: the hidden economics of pirates*. Princeton, N.J., Princeton University Press.

Libecap, G.D. (1978). “Economic Variables and the Development of the Law: The Case of Western Mineral Rights.” Journal of Economic History, 38(2): 338-362.

Libecap, G. D. (2009). “Chinatown Revisited: Owens Valley and Los Angeles—Bargaining Costs and Fairness Perceptions of the First Major Water Rights Exchange.” Journal of Law, Economics, & Organization 25(2): 311-338.

Libecap, G. D. and D. Lueck (2011). "The Demarcation of Land and the Role of Coordinating Property Institutions." Journal of Political Economy 119(3): 426-467.

Libecap, G.D. and D. Lueck (2014). “Land Demarcation in Ancient Rome” in *Roman Law and Economics*, ed. Giuseppe Dari-Mattiacci (unpublished).

Libecap, G. D., D. Lueck, and T. O’Grady (2011). “Large Scale Institutional Changes: Land Demarcation in the British Empire.” Journal of Law & Economics 54:S295-327.

Libecap, G. D. and James L. Smith (2002). “The Economic Evolution of Petroleum Property Rights in the United States.” Journal of Legal Studies 31(S2): S589-S608.

Litvak, Katherine. (2007). "The Impact of the Sarbanes-Oxley Act on Non-US Companies Cross-Listed in the US." Journal of Corporate Finance 13: 195-228.

Lott, J. R. and L. W. Kenny (1999). “Did Women’s Suffrage Change the Size and Scope of Government?” Journal of Political Economy 107(6): 1163-1198.

Macey, J. R. and G. P. Miller (1991). “Origin of the Blue Sky Laws.” Texas Law Review 70(2): 347-398.

Mahoney, P.G. (2001). “The Political Economy of the Securities Act of 1933.” Journal of Legal Studies, 30(1): 1-31.

Mahoney, P. G. (2001a). "The common law and economic growth: Hayek might be right." Journal of Legal Studies 30(2): 503-525.

McDowell, Andrea. G. (2012). “Gold Rushes Are All the Same: Labor Rules the Diggings.” In David H. Cole & Elinor Ostrom, eds., *Property in Land and Other Resources*. Cambridge, Massachusetts, Lincoln Institute of Land Policy.

Miller, G. (2008). “Women’s Suffrage, Political Responsiveness, and Child Survival in American History.” Quarterly Journal of Economics 123 (3): 1287-1327.

Miller, G. P. (1993). "Contracts of Genesis." Journal of Legal Studies 22(1): 15-45.

Musacchio, Aldo (2008). “Law versus Contracts: Shareholder Protections and Ownership Concentration in Brazil, 1890-1950.” 82: 445-73.

North, Douglass. C. (2005). *Understanding the process of economic change*. Princeton, N.J., Princeton University Press.

North, Douglass. C. and R. P. Thomas (1973). *The rise of the Western world: a new economic history*. Cambridge Eng., University Press.

North, Douglass. C., John. J. Wallis and Barry. R. Weingast (2009). *Violence and social orders: a conceptual framework for interpreting recorded human history*. Cambridge; New York, Cambridge University Press.

North, D. C. and B. R. Weingast (1989). “Constitutions and Commitment: The Evolution of Institutions Governing Public Choice in Seventeenth-Century England.” Journal of Economic History 49(4): 803-832.

Ogilvie, Sheilagh (2011). *Institutions and European Trade: Merchant Guilds, 1000-1800.* Cambridge; New York, Cambridge University Press.

Posner, Eric (2014). “The Constitution of the Roman Republic” in *Roman Law and Economics,* ed. Giuseppe Dari-Mattiacci (unpublished).

Posner, Richard A. (1972). *Economic analysis of law*. Boston, Little, Brown. 1st edition

Posner, Richard A. (1972a). “A Theory of Negligence” Journal of Legal Studies 1(1) 29-96.

Posner, Richard A. (1974). “Theories of Economic Regulation.” Bell Journal of Economics and Management Science 5(2): 335-358.

Posner, Richard A. (1977). *Economic analysis of law*. Boston, Little, Brown. 2nd edition

Posner, Richard A. (1981). *The economics of justice*. Cambridge, Mass., Harvard University Press.

Posner, Richard A. (1986). *Economic analysis of law*. Boston, Little, Brown. 3rd edition

Posner, Richard A. (1992). *Economic analysis of law*. Boston, Little, Brown. 4th edition

Posner, Richard A (2011). *Economic analysis of law*. New York, Aspen Publishers. 8th edition

Priest, C. (2001). “Currency Policies and Legal Development in Colonial New England.” Yale Law Journal 110(8): 1303-1405.

Priest, C. (2006). “Creating an American Property Law: Alienability and Its Limits in American History.” Harvard Law Review 120(2): 385-459.

Priest, C. and Justin duRivage (2014). “The Stamp Act and the Political Origins of American Legal and Economic Institutions” (unpublished).

Priest, G. L. and B. Klein (1984). "The Selection of Disputes for Litigation." Journal of Legal Studies 13(1): 1-55.

Quinn, S. (2001). “The Glorious Revolution’s Effect on English Private Finance: A Microhistory.” Journal of Economic History 61(3): 593-615.

Rajan, Raghuram G., & Luigi Zingales (2003). “The Great Reversals: The Politics of Financial Development in the Twentieth Century.” J. Financ. Econ. 69:5–50.

Ramseyer, J. Mark. (1996). *Odd markets in Japanese history: law and economic growth*. Cambridge; New York, Cambridge University Press.

Rose, Carol (1990). “Energy and Efficiency in the Realignment of Common-Law Water Rights.” Journal of Legal Studies 19:261-96.

Rubin, Paul. H. (1977). "Why Is Common-Law Efficient." Journal of Legal Studies 6(1): 51-63.

Rubin, Paul H. (1982). “Common Law and Statute Law.” Journal of Legal Studies 11(2): 205-223.

Rubin, Paul. H. (ed.) (2007). *The Evolution of efficient common law*. Cheltenham, UK; Northampton, Mass., E. Elgar.

Rubin, Paul.H. and Joanna M. Shepherd (2013). “Public Choice and the Law.” In Reksulak, Michael, Laura Razzolini and William F. Shughart II (eds.) *The Elgar companion to public choice*. Cheltenham, UK; Northampton, Mass., E. Elgar. 2nd edition

Shavell, S. (1996). “Any Frequency of Plaintiff Victory at Trial is Possible,” 26 Journal of Legal Studies 493-501.

Silver, Morris (2011). “In Dubious Battle: An Economic Analysis of Emperor Hadrian’s Fish and Olive Oil Laws.” Roman Legal Tradition 7: 1-15.

Silver, Morris (2014). “Serfdom by Contract in the Late Roman Empire” in Roman Law and Economics, ed. Giuseppe Dari-Mattiacci (unpublished).

Silverman, Brian S. and Ingram, Paul L. (2012). “Managing Agency Problems in Early Shareholder Capitalism: An Exploration of Liverpool Shipping in the 18th Century.” (unpublished)

Smith, Henry (2000). “Semicommon Property Rights and Scattering in the Open Fields.” Journal of Legal Studies 29(1): 131-69.

Stake, Jeffrey E. (2005). “Evolution of Rules in a Common Law System: Differential Litigation of the Fee Tail and Other Perpetuities.” Florida State University Law Review 32(2): 401-424. [reprinted in Rubin 2007]

Stasavage, D. (2007). “Partisan politics and public debt: The importance of the ‘Whig Supremacy’ for Britain’s financial revolution.” European Review of Economic History 11(1): 123-153.

Stigler, G. J. (1971). "Theory of Economic Regulation." Bell Journal of Economics and Management Science 2(1): 3-21.

Sussman, N. and Y. Yafeh (2006). “Institutional Reforms, Financial Development and Sovereign Debt: Britain 1690-1790.” Journal of Economic History 66(4): 906-935.

Umbeck, J. (1977). “A Theory of Contract Choice and the California Gold Rush.” Journal of Law & Economics 20(2): 421-438.

van Zandt, D. E. (1993). “The Lessons of the Lighthouse: ‘Government’ or ‘Private’ Provision of Goods.” Journal of Legal Studies 22(1): 47-72.

Verhagen, H. L. E. (2014). “The Security of Credit in Rome: Secured Transactions in Classical Roman Law” in *Roman Law and Economics,* ed. Giuseppe Dari-Mattiacci (unpublished).

Volokh, A. (2009). “Property Rights and Contract Form in Medieval Europe.” American Law and Economics Review 11(2): 399-450.

Wahl, J. B. (1998). *The bondsman's burden: an economic analysis of the common law of Southern slavery*. Cambridge; New York, Cambridge University Press.

Weinstein, M. I. (2003). “Share Price Changes and the Arrival of Limited Liability in California.” Journal of Legal Studies 32(1): 1-26.

Weinstein, M. I. (2005). “Limited Liability in California 1928–31: It’s the Lawyers.” American Law and Economics Review 7(2): 439-483.

Weinstein, M. I. (2008). “Don’t Buy Shares without It: Limited Liability Comes to American Express.” Journal of Legal Studies 37(1): 189-227.

Wright, Gavin (2006). *Slavery and American Economic Development*. Baton Rouge, Louisiana State University Press

Zerbe, R. O. and C. L. Anderson (2001). “Culture and Fairness in the Development of Institutions in the California Gold Fields.” Journal of Economic History 61(1): 114-143.