Commerce and Cooperation: Litigation and Settlement of Civil Disputes on the Australian Frontier, 1860–1900

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I examine the evolution of conflict and cooperation during economic growth by analyzing civil disputes in New South Wales between 1860 and 1900. Disputes per capita fell over time and the proportion of cases settled before trial increased, but patterns varied across locations and types of disputes. Economic conflicts were likelier to be settled than personal disputes, and the fraction of cases settled was significantly lower in frontier areas and in districts without access to transportation. The results suggest that increased market exchange facilitates the development of informal rules and encourages transactors to find cooperative solutions through private bargaining.

> *When a person makes perhaps twenty contracts in one day, he cannot gain so much by endeavouring to impose on his neighbours. . . . When people seldom deal with one another, we find that they are somewhat disposed to cheat.*
> Adam Smith, 1763[1]

Economic historians have long emphasized the contribution of appropriate institutions to economic growth.[2] Few would contest the claim that institutions such as property rights and legal systems influence the course of economic change, or that institutions are in turn conditioned by their environment. Douglass North has posited that "long-run economic growth entails the development of the rule of law," and Willard Hurst has

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[1] Smith, *Lectures*, p. 254.

[2] According to North, "in a world of uncertainty [institutions] have been used by human beings in an attempt to structure human interaction. . . . Institutions are composed of formal rules (laws, constitutions, rules), informal constraints (conventions, codes of conduct, norms of behavior), and the effectiveness of their enforcement. . . the efficiency of the market is directly shaped by the institutional framework" ("Prologue," p. 6).

similarly argued that legal institutions serve to "multiply the productive power of the economy."[3] Legal institutions may increase social wealth by codifying the rules that govern exchange most efficiently, and by providing mechanisms that reduce the costs of transacting and increase the net benefits from exchange. Appropriate legal rules lower the degree of uncertainty and also shift risk to those who can avoid it at least cost. Morton Horwitz, for example, has argued that common-law doctrines in effect subsidized American economic growth in the antebellum period; and other studies have shown that legal systems can influence the development of financial markets and technology.[4]

One crucial aspect of institutions pertains to the resolution of disputes: a society based on commerce and the division of labor requires efficient methods of resolving conflict, and it may be expected that the methods adopted will tend to vary across time, region, culture, and the nature of disputes. Two approaches to the relationship between legal institutions (such as courts, norms, and property rights), dispute resolution, and economic change dominate the contemporary literature. Law-and-economics models highlight the importance of formal laws and of well-defined, well-enforced property rights. Proponents of this approach have examined the selection of disputes that are taken to trial and those that are settled before trial, and suggest that predictable rules and established legal standards encourage out-of-court settlements. Recently, game-theoretic models have stressed the importance of learning and behavioral evolution in promoting cooperation and efficient outcomes in the presence of gains from coordination.[5] Together these findings suggest a Smithian process, in which the growth of the market (and thus of the gains from exchange), in tandem with increased legal certainty, encourages more cooperative behavior; this would be evidenced in higher rates of out-of-court settlement or lower rates of dispute.

Adam Smith and many of his contemporaries were convinced that an increase in commercial transactions was a prerequisite for perfecting civil society.[6] However, further urbanization and industrialization later gave rise

[3] North, "Economic Performance," p. 367; and Hurst, *Law*, p. 203. Coase ("Institutional Structure," pp. 717–18) points out that "the legal system will have a profound effect on the working of the economic system and may in certain respects be said to control it."

[4] Horwitz, *Transformation*, pp. 63–108. Khan ("Property Rights") has argued that antebellum courts promoted the progress of technology by strongly supporting and enforcing patent rights. Levine ("Legal Environment") has found that cross-country differences in the legal rights of creditors and the efficiency with which legal systems enforce those rights explain over half of the cross-country variation in banking-sector development, and that the nature of the legal environment is associated with long-run rates of economic growth, capital accumulation, and productivity growth.

[5] In Prisoner's Dilemma games, tit-for-tat strategies punish defection and should, over time, induce cooperative behavior; more generally, the Folk Theorem asserts that sufficiently patient players in repeated games can attain equilibria with individually rational payoffs.

[6] Indeed, according to Smith, "When the greater part of people are merchants, they always bring probity and punctuality into fashion, and these, therefore, are the principal virtues of a commercial nation" (*Lectures*, p. 255).

to critics of the free market who argued that commerce, far from a civilizing force, corroded nonutilitarian values and traditional norms of cooperation.[7] Social theorists came to dichotomize "community" (based on informal norms and social cooperation) and "market" (involving impersonal transactions prone to conflict because they are sanctioned by law and self-interest, rather than by custom or affect). This perspective is reflected in a number of recent economic and legal studies that highlight the role of informal norms in reducing and resolving disputes in small or underdeveloped communities. For instance, Robert Ellickson criticizes the economic approach for underestimating the role of social norms, and faults Ronald Coase for mistakenly implying that rural residents would resort to formal laws to settle their differences.[8] Avner Greif points out that in premodern Europe nonlegal institutions substituted for contract law in enforcing impersonal exchange, so that community norms, rather than formal law, fueled market expansion.[9] Most recently, new institutional economists have revisited the hypothesis that frontier communities attach greater importance to informal norms and sanctions. They treat the frontier as a region where property rights are fluid, enforcement is difficult, and conflict tends to be resolved by extralegal methods such as violence or corruption.[10]

These arguments all have their merit. But the fact remains that we can gain only partial—and potentially inaccurate—insights through ahistorical references either to frontier regions, or to communities in an advanced contemporary society.[11] Instead, we need to examine the evolution of the relationship between legal institutions, norms of cooperation, and the degree of commer-

[7] Hirschman ("Rival Interpretations," p. 1471) contrasts the "doux commerce" thesis with others, including the view that "commerce was widely viewed as contributing to the breakdown of traditional communities and to the loosening and disintegration of social and affective ties, rather than to their consolidation."

[8] Ellickson, *Order*. The Ellickson model suggests that social norms provide a more effective substitute for law in areas of low population density, so order is maintained independently of the formal legal system. He contends that in rural communities where transaction costs are high—such as Shasta County, California—transactors cooperate independently of the law, of which they remain largely ignorant. Similarly, he has argued that "much of the glue of a society comes not from law enforcement, as the classicists would have it, but rather from the informal enforcement of social mores by acquaintances, bystanders, trading partners, and others" ("Law and Economics," p. 540).

[9] See, for instance, Greif, "Reputation" and "Institutions."

[10] See Alston and Libecap, "Determinants"; and Alston, Libecap, and Mueller, "Development." Others, such as Reid (*Law for the Elephant*), reject this image of the lawless frontier, and contend that immigrants to unsettled areas are likely to transplant and foster norms and institutions from their previous area of residence.

[11] Hayek's celebrated theories about the spontaneous evolution of cooperation in a capitalist society are especially relevant here. As Robert Sugden ("Spontaneous Order," p. 1107) points out, "if we are to explain why one convention is found rather than another, it is not very useful to start from a comparison between one world in which everyone follows one convention and a world in which everyone follows the other. . . Instead we must consider the process by which conventions evolve." Axelrod ("Evolutionary Approach") likewise adopts an evolutionary perspective, and his simulation of the evolution of norms in society suggests that defection may be controlled by a combination of laws and norms: "social norms and laws are often mutually supporting."

cial activity. These issues are complex and are not entirely amenable to quantitative analysis, so it is not surprising that little empirical evidence has been directed to their investigation.[12] However, a narrower focus may shed some light on variation in the resolution of disputes over time and place.

Accordingly, this study assesses the validity of the "Smithian hypothesis" by considering the resolution of civil disputes in the frontier society of New South Wales between 1860 and 1900. The ratio of cases settled before trial to all disputes (the settlement rate) yields unique insights into the processes of legal development and economic change, because settlements are based on predictable and well-established institutions, and because the settlement rate reflects norms of cooperation. Empirical studies of litigation do not typically distinguish settlements from trials, for want of comprehensive data.[13] However, after 1860 New South Wales records included consistent information on settled cases; they thus offer a valuable opportunity to assess the evolution of settlements in economic disputes during a critical period of market expansion.

If it is true that commercial activity within a formal legal system enhances norms of cooperation, one would expect that conflict (as gauged by litigation) would fall over time, and that settlements (an index of cooperative behavior) would increase with economic development, and also tend to be higher in commercial disputes and areas with more extensive commerce. In contrast, the frontier/community norms hypotheses predict that over time, as societies engage in more impersonal transactions, disputes would increasingly tend to be filed within the formal legal system, and property cases would fall in relative importance. If rural or frontier areas are associated with rule by informal norms, and market activity does indeed erode such norms, we would expect that the tendency to settle cases would be higher in rural and frontier regions and that the settlement rate would fall with economic development. Moreover, settlements would also be lower in commercial disputes and areas with more commercial activity.

In the first part of this study I describe legal institutions and the aggregate patterns of litigation in New South Wales. I then estimate the temporal, geographic, and demographic correlates of per-capita litigation rates. The third section analyzes settlement rates. Both the time-series and cross-sectional results support the Smithian hypothesis that commerce and market expansion promoted greater cooperation, as gauged by the resolution of civil

[12] The law-and-economics school has devoted its efforts primarily to theory and to experimental laboratory results rather than to empirical estimation. Friedman ("Opening") reviews existing longitudinal studies of trial courts which have been produced by a small number of law-and-society scholars. His paper appeared in a special issue of *Law and Society Review* dedicated to the subject.

[13] Empirical studies of modern settlement data focus on specific regions or narrow samples, such as product-liability claims (Viscusi, "Determinants") and medical malpractice claims from Florida (Hughes and Snyder, "Litigation and Settlement"). Several other studies rely on simulation results. The ICPSR maintains a data set for U.S. federal court cases since 1970 which distinguishes between trials and cases that were dismissed (some subset of which were settled).

disputes. The aggregate number of disputes fell over time, even though population growth was rapid, and the tendency to settle cases increased during this period of economic development. Although the composition of cases varied little during the period under review, the data indicate that settlement rates varied according to the type of case. Economic disputes were likelier to be settled than personal ones, in part because the interested parties were motivated more by rational calculation than by indignation, and in part because, if they went to trial, economic disputes were likelier to be decided by (dispassionate) judges than (unpredictable) juries. A striking result is that the settlement rate was significantly lower in areas without access to markets, and increased with the extent of economic and urban development.

DISPUTE RESOLUTION AND N.S.W. DISTRICT COURTS

> *[Law] increases the degree of certainty with which an economically relevant action can be calculated in advance.*
>
> Max Weber[14]

Other things being equal, institutions that reduce the amount of resources consumed in dispute resolution will conduce to increases in productivity and net output. Civil litigation arises as a means of resolving conflicts between individuals in the course of socioeconomic transactions and is especially relevant to understanding the link between legal institutions and the economy. Unlike criminal cases, a large fraction of the population engages in civil litigation, to resolve important commercial disputes over the responsibilities of principals and agents, contracts, exchanges, property (tangible and intangible), reputation, promissory notes, negligence, and employment issues, among others.[15] It may be useful at this point to clarify the different stages of a legal dispute.[16]

[14] Weber, *Max Weber*, p. 329.

[15] The jurisdiction of the district courts was predominantly common law (although a few cases were brought in equity), and excluded criminal cases. Jurisdiction excluded litigation relating to seduction, titles to land, intestacy and probates, bankruptcy, and matrimonial causes. The jurisdiction of the district courts was enlarged once during the period by 37 Vic. No. 13 (1874), which allowed them to hear appeals from decisions in Mining Wardens' Courts. In this paper, I refer to litigation, cases, disputes, and lawsuits interchangeably, to indicate all conflicts filed in the district courts. Cases in which the litigants reach an agreement before trial are termed "settlements," and cases that are formally brought before a judge are called "trials." Trials consist of cases tried before juries ("jury trials") as well as those decided summarily by a judge or judges.

[16] See Priest and Klein, "Selection," for a detailed analysis of the selection of disputes for trial; see also Priest, "Measuring." Under the American Rule, where each party pays his own costs, a settlement range exists if $(P_p - P_d)J \leq (C_p + C_d)$. More recent approaches in bargaining and game theory explore why litigants may have divergent expectations. An extensive literature also addresses the effects of legal rules and procedures on decisions, as well as the influence of other "players" such as lawyers and judges. For surveys see Hay and Spier, "Settlement of Litigation," and Cooter and Rubinfeld, "Economic Analysis."

A primary hypothesis of law-and-economics models is that litigation is conducted by rational individuals, who decide to litigate in response to expected net benefits. Disputes are initiated when one party (the plaintiff) alleges an injury caused by another party (the defendant). The plaintiff then decides whether to assert a formal legal claim, and if the complaint is filed it is at this juncture that the dispute is documented. Court records subsequently note whether the complaint was settled, or whether it proceeded to a trial before a judge or jury. Settlement negotiations are likely because it is in the interest of both parties to reach an efficient resolution of the dispute, and the costs of trial are generally higher than those of settlement.

The decision rule takes the following form. Define S as the value of the proposed settlement, J as the monetary judgement at stake in a potential trial, and P_p and P_d as the plaintiff's and defendant's respective perceived probabilities of the plaintiff's winning the trial. C_p and C_d are their respective costs of going to trial (in excess of the cost of settlement). Under the so-called English Rule, which allocates the litigation costs of both parties to the loser, the plaintiff would seek to settle if

$$S \geq P_p J - (1 - P_p)(C_p + C_d) \tag{1}$$

In effect, Equation 1 asserts that the plaintiff will settle if S exceeds the expected net benefits of trial (the expected judgement less the expected excess of trial over settlement costs). The defendant will settle if

$$S \leq P_d(J + C_p + C_d) \tag{2}$$

thus implying a zone of mutually acceptable settlement if

$$(P_p - P_d)(J + C_p + C_d) \leq (C_p + C_d) \tag{3}$$

If the parties have identical expectations regarding the strength of the plaintiff's case, then there will always exist a range of settlement. But, other things being equal, the greater the difference in expectations $(P_p - P_d)$, the higher the expected judgement (J), and the lower the costs of litigation $(C_p + C_d)$, the lower the likelihood of settlement and the greater the probability of trial. Legal disputes are prolonged if there are differences in the expectations of plaintiffs and defendants about their probability of winning. Settlement rates thus yield unique insights into the processes of legal development and economic change, because pretrial settlements are promoted by predictable rules and well-established norms. If rules or procedures are arbitrary or poorly understood, plaintiffs and defendants are unlikely to reach a private agreement, and will incur the costs of taking their disputes to trial. Holding other things constant, the more certain the legal institution and environment, the greater the likelihood that disputants will be able to avoid the costs of trial by negotiating an informal settlement. This

suggests that the propensity to reach out-of-court agreements might vary positively with the frequency of market exchange, and that settlements would tend to increase over the course of economic development.[17]

Law-and-economics models thus imply that the highest expression of civil society is when the rules are so well understood and predictable that disagreements can be resolved through private bargaining (cooperative solutions) rather than through judgements imposed by the courts (confrontational solutions). Theoretical discussions further imply that the accumulation of social capital is likely to be associated with the following patterns: first, a nonincreasing trend in per-capita litigation rates; second, a greater number of disputes that are settled out of court; and third, a shift away from formal enforcement towards reliance on generally understood rules or norms. In practice, the mechanisms that promote these outcomes include specialized agents who formulate and enforce standardized contracts; higher frequency of transactions that lead to the creation and refinement of informal conventions and formal rules; and a greater volume of transactions that create economies in dispute resolution and incentives for working out more subtle issues. These patterns will be assessed in nonurban and frontier regions of New South Wales and compared with more developed areas in the colony.

At the advent of the nineteenth century, "frontier" regions such as the American West, Canada, Argentina, Australia, and New Zealand possessed abundant natural resources, low population density, undeveloped markets, and the potential for rapid economic growth. These features also characterized New South Wales, which was settled in 1788 as a British penal colony.[18] Only a few months later, the first lawsuit was brought before its Court of Civil Jurisdiction by convict plaintiffs, contrary to British law regarding the lack of civil rights due to "convict attaint."[19] Right from the beginning, it was clear that the colonial courts were willing to adapt British institutions to the circumstances of an emerging frontier society.[20]

However, as N. G. Butlin has pointed out, the colony's extensive resource base remained largely unexploited until the middle of the nineteenth

[17] Although pretrial settlement patterns can provide unique insights into the evolution of cooperative solutions, it should be noted that the population of all disputes is much larger than the population of complaints filed in the courts, and that it is impossible to know how representative the latter are of the former.

[18] The transportation of convicts ended by 1840. In 1860 the convict and ex-convict population amounted to less than a third (28.9 percent) of total population. Native born whites accounted for 34.7 percent, and free immigrants for the remaining fraction. See Butlin, *Investment*.

[19] The first civil case filed in the colony was *Kable v. Sinclair*, in July 1788. A young couple transported for burglary brought the case to recover goods that they claimed Sinclair, the ship's master, had stolen. The plaintiffs not only won the case, but also secured a judgement of £15. Henry Kable became successful as police Constable and entrepreneur, and was involved in several other lawsuits. See Kercher, *Debt, Unruly Child*, and "Commerce" for a discussion of the early courts.

[20] Indeed, many innovations were adopted in New South Wales before England, including the abolition of imprisonment for debt; universal male suffrage; simplified land titles (the Torrens system); secret ballots; formal arbitration of labor disputes; and mining licences.

century.[21] Settlement expanded rapidly after 1860, with annual population growth above 3 percent, much of it concentrated in Sydney and other urban areas.[22] Economic progress in this period was predominantly extensive, driven by primary production (pastoral, mining, and agricultural pursuits), although industrial output and railway construction absorbed increasing shares of national income. By the 1890s New South Wales was one of the most prosperous economies in the world, and thus presents an important opportunity for examining changes in the relationship between law and commercial activity.[23]

In the first half of the nineteenth century the New South Wales Supreme Court and four circuit courts were overwhelmed with outstanding cases. Disputes in outlying areas may have been abandoned in order to avoid the expense and trouble of traveling the great distances required.[24] In order to resolve these problems, the District Courts Act was passed in 1858, establishing intermediate courts in most of the major townships.[25] This legislation succeeded in its objective of creating democratic courts to which everyone had ready access, regardless of income or location.[26] Fees and administrative costs were kept low, and cases were heard and decided with despatch by traveling judges who presided over each court in their district several times during the year.[27] The district courts quickly became, and remained, the

[21] See Butlin, *Investment*, p. 3, and *Colonial Economy*. See also Jeans, *Historical Geography*.

[22] Population during the census years was: 350,860 (1861); 503,981 (1871); 778,690 (1881); 1,117,250 (1891); and 1,359,133 (1901). Average annual population growth was 3.55 percent during this period. Population density was 1.13 persons per square mile (1861); 1.62 (1871); 2.42 (1881); 3.65 (1891); and 4.44 (1901). In comparison, population density of the United States in 1895 was 9.23 (Coghlan, *Seven Colonies*, various years). Sydney and its surrounding suburbs accounted for 27.3 percent of the population of New South Wales in 1871, 29.3 percent in 1881, 33.9 percent in 1891, and 35.9 percent in 1901 (Coghlan, *Seven Colonies*, various years; and *Statistical Register*, various years).

[23] Per-capita income in New South Wales was £57 in 1890, relative to £39 in the United States. Wages and per-capita consumption were also higher. See Coghlan, *Seven Colonies*.

[24] Holt, *Court*, p. 4. New South Wales consisted of over 200 million acres, or approximately 300,000 square miles. The colony's final boundaries were set by 1860, after Queensland was created from its territories in 1859.

[25] District Courts Act, 22 Victoria 18, 1858.

[26] The district courts had jurisdiction over civil disputes where the amount in question was £200 or less. This sum amounted to four times per-capita income in 1899, and only 2 percent of the population held annual incomes in excess of £200. See Coghlan, *Seven Colonies, 1899–1900*, pp. 736–37. Costs were decided according to the English Rule. In undefended cases, attorneys and barristers were paid between one and three guineas, depending on the amount at issue. Payment increased if the case was defended, totaling two to five guineas. Costs also included a deposit for jury trials, miscellaneous filing fees, and the expenses of witnesses. Costs of filing were 2s. 6d. if the amount claimed was below £5; 5s. if below £10; 7s. 6d. if below £30; and 20s. for all other cases. See Foster and Murray, *Practice of the District Courts*. In exceptional circumstances, the judge could order each party to bear their own costs, as in *Hodgkinson v. Hodgkinson*, 2 Ch. 190 (1895). Appeals from the decisions of the district courts could be brought before the Supreme Court of New South Wales if the amount claimed were greater than £30.

[27] The numbers and locations of courts were expanded and contracted to adjust to perceived need. In 1859 there were 40 district courts, 52 in 1862, 62 in 1870, and 79 in 1885. This suggests that the supply of courts was fairly elastic, and a reduced-form litigation model that emphasizes demand factors

principal trial courts of the colony. In 1859, its first full year of operation, the system administered over 9,200 causes for action, and this level of litigation was sustained over the next two decades.

The district court records from New South Wales are unique in allowing us to examine patterns of both litigation and settlements over time and across regions. The District Courts Act of 1858 required the registrars for each court to submit summary annual statements that included information on the following variables: the number of lawsuits filed; the number settled out of court; the number litigated; the number of jury trials; the damages sought in each; the costs of litigation; and the outcome. The data set for this paper includes these variables for each year and district, from 1863 through 1900. In addition, I constructed from the more detailed annual reports of the courts a sample of every fifth year from 1860 to 1900, that compiled the same variables for each district, disaggregated by nature of dispute.[28] The data thus permit insights into longitudinal trends in litigation during the period when this colonial economy first attained self-sustaining growth, as well as the analysis of variation across districts and types of cases within a given period.[29]

PATTERNS OF CIVIL LITIGATION

> *L'esprit de commerce produit dans les hommes un certain sentiment de justice exacte.*
>
> Montesquieu, 1748[30]

Economic expansion in New South Wales during the nineteenth century proceeded along several frontiers, both regional and sectoral.[31] The populous

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would be appropriate. A more accurate model would specify the role and effect of judges and lawyers, but the relevant information is unavailable.

[28] The *Statistical Registers* of New South Wales include the summary annual statements for 1863 onwards, except for four years (1889 through 1892) which I obtained from the full-length reports. The sample for every fifth year is drawn from the full reports that were submitted to Parliament, and published in the annual *Votes and Proceedings of the Legislative Assembly of New South Wales*. However, the detailed returns for 1895 through 1897 were not published in the Parliamentary Papers, so 1895 is not included in the analysis by type of case.

[29] Ideally one would prefer information at a more disaggregated level than the fifteen or so categories of "nature of causes" that are available annually for each district. However, even if comprehensive information on individual cases existed, it would be impossible to collate and process the large number of individual cases that would be required to represent all the districts over time.

[30] "Commercial thinking creates a precise sense of justice." Montesquieu, *De l'esprit*, p. 298.

[31] Pastoral farming (sheep and livestock), railways, and construction grew rapidly after the gold rush years of the 1850s. Mining was important in the Central division and the West, in districts such as Orange, Broken Hill, and Silverton, but accounted for a minor share of aggregate output. Instead, the growth of sheep farming in the South and the interior plains of the North dominated the economy. In addition, dairy farming gained importance, as did wheat and other crops grown on a large scale. See Jeans, *Historical Geography*.

TABLE 1
DIMENSIONS OF CIVIL LITIGATION, 1860–1900, BY REGION (percentage of total)

	1860–1869	1870–1879	1880–1889	1890–1900	1860–1900
North					
Disputes	5.0	5.7	11.5	14.5	8.9
Cases tried	4.7	5.4	12.7	16.8	9.1
Wins by plaintiff	4.5	5.2	12.5	15.4	8.8
Amount at issue	6.8	9.0	12.1	16.3	12.6
Cost of litigation	10.5	9.2	11.5	17.3	12.4
Population	8.5	10.6	11.0	11.4	
South					
Disputes	8.9	7.6	10.9	10.5	9.5
Cases tried	8.8	7.6	12.2	11.6	9.8
Wins by plaintiff	8.5	7.3	11.8	10.8	9.5
Amount at issue	15.1	13.4	12.5	10.5	12.1
Cost of litigation	11.4	7.6	10.4	8.4	9.5
Population	17.7	13.3	12.7	12.0	
West					
Disputes	7.6	6.4	6.3	9.2	7.3
Cases tried	7.2	6.0	6.3	9.7	7.2
Wins by plaintiff	7.0	5.6	6.2	9.3	6.9
Amount at issue	12.2	12.8	7.8	12.4	10.7
Cost of litigation	10.8	11.2	8.2	10.8	10.1
Population	13.9	11.8	12.5	12.2	
Sydney					
Disputes	60.1	63.0	50.3	44.1	54.0
Cases tried	62.7	62.7	64.3	48.3	53.8
Wins by plaintiff	64.2	66.0	49.6	45.2	55.7
Amount at issue	41.0	38.7	42.9	36.5	39.2
Cost of litigation	41.1	43.5	48.4	39.5	43.1
Population	16.6	12.4	10.6	8.3	
Metropolitan and Hunter					
Disputes	13.0	9.0	9.9	11.3	10.7
Cases tried	12.5	11.2	9.8	11.5	10.6
Wins by plaintiff	12.0	8.3	9.7	11.1	10.1
Amount at issue	14.4	9.0	8.2	9.5	9.0
Cost of litigation	12.6	9.7	7.7	9.5	9.3
Population	36.7	40.2	40.2	43.0	
North West					
Disputes	0.4	1.7	4.0	4.1	2.4
Cases tried	0.4	1.6	4.0	4.3	2.3
Wins by plaintiff	0.3	1.6	3.7	4.0	2.2
Amount at issue	0.6	3.6	6.6	7.5	6.0
Cost of litigation	0.7	4.2	4.9	6.7	4.4
Population	0.8	4.5	5.2	5.1	
South West					
Disputes	4.2	6.6	7.2	8.0	6.4
Cases tried	3.7	6.1	6.7	9.0	6.1
Wins by plaintiff	3.5	6.0	6.5	8.3	5.8
Amount at issue	10.0	13.1	9.8	10.1	10.7
Cost of litigation	12.7	14.6	8.9	11.2	11.4
Population	5.4	7.3	7.6	7.8	
New South Wales Total			(thousands)		
Disputes	111.5	90.7	97.9	86.0	386.1
Cases tried	65.9	52.6	50.0	40.5	208.9
Wins by plaintiff	58.9	46.4	44.4	39.3	189.1
Amount at issue (£)	205	1,534	2,623	2,227	6,589
Cost of litigation (£)	114.6	119.5	189.5	163.4	586.9
Population	342.8	605.0	939.1	1,298.6	

TABLE 1 — continued

Notes: Population figures are for the middle of each decade, estimated from the *Census of Population* for 1861, 1871, 1891, and 1901. However, the population estimates needed to be adjusted significantly: the 1861 census reported population at the police-district level, which corresponded to the district-court level of that period. Definitions of district courts' jurisdiction for 1860 were obtained from *Votes and Proceedings, 1858–59*, and for later in the century from documents in the Sydney Archives. However, the later jurisdiction related to counties, several of which were contained in more than one district. I allocated an equal fraction of county population to each district. Thus the district-court population is an aggregate of any entire counties that were included in its jurisdiction, and any fraction of a county that was also included. The census reports for 1881 were unreliable and incomplete, so I extrapolated the population for that decade, as well as the population of any districts that were newly created in 1870. The actual annual population reported in the various censuses were: 350,860 (1861); 503,981 (1871); 751,468 (1881); 1,132,234 (1891); and 1,359,133 (1901).
Sources: *Statistical Register of New South Wales*, 1864–1901. Population from *Census of New South Wales*, various years.

cities of Sydney and Newcastle and the surrounding Hunter region were industrially the most diverse, including shipping, manufactures, and rich agricultural lands along the Hunter Valley. It is hardly surprising that most litigation was focused in the same area (Table 1). These two regions together accounted for approximately 75 percent of total disputes and trials during the 1860s, but by 1900 their share of disputes and trials had fallen to 53.7 and 48.5 percent respectively, largely because of a decline in litigation in Sydney relative to other areas. During this period towns in the North (such as Grafton, Armidale, and Glen Innes), West and Southwest (Hay, Bathurst, Deniliquin), and rural areas experienced increases in litigation relative to the settled districts around Sydney and Newcastle. These outlying regions also accounted for a disproportionate share of the amounts at issue and of litigation costs relative to disputes, this latter suggesting that transaction costs may have been higher outside the large cities.[32]

Figure 1 presents the time series for district court filings in New South Wales. This series indicates that civil litigation fell significantly over the period of economic growth, both before and after adjusting for population.[33] The district courts recorded 30 cases per thousand inhabitants in 1866, but by the end of the century fewer than five cases per thousand were filed annually. The jurisdiction of the district courts was limited to claims not exceeding £200 (cases involving higher values being heard by the Supreme Court),

[32] High transaction costs, in the Coasian view, tend to inhibit the private settlement of disputes. A possible (but not inevitable) implication of the "lawless frontier" model is that as such transaction costs fall over the course of economic development one will, other things being equal, observe an increase in cases within the formal legal system. Ellickson (*Order*) also emphasizes the importance of high transaction costs in areas of low population density, but he argues that such costs lead rural residents to depend on informal methods of social control outside of the legal system.

[33] This pattern is consistent with findings for other societies. In a study of litigation in England, Johnson ("Small Debts") found that about 45 cases per thousand population were filed in the 1860s, declining to 33 per thousand in the early twentieth century. According to Muldrew ("Credit and the Courts"), litigation declined rapidly in England after 1700, both in absolute terms and relative to the population.

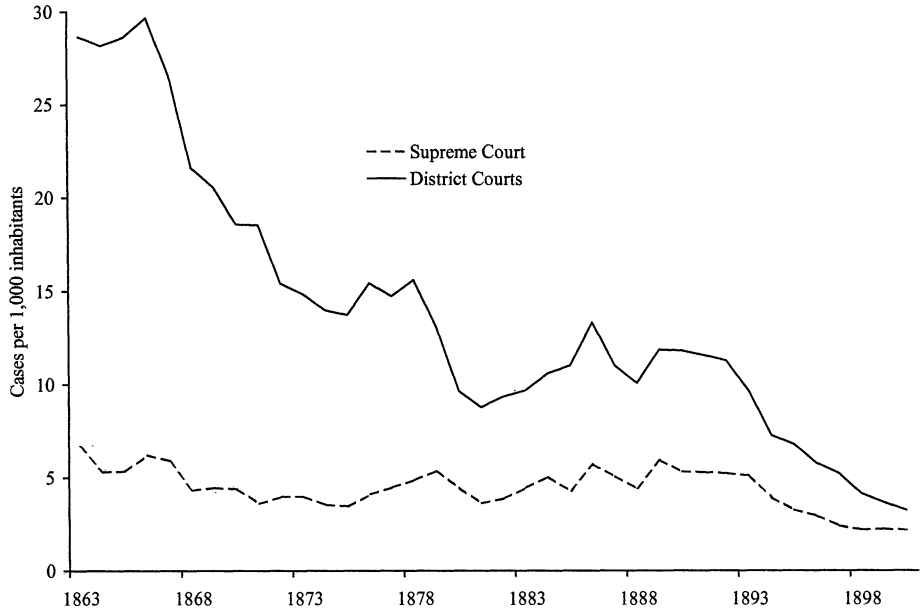

FIGURE 1
SUPREME- AND DISTRICT-COURT CASES PER CAPITA, 1863–1900

Sources: See the text.

so it is possible that the observed pattern might be biased if claims tended to rise in value over time or during specific phases in the business cycle. However, Figure 1 also shows that the marked decline in per-capita civil litigation in the district courts cannot be explained by transferral of causes to the superior courts.[34] For, although Supreme Court writs increased somewhat before 1893, their total comprised only a small fraction of district court cases and a large number were abandoned before conclusion; moreover, many of these cases were unrelated to the jurisdiction of the district courts.[35] At the other end of the spectrum, the Magistrate's Courts, which dealt with small claims, also show a fall in the number of filings over time.[36]

[34] The amount at issue in the Supreme Court is more variable than the number of disputes filed, and the total value also falls rapidly during the last decade in both real and nominal terms. For Supreme Court cases, see New South Wales, *Reports*.

[35] It should also be noted that the majority of these writs before the Supreme Court were abandoned, and less than 15 percent were taken to trial. The superior courts also considered issues relating to land titles, bankruptcy, probates, and matrimonial causes.

[36] Debt matters involving small sums of money could also be brought before magistrates in the police districts who dealt out summary judgements. Metropolitan magistrates' courts could adjudicate cases when the amount in dispute did not exceed £10, and country courts when the amount did not exceed £30. According to Kercher (*Debt*, p. 20), the magistrates' courts were "essentially the courts for the lower classes in society" and were not much concerned with significant commercial litigation. In 1894 13,830 small claims came before the metropolitan magistrates' courts, of which 80 percent were for amounts below £5. Country courts processed 21,952 cases in that year, of which 62 percent concerned

These longitudinal patterns are striking, but perhaps they pose more questions than insights regarding the underlying processes. For example, it may be expected that both the nature and role of the legal system would change over time. In the early years of the colony, when other types of public institutions were absent or unreliable, recourse to the courts may have provided the most reliable way to resolve disputes or to enforce contracts.[37] Later on, as markets expanded, we observe a division of labor, and specialization among institutions that absorbed some of the functions of early courts. The advent of other means of recording and enforcing transactions, as well as alternative methods of resolving disputes (such as compulsory labor arbitration, registration with mining wardens, and land title registration under the Torrens system) could also lead to a fall in appearances before the main trial court. Scholars such as Bruce Mann point to the role of professionalization and routinization of the legal profession in influencing legal outcomes. Ultimately, as the stock of legal capital grows, and standards become more predictable, courts may be expected to extend their purview from simple questions of contract enforcement to more novel and complex disputes.[38] In order to shed more light on these issues, I consider the evidence at a more disaggregated level, in terms of the composition of cases, the prevalence of jury trials, and plaintiff recovery rates.

The composition of cases before the court (Table 2) allows us to assess the role of property rights in economic development. The "lawless frontier" hypothesis suggests that property and personal disputes will predominate in the earlier stages, when property rights are ill-defined and contested, but will decline over time. But although the total number of disputes fell over time, the composition of cases did not vary significantly. Even in the earliest years of settlement, conflicts over property were relatively infrequent, and this remained true in the second half of the nineteenth century, when property disputes amounted to only 7 percent of all litigation.[39] The overwhelming majority of cases in the colony during the

debts below £5; 23 percent were for £5 to £10; and 16 percent were for £10 to £30 (*Statistical Register*, 1894, p. 676). Complaints brought before these lower courts followed a similar downward trend. Hence, aggregate statistics for magistrates' courts do not support the idea that variation in district-court cases was related to changes in the cases brought before the magistrates.

[37] See Kercher, *Debt*, p. 26.

[38] See Horwitz (*Transformation*, p. 26), who argues that in the United States judges consciously tried to "create substantive doctrines that would themselves assure greater predictability of legal consequences."

[39] This might be due partially to the limited jurisdiction of the district courts, which excluded cases where the title of land was in question; but an examination of Supreme Court cases from 1863 to 1900 does not reveal different patterns. It should be recalled that the Torrens system introduced land registrations that greatly simplified transfers, and reduced the likelihood of conflict over titles (though not of conflicts over property itself). Research into the history of litigation elsewhere has similarly revealed that property litigation played a small part in civil disputes. For instance, Langum (*Law*) reports that only 3.5 percent of civil litigation in Mexican California related to land and real property. Similarly, according to Kolish ("Some Aspects"), between 1785 and 1825 some 65 percent of cases in Lower Canada dealt with debt contracts, whereas property only accounted for about 10 percent. And Muldrew ("Credit") has found that 80 to 90 percent of the cases litigated in the English Court of Common Pleas were debt-related.

TABLE 2
NATURE OF CASES IN SYDNEY AND ELSEWHERE, 1860–1900
(percentage of total)

	1860	1870	1880	1890	1860–1900
Sydney					
Debt	15.3	13.6	25.9	17.8	18.2
Labor	18.5	16.2	16.2	8.9	16.4
Personal	2.9	3.0	3.0	2.5	3.4
Property	6.4	8.1	8.1	3.6	6.7
Trade	56.3	58.6	46.3	45.4	48.0
Other	0.6	0.5	0.5	21.7	7.2
Other districts					
Debt	20.0	18.4	15.9	17.1	17.4
Labor	14.8	13.3	12.0	13.5	13.3
Personal	3.9	4.3	6.4	2.6	4.0
Property	6.9	8.3	12.5	5.8	8.0
Trade	48.4	46.6	45.2	47.4	46.9
Other	6.1	9.1	8.0	13.7	10.4
All districts in New South Wales					
Debt	16.8	15.2	21.7	17.4	17.9
Labor	17.3	15.2	13.2	11.2	15.1
Personal	3.2	3.4	5.5	2.5	3.7
Property	6.5	8.2	11.0	4.7	7.3
Trade	53.7	54.5	45.9	46.4	47.5
Other	2.4	3.4	3.7	17.7	8.6

Notes: "Debt" includes disputes about promissory notes, money exchanged, and checks; "labor" includes breach of contract, liability, and disputes about wages; "personal" includes allegations of assault, libel, negligence, slander, breach of promise to marry, illegal distress, and malicious prosecution; "property" involves trespass, rentals, mortgages, distraint (use of grazing lands), hire of horses, and livestock disputes; "trade" covers the exchange of goods and services, liability, insurance and freight, and contract issues. The data were sampled from every fifth year, except for 1895 (when no reports were published). The percentages for 1860 refer to averages for 1860 and 1865, and similarly for 1870 and 1880. The figure for 1890 is averaged over 1890 and 1900, but it should be noted that the returns for Sydney in 1890 are somewhat anomalous because of the unusually large number of cases that were included in the "other" category (1,713 cases, compared to an average of 35 for all previous years).
Sources: See the text.

first decade of the nineteenth century concerned commercial issues such as debt and trade.[40] Similarly, almost half of all civil disputes between 1860 and 1900 involved trade. Disputes over wages, work, and labor accounted for another 15 percent, while debt issues comprised 18 percent. One might perhaps have expected that creditors would be more inclined to pursue marginal debts during recessionary periods, or that the share of trade disputes would fall. During the depression of the 1890s some changes in composition did occur, but this may be due to reporting of the "other" category. Overall the share of the different types of causes remained virtually un-

[40] This was also true of the early years before 1814, according to Kercher: "the issues faced by the Court of Civil Jurisdiction rapidly changed from an emphasis on status and character to a primary concern about commerce, . . . there was also a shift in the role of damages from deterrence and appeasement to compensation. New South Wales law was becoming more commercial over time, if not more industrial" (*Debt*, p. 112).

changed during the critical years when the economy was growing rapidly, as well as during downturns. The relative stability in the composition of cases suggests that statistical patterns such as the decline in litigation over time were being affected by broad-based factors, rather than specific elements such as ill-defined property rights.

Another indication that the fall in disputes over time was not due to structural changes in the nature of disputes can be obtained by comparing rural and urban patterns. In order to find out whether the aggregate data mask differences between metropolitan and country areas, Table 2 compares causes litigated in Sydney and elsewhere. One striking result is how similar the patterns were in the colony's major commercial center and its outlying districts. In 1860 there were 1,200 conflicts over promissory notes and money exchanged, which amounted to 15 percent of all suits filed in the metropolitan area, and 20 percent of cases in other districts. Initially the fraction of trade causes was higher in Sydney, but over time the proportion converged to the aggregate rate. The significance of debt-related cases in Sydney increased slightly between 1860 and 1900 and declined slightly in other regions, but overall little difference in the composition of cases is evident across the urban and outlying areas.[41]

Economic and technological change have unpredictable net effects on the development of norms and civil litigation, and nineteenth-century New South Wales was no exception. On the one hand, innovations may serve to connect individuals more closely through the flow of information and more frequent interaction. On the other, such change creates uncertainty about the relevance of existing norms and precedents. For example, the law of contract depends on standardized situations, since it is prohibitively costly to specify every eventuality. Technological change therefore initially increases the costs of contracting, if it creates uncertainty about legal rights and liabili-

[41] The courts in Sydney reported the causes at issue in more detail, and one does detect some subtle shifts in the nature of causes at a lower level of aggregation. For instance, the number of cases in Sydney that dealt with wages, work, and labor fell from over 1,000 per year before 1870 to 423 in 1881, 412 in 1891, and 319 in 1901, possibly because protective labor legislation and/or collective bargaining removed the need for workers to litigate. See Castles (*Australian Legal History*, p. 470), who points out that "through the creation of new machinery like this the ordinary courts were progressively largely excluded from dealing with industrial matters." On the other hand, growth occurred in areas such as corporate actions and shareholding. For instance, negligence suits were increasingly brought by customers and employees against firms and railroads rather than individuals.

In *Holburd v. The Burwood Extended Coal Mining Co.* (*Weekly Notes*, 29 August 1890), the company attempted to avoid liability in a negligence plea before the Newcastle District Court by arguing that the case should be dismissed for lack of jurisdiction because the company was registered in Sydney, not Newcastle. Traditionally, an individual had to be sued in the district of his residence. (Thus, rates of litigation in New South Wales at least up to 1890 were not due to court filings in districts where visitors were numerous.) The Chief Justice ruled against the company's appeal, adding that "nothing could be more disastrous, seeing the enormous distances which prevail in this colony between the registered office of companies and their works, than to hold that although a company carries on business in a country district and employs a number of men there, still it cannot be sued there." This case illustrates the increase in uncertainty that typically ensues from institutional innovation.

ties, as we see in the case of *Wellman v. the Commissioner of Railways* (1884). This district-court case was filed by a plaintiff who claimed loss of £100 due to the railway's negligence in shipping his cattle from Junee to the Homebush market. Wellman had communicated with Roberts, a railway employee, by telegraph regarding the disposition of the cattle. The Supreme Court ruled that telegraph notices did not constitute a binding contract, and reversed the district court award of damages.

Further perspective is provided by comparing commercial and personal disputes. The category of personal causes includes noncommercial claims such as personal injury, assaults, false imprisonment, libel, and slander. Given that these conflicts were likely to be driven by emotions, they offer a useful foil to the arguably more rational calculations of commerce. Summary statistics by type of case (see Table 3) supports this view. Relative to debt and trade, personal disputes exhibited lower variance in the number of cases across districts, higher amounts at issue, and higher average cost; for instance, in 1880 the average amount claimed in a trade cause was approximately £20, compared to £126 in a personal cause.

Table 4 shows the number and fraction of cases that resulted in jury trials, and indicates that litigants in personal disputes were also more likely to opt for arbitration by a jury of their peers relative to the decisions of a trained court official: 27 percent of personal cases involved jury trials, compared to 8 percent of property cases, 5 percent of labor cases and 5 percent of those in the residual category. The contrast with predominantly commercial litigation in this regard is evident: only a small fraction of these cases were tried before a jury (0.84 percent of debt cases, and 0.54 percent of trade cases).[42] Jury trials were also adopted more frequently in outlying areas (Table 5). Although a number of factors may account for this difference, it is likely that the rationalization of transactions led to greater acceptance of impersonal, administrative rules in developed regions.[43] In his study of the American system, Horwitz argues that the initial prevalence of trial by jury was associated with legal uncertainty, and that decision-making by judges superceded that of juries once the interest of the community became identified with the need for courts to promote certainty in the commercial sphere.[44]

[42] Full trial by jury was granted for civil cases in 1844. For a discussion of the development of jury trials, see Neal, "Rule." Either the plaintiff or defendant could request a trial by jury when the amount at issue exceeded £20. The jury for a session consisted of four persons, chosen by ballot from a panel of eight to twelve individuals on the district's jury list. Jurors were required to own landed property worth at least £300, or a house with annual rents of £30. Francis ("Practice") has similarly found that commercial cases in England between 1740 and 1840 were significantly less likely to be resolved by jury trial than were personal disputes.

[43] A number of other studies have made similar observations. See, for instance, Mann (*Neighbors*), who has discovered a secular shift from decisions by juries to decisions by judges in colonial Connecticut.

[44] Horwitz states that "as the question of certainty began to be conceived of in more instrumental terms, the issue of control of juries took on a new significance" (*Transformation*, p. 28). He cites Justice Joseph Story, who refused to allow a decision reached by the jury because their judgment would have caused "utter uncertainty" among commercial interests.

TABLE 3
SUMMARY STATISTICS ON THE NATURE OF CIVIL LITIGATION, 1860–1900
(unweighted averages, selected years)

Characteristics of Dispute	1860s	1870s	1880s	1890s	1900	1860–1900
Debt						
Number of disputes	9.92	6.46	6.86	8.52	3.66	7.14
	(13.48)	(7.62)	(8.22)	(10.87)	(4.51)	(9.46)
Settlement rate	0.39	0.41	0.47	0.41	0.37	0.42
	(0.3)	(0.34)	(0.35)	(0.33)	(0.37)	(0.34)
Plaintiff recovery rate	0.9	0.86	0.89	0.91	0.93	0.89
	(0.23)	(0.29)	(0.24)	(0.24)	(0.19)	(0.24)
Cost per case (£)	1.38	1.92	2.2	2.69	2.96	2.20
	(1.36)	(2.33)	(2.21)	(3.64)	(3.27)	(2.65)
Claim per case (£)	—	25.1	32.55	37.8	39.03	32.56
	—	(17.61)	(23.16)	(30.99)	(32.73)	(25.85)
Labor						
Number of disputes	7.61	5.03	5.31	7.83	2.86	5.72
	(11.88)	(4.99)	(6.86)	(12.72)	(2.83)	(8.55)
Settlement rate	0.3	0.33	0.4	0.34	0.37	0.36
	(0.29)	(0.32)	(0.35)	(0.32)	(0.38)	(0.34)
Plaintiff recovery rate	0.73	0.57	0.7	0.76	0.77	0.69
	(0.32)	(0.38)	(0.36)	(0.31)	(0.36)	(0.36)
Cost per case (£)	3.18	3.1	3.52	4.66	5.88	3.85
	(4.21)	(3.99)	(4.44)	(9.86)	(7.98)	(6.16)
Claim per case (£)	—	42.33	49.3	47.64	42.96	46.10
	—	(37.48)	(47.39)	(45.77)	(47.91)	(44.62)
Personal						
Number of disputes	2.36	2.17	2.01	2.42	1.48	2.12
	(1.99)	(1.59)	(1.49)	(2.08)	(0.84)	(1.68)
Settlement rate	0.38	0.26	0.38	0.32	0.28	0.33
	(0.4)	(0.34)	(0.42)	(0.37)	(0.42)	(0.39)
Plaintiff recovery rate	0.58	0.61	0.6	0.6	0.58	0.60
	(0.46)	(0.44)	(0.43)	(0.45)	(0.48)	(0.44)
Cost per case (£)	5.03	6.75	5.55	8.05	11.23	6.59
	(6.64)	(8.45)	(7.42)	(8.84)	(11.19)	(8.27)
Claim per case (£)	—	104.45	126.47	141.87	128.56	122.30
	—	(72.49)	(74.01)	(67.45)	(76.07)	(73.65)
Property						
Number of disputes	3.59	2.84	2.78	2.78	1.63	2.80
	(4.09)	(3.39)	(2.98)	(3.09)	(1.03)	(3.20)
Settlement rate	0.29	0.34	0.38	0.39	0.35	0.36
	(0.35)	(0.4)	(0.4)	(0.41)	(0.45)	(0.40)
Plaintiff recovery rate	0.71	0.81	0.76	0.86	0.87	0.79
	(0.38)	(0.34)	(0.37)	(0.29)	(0.3)	(0.35)
Cost per case (£)	2.43	2.92	3.17	2.95	5.4	3.14
	(3.61)	(4.38)	(4.35)	(4.04)	(9.36)	(4.87)
Claim per case (£)	—	48.95	43.77	42.34	44.22	45.05
	—	(56.39)	(49.12)	(47.94)	(49.76)	(51.16)
Trade						
Number of disputes	42.04	26	30.85	41.68	13.16	30.36
	(53.83)	(33.06)	(37.2)	(49.77)	(15.21)	(40.16)
Settlement rate	0.41	0.43	0.42	0.46	0.39	0.43
	(0.15)	(0.24)	(0.23)	(0.18)	(0.23)	(0.22)

TABLE 3 — continued

Characteristics of Dispute	1860s	1870s	1880s	1890s	1900	1860–1900
Plaintiff recovery rate	0.91	0.93	0.93	0.92	0.96	0.93
	(0.14)	(0.14)	(0.15)	(0.12)	(0.11)	(0.13)
Cost per case (£)	1.41	1.39	1.43	1.51	1.65	1.47
	(1.34)	(1.29)	(1.09)	(0.93)	(1.64)	(1.24)
Claim per case (£)	—	17.32	19.65	20.62	21.48	19.53
	—	(8.44)	(9.3)	(8.79)	(17.42)	(11.02)
Other						
Number of disputes	7.08	7.75	7.45	11.64	7.6	8.25
	(9.85)	(14.08)	(8.8)	(24.94)	(8.3)	(14.33)
Settlement rate	0.28	0.34	0.43	0.42	0.45	0.39
	(0.28)	(0.31)	(0.32)	(0.34)	(0.33)	(0.32)
Plaintiff recovery rate	0.66	0.67	0.71	0.79	0.81	0.72
	(0.39)	(0.35)	(0.32)	(0.32)	(0.31)	(0.34)
Cost per case (£)	2.54	3.4	3.11	2.7	2.98	3.00
	(4.47)	(4.76)	(3.84)	(3.03)	(2.69)	(3.82)
Claim per case (£)	—	36.2	43.57	40.42	32.10	38.89
	—	(32)	(43)	(38.68)	(30.65)	(37.47)
Total						
Number of disputes	10.5	7.49	8.25	11.02	5.0	8.50
	(23.88)	(15.47)	(17.31)	(24.34)	(8.34)	(18.78)
Settlement rate	0.34	0.36	0.41	0.39	0.37	0.38
	(0.32)	(0.34)	(0.36)	(0.34)	(0.37)	(0.35)
Plaintiff recovery rate	0.76	0.75	0.78	0.82	0.84	0.78
	(0.35)	(0.36)	(0.34)	(0.31)	(0.31)	(0.34)
Cost per case (£)	2.66	3.13	3.12	3.56	4.44	3.29
	(4.14)	(4.87)	(4.43)	(6.21)	(6.95)	(5.21)
Claim per case (£)	—	45.48	51.39	50.21	46.17	48.69
	—	(51.35)	(55.75)	(53.88)	(52.26)	(53.67)

Notes: Standard deviations are in parentheses and indicate variation across districts. Total figures for each period consist of the mean for two years in the decade (e.g. 1870 and 1875); the averages for each category are computed across districts. "Disputes" include all litigation; "settlement rate" refers to the fraction of disputes that were settled by litigants before going to trial; "plaintiff recovery rate" is the fraction of trials that result in a decision for the plaintiff; "cost per case" is the average cost of a case in a district; "claim per case" is the amount at issue that is declared by the plaintiff. District court jurisdiction was limited to amounts below £200 at this time.
Sources: See the text.

If social norms were effective, it might be expected that relatively straightforward disputes would seldom reach the courts, because they could be settled out of court at lower cost, leaving the more complex issues for litigation. But one of the most striking features of the earlier cases in New South Wales is that the issues brought before the courts tended to be quite routine. For instance, a typical case in the Sydney Minute Book for 1864 related to a plea brought by Wilkinson Brothers and Company against James Kennedy, for nonpayment of a promissory note of £6 13s. 3d. The judgement awarded exactly that sum to the plaintiff. This suggests that in many instances the courts were initially being used as an enforcement mechanism rather than as a forum for genuine conflict. This made it all the more likely that economic

TABLE 4
JURY TRIALS, 1860–1900, BY TYPE OF CASE
(selected years[a])

Nature of Dispute	Number of Trials (a)	Number of Jury Trials (b)	Percentage Sent to Jury (b ÷ a · 100)
Debt	2,868	24	0.84
Labor	2,247	116	5.16
Personal	626	170	27.16
Property	1,176	94	8.00
Trade	7,002	38	0.54
Other	1,423	72	5.06
Total	15,342	514	3.35

[a] Every fifth year from 1860 through 1890 (inclusive) and 1900.
Sources: See the text.

development would lead to reductions in the use of courts, as transactors internalized the fact that decisions would be enforced.

The high plaintiff recovery rates, especially in debt and trade cases, is consistent with this view, since in many cases the defendant did not choose to respond to the summons, conceding the validity of the claim. Table 6 shows the rate of plaintiff victories in cases that went to trial, by type of dispute. For example, in 1860, 85 percent of debt cases and 90 percent of trade cases were decided in favor of the plaintiff. This compared to 60 percent for personal cases, where there was more genuine disagreement about the underlying charges of slander, libel, assault, and emotional distress. The proportions deviate significantly from a fifty-fifty outcome, except for personal cases. However, the latter were also less likely to reach a pretrial settlement, and thus the subset that reached trial was more likely to be representative of disputes at large. According to some legal models, the high ratio of plaintiff wins in the other categories may reflect a strong selection in the cases that reached trial. One possible explanation for this selection touches on asymmetric stakes in the dispute.[45] For example, if a creditor considered that his chances of recovering against other debtors might improve if he won the current case, he might increase his expenditures and efforts to win relative to the defendant. Consequently, the exceptionally high rate of plaintiff wins in debt and trade litigation may have owed to the likelihood that plaintiffs (creditors, shopkeepers, and merchants) had future interests at stake. Alternatively, the English Rule of allocating costs to the loser may have encouraged risk-averse plaintiffs to go to court only if they perceived a high probability of winning.

Some have argued that "most rural residents are consciously committed to the overarching norm of cooperation among neighbors," and that in areas of low population density such norms of cooperation result in an

[45] A large literature considers the selection of disputes for trial, settlement, and predicted plaintiff recovery rates. For surveys, see Hay and Spier, "Settlement"; and Cooter and Rubinfeld, "Economic Analysis." It is also possible that undefended cases were recorded as a win for the plaintiff.

TABLE 5
JURY TRIALS, 1863–1900, BY DEGREE OF URBANIZATION

Years	Urbanization Class	Number of Trials (a)	Number of Jury Trials (b)	Percentage Sent to Jury (b ÷ a · 100)
1860s	Metropolitan	42,094	241	0.57
	Outlying	23,797	646	2.70
	Total	65,891	887	1.35
1870s	Metropolitan	35,307	209	0.59
	Outlying	17,229	761	4.42
	Total	52,536	970	1.85
1880s	Metropolitan	25,966	292	1.12
	Outlying	24,035	866	3.60
	Total	50,001	1,158	2.32
1890s	Metropolitan	16,944	69	0.41
	Outlying	25,432	325	1.28
	Total	42,376	394	0.93
1863–1900	Metropolitan	120,311	811	0.67
	Outlying	90,493	2,598	2.87
	Total	210,804	3,409	1.62

Notes: Annual data. "Metropolitan" includes Sydney and Newcastle; "Outlying" includes all other regions.
Sources: See the text.

"aversion to hiring an attorney to fight one's battles."[46] It is striking that in the sparsely settled areas of colonial New South Wales one finds the exact opposite pattern. In the low-density districts of Wilcannia and Walgett, the likelihood of attorney representation in legal disputes was significantly higher than in metropolitan areas. The manuscript district court records indicate that approximately seven out of every ten cases in Wilcannia involved attorney representation, compared to approximately three out of ten for cities such as Sydney.[47] More of the Wilcannia cases also included attorney representation for both plaintiff and defendant. This suggests that, in regions where market exchange was not well developed, attorneys may have served to reduce costs of information, negotiation, enforcement, and compliance. When the rules and standards were better understood or more predictable, as in urban areas, transactors economized by self-representation or by reliance on judges.[48]

[46] Ellickson, "Of Coase."

[47] District Court Plaints Book, 9/6119, Wilcannia, 1894–1897; NSW Archives.

[48] Some theoretical models highlight the role of judicial error in explaining litigation patterns: for instance, inconsistent rulings may serve to increase legal uncertainty and thus promote litigation rather than settlement. If colonial judges were initially responsible for high levels of litigation, we might expect that these cases would be appealed. Initially, opponents of the district-court system predicted that appeals would clog the superior courts. However, few cases tended to be appealed, and of those that were, only a small number of the decisions of the lower courts were reversed: in the first two decades there were fewer than two successful appeals per annum.

TABLE 6
PLAINTIFF RECOVERY RATES, 1860–1900
(selected years)

Nature of Dispute	1860	1870	1880	1890	1900
Debt	84.5	88.9	93.6	94.7	93.0
Labor	91.2	70.1	75.1	77.5	75.6
Personal	60.0	65.4	70.0	55.4	51.1
Property	73.6	85.5	77.2	85.4	84.6
Trade	90.3	92.4	94.8	91.8	96.7
Other	79.5	63.2	77.8	79.6	85.4
TOTAL	84.5	83.5	88.6	87.4	88.6

Notes: "Plaintiff recovery rate" represents the percentage of cases going to trial which resulted in a decision for the plaintiff. The recovery rate is analogous to the win–loss ratio. It should be noted that a "win" for the plaintiff does not necessarily imply that the defendant "lost": the interpretation depends on the nature of the dispute being litigated. See Table 3 for details about each type of case.

LITIGATION, SETTLEMENT, AND ECONOMIC DEVELOPMENT

Le commerce guérit des préjugés destructeurs.
Montesquieu, 1748[49]

The previous sections described patterns of litigation in New South Wales across time, region, and type of case. The evidence is consistent with the view that economic development was correlated with the growth of consensus and certainty regarding the rules and standards of civil transactions, such that rational disputes were likelier be resolved informally, or settled before trial. But since cross-tabulations may mislead, this section presents multivariate regressions that simultaneously control for potentially influential factors.

Another perspective on the relationship between legal institutions and commercial exchange may be offered by drawing a more rigorous distinction between frontier areas and more developed regions.[50] Accordingly, this section considers whether frontiers were different from commercially advanced areas, and whether changes occurred in the nature and process of dispute resolution as these outlying regions gained access to markets. First, I present multivariate regressions of litigation per person in frontier and metropolitan regions, that control for trends. Second, I test the hypothesis that as frontier areas become integrated into the market, commercial exchange in-

[49] "Commerce cures destructive prejudices." Montesquieu, *De l'esprit*, p. 297.

[50] Butlin has pointed out that British commercial principles were replicated and respected in the early convict society. However, even as a penal colony, New South Wales secured a measure of independence from Britain owing to its geographic isolation. The "tyranny of distance" that shaped the Australian experience possibly encouraged greater institutional adaptation than in Canada. During the nineteenth century it was necessary for the colony to consider such issues as: the extent to which British institutions and laws should be retained; the role of the courts and the judiciary; and the balance of power between juries and judges. Perhaps because of its colonial status, it was largely through litigation rather than statute that New South Wales attained an indigenous jurisprudence that was appropriate to a frontier society in the process of rapid economic expansion.

creases and institutions become more predictable. Under those circumstances, one would expect that plaintiffs and defendants would tend to reach similar conclusions about their likelihood of winning a trial, and thus increase the proportion of cases that never reached trial because of prior settlement.[51]

Although an extensive literature exists on the nature and implication of frontiers, there is little consensus on its measurement.[52] The analysis in this section attempts to increase the degree of confidence in the results by using three alternative proxies for the frontier: population density; "pastoral districts" that were largely unsettled before 1870; and distance from the nearest railway terminus. The extension of transportation networks is generally agreed to play an important role in integrating frontier areas into the market. Transportation and transaction costs in New South Wales limited the spread of pastoral and agricultural pursuits until the development of railroads. The colony lacked alternative means of transportation, such as navigable rivers and canals, and the roads were hazardous, expensive, and unpredictable.[53] Railroads were constructed and operated by the state, which deliberately kept charges low to subsidize economic growth in outlying regions.[54] Thus, the regions outside the economic boundaries of the railroads were likely to be at the margins of existence, with greater dependence on natural conditions and little access to markets.

The regressions in Table 7 examine variation in disputes per person at the district level between 1860 and 1900. In order to control for biases that might

[51] Although quantitative analysis can further our knowledge of legal institutions in frontiers relative to more developed regions, it also raises many questions regarding the sources and details of the patterns identified. For instance, it would be important to identify the nature of social and commercial relationships, flows of information, the role of lawyers relative to their clients and judges, differences in opportunity costs, incomes, and occupations across districts, the residence of plaintiffs relative to defendants, religious and gender differences, and a host of other details that might illuminate the cause and impact of institutional differences in areas with access to markets relative to isolated regions.

[52] Turner (*Frontier*), the most notable proponent of the "frontier thesis," designated as frontiers regions where the population density was below two residents per square mile. In 1871, the "limits of local settlement" extended only to the nineteen counties in eastern New South Wales, where population density averaged 9.7 per square mile. In the remaining 85 percent of the colony, designated Pastoral Districts, the density was 0.48 (*Census of New South Wales*, 1871, p. xli). Population density in Cumberland County, which contained Sydney, was 78.6 in 1861, and 105.4 in 1871.

[53] The most significant rivers were the Darling and the Murray. However, even these rivers were only navigable for six months in the year, according to the Parliamentary Committee on Public Works, and New South Wales, *Journal*, vol. 5, 1896, p. 725. Roads could also be impassible during wet seasons, and the cost of freight was high, as were insurance charges for both river and road haulage. See Lee, *Railways*; and NSW Department of Railways, *Historical Notes*.

[54] The miles of track open for traffic increased dramatically during the period in review: 70 miles in 1860; 340 miles in 1870; 848 in 1880; 1,745 in 1885; 2,193 in 1890; and 2,811 in 1900 (New South Wales, *Statistical Register*, 1900). By the end of the century the railroad connected towns such as Bourke (to the Northwest of Sydney), Lismore (to the Northeast), and Hay (to the West). Lines extended between Sydney, Adelaide (in South Australia), Brisbane (Queensland), and Melbourne (Victoria). In addition, "pioneer railway lines," built ahead of demand, facilitated settlement and increased the productivity of the hinterlands. These lines were of lighter gauge and intended to be improved once economic conditions required sturdier facilities. See Lee, *Railways*; New South Wales, *Annual Reports*; and Gunn, *Parallel Lines*.

arise from differences in district size, I also report population-weighted regressions. The independent variables include dummies for Sydney, for the frontier regions, and for each of three decades. The multivariate analysis confirms my inference from Figure 1: in both the weighted and unweighted regressions, one is struck by the strong secular decline in disputes per capita, as shown by the negative and significant coefficients on the decadal dummies. This downward trend is all the more striking in view of other evidence suggesting that litigation was proportional to economic activity.

The decline in per-capita litigation is reflected especially in the dummy variable representing the last decade of the century. These years, which included a deep depression, constituted a defining period in Australian economic history. As gross domestic product fell some 20 percent from its peak in the 1880s, per-capita litigation similarly plummeted, particularly trade-related disputes.[55] Tradesmen, creditors, and debtors may have opted to settle their disputes outside the court system entirely during difficult economic conditions; but it seems more plausible that disputes themselves declined during the depression, because litigation was proportional to commercial activity, or because the opportunity cost of the resources devoted to litigation was too high.

Litigation per resident was significantly higher in Sydney, the capital, commercial center, and major seaport. The negative coefficients on the "Metropolitan and Hunter District" dummy may reflect the role of Sydney as a magnet for trade and commerce during the nineteenth century, especially after the extension of the railway system. Once areas outside of the city were linked to Sydney it is possible that commercial activity tended to concentrate in the capital, because of locational externalities and/or scale economies. The scale or scope of such activities may have tended to generate higher litigation in the metropolis, and likewise lowered the rate of disputes in the surrounding municipalities.

The "Frontier Regions" dummy, which represents outlying regions that were designated "Pastoral Districts" and settled by colonists after 1871, presents striking results. The positive and significant coefficient indicates a higher rate of litigation per person in these areas. If the base of analysis is litigation per unit output rather than per capita, it is all the more striking that rural areas experienced higher rates of litigation, since income was lower there. Because these patterns may have been due to differences in population density, I also report regressions that control for the number of residents per square mile in a district (Columns 3 and 4). These latter regressions suggest a nonlinearity in the relationship between density and per-capita litigation after controlling for trends: disputes tended to be more common in areas of low population density, but also in regions such as Sydney, at the upper end

[55] The information about business cycles is drawn from Butlin, *Investment*, who finds that recessions before 1893 were brief and mild in nature, involving falls in output of under 5 percent.

TABLE 7
REGRESSION RESULTS: LITIGIOUSNESS IN FRONTIER AND DEVELOPED AREAS
(dependent variable: log disputes per capita)

Variable	Unweighted (1)	Weighted by Population (2)	Unweighted (3)	Weighted by Population (4)
Intercept	−4.24	−3.92	−4.17	−3.89
	(61.77)	(48.26)	(61.47)	(48.69)
Sydney	2.26	2.21	2.88	2.6
	(13.5)	(29.28)	(16.42)	(30.76)
Metropolitan and Hunter District	−0.77	−1.53	−0.25	−1.15
	(11.59)	(28.47)	(3.25)	(17.27)
Gold-Mining Areas	−0.23	−0.25	−0.23	−0.27
	(4.16)	(3.94)	(4.37)	(4.30)
1870–1879	−0.62	−0.89	−0.54	−0.78
	(8.26)	(10.56)	(7.32)	(9.30)
1880–1889	−0.84	−1.15	−0.7	−1.00
	(11.51)	(14.58)	(9.34)	(12.74)
1890–1900	−1.24	−1.68	−1.09	−1.56
	(17.38)	(21.88)	(15.4)	(20.41)
Frontier Regions	0.28	0.40	0.13	0.28
	(6.16)	(7.19)	(2.82)	(5.10)
Population Density	—	—	−0.029	−0.018
			(8.95)	(9.43)
Population Density Squared	—	—	0.0001	0.0001
			(6.62)	(8.78)
F-Statistic	101.9	637.1	99.8	526.5
R^2	0.24	0.67	0.29	0.68
N	2,258	2,258	2,258	2,258

Notes: *t*-statistics are in parentheses. "Gold-mining areas" are identified by gold output before 1870 and after 1870. "Frontier regions" are all districts excepting the 19 counties deemed to be "settled areas" in 1871. "Population density" represents population per square mile in a district. The intercept refers to non-gold-mining districts in settled areas outside Sydney and the Metropolitan district before 1870.
Sources: See the text.

of the density distribution. This finding is consistent with the view that in areas of sparse settlement there is greater uncertainty about the application of law, which tends to increase the likelihood of conflict and lower the likelihood of pretrial settlement.[56] It is also likely that the density variable reflects the significance of the scale of transactions over time and place, which is likely to affect the ability of courts and participants to achieve economies in dispute resolution. At lower levels of socioeconomic activity litigants may have few precedents on which to rely and may thus resort to trial rather than reach a settlement; whereas at higher levels disputes may be avoided entirely because of factors such as standardization, increases in the stock of social capital, or learning-by-doing.

[56] Recent research has attempted to identify the relationship between law and rent-seeking, and the effect of lawyers on economic growth. Olson ("Do Lawyers?" p. 628) has focused on the possibility that, after an optimal point, higher numbers of lawyers inhibit economic growth.

The negative and significant coefficients on the "Gold-Mining Districts" dummy signals a perhaps minor, but nonetheless interesting, insight into the role of institutions in orchestrating economic activity and dispute resolution. Some have argued that gold-mining camps in the American West were more law-abiding than popular opinion holds. Still, in the nineteenth century the prevailing impression was that these camps were characterized by violence and a lack of civil institutions. A former California gold miner discovered gold in New South Wales in 1851, triggering a rush to mining camps that transformed the colony during that decade. The local authorities, determined to avoid the supposed lawlessness of the American frontier, established a number of rules and standards that governed mining, including the strict enforcement of licences. As a result, mining camps in New South Wales (as in Canada) were orderly and even domestic, with a high proportion of families in residence. The significantly lower rate of disputes per person in gold mining camps were thus partly due to the deliberate establishment of institutions designed to reduce the potential for conflict.

Although the litigation results are intriguing, the strongest test of the Smithian hypothesis relates to the relationship between settlements and commercial activity or market access. In its first decade of operation, over 111,000 cases were filed in the district court system, and approximately 60 percent of these reached trial. By the end of the century, despite a fourfold increase in population, the number of cases registered had fallen below 90,000 per decade, less than half of which reached trial. Table 8 reports the results of regressions with each district's settlement rate as the dependent variable, estimated over types of cases in a district in every fifth year after 1864. Independent variables in various specifications included dummies for metropolitan regions, distance to the nearest railroad, decade, and type of case.

If commercial activities were associated with increased cooperation, one would expect that settlement rates would increase over the course of economic development, other things being equal, whereas they would tend to decrease if community norms were eroded by impersonal transactions. Although there may be some debate about the magnitudes of the coefficients, the dummy variables for the 1880s and 1890s are positive and statistically significant, suggesting an increase in settlement rates. The dummy for 1900, at the end of the long depression decade, is an unsurprising exception. When each observation is weighted by population (Regression 3) the dummies for time are no longer statistically significant. This result indicates that settlement rates were increasing over time in districts with lower populations. Moreover, the 1900 dummy is no longer significant, perhaps because populous regions recovered more quickly from the downturn than outlying areas.

The settlement rate is positively related to the plaintiff recovery rate, suggesting that when plaintiffs experienced a higher tendency to win, both defendant and plaintiff realized what was the most probable outcome and

TABLE 8
REGRESSION RESULTS: SETTLEMENT RATES
(selected years)

Variable	Unweighted (1)	Unweighted (2)	Weighted by Population (3)
Intercept	0.198	0.219	0.219
	(8.61)	(9.13)	(8.92)
Average amount	−0.0001	−0.0000	0.0002
	(0.77)	(0.71)	(1.17)
Average cost	−0.006	−0.006	−0.008
	(3.87)	(5.64)	(7.28)
Plaintiff recovery rate	0.067	0.064	0.078
	(3.87)	(3.71)	(4.36)
Case dummies			
Debt	0.049	0.05	0.08
	(2.70)	(2.73)	(4.66)
Personal	−0.046	−0.049	−0.076
	(1.90)	(2.05)	(3.38)
Labor	0.03	0.028	0.066
	(1.63)	(1.54)	(3.82)
Property	−0.064	−0.065	−0.089
	(3.39)	(3.48)	(5.09)
Trade	0.13	0.131	0.16
	(6.60)	(6.66)	(8.42)
Time dummies			
1880s	0.041	0.036	0.032
	(2.56)	(2.19)	(1.69)
1890s	0.05	0.04	0.035
	(2.87)	(2.20)	(1.79)
1900	−0.026	−0.04	−0.036
	(1.36)	(2.01)	(1.67)
Distance to railway	—	−0.0002	−0.0002
		(3.00)	(2.38)
F-Statistic	26.0	34.7	36.9
R^2	0.12	0.13	0.18
N	2,035	2,035	1,998

Notes: *t*-statistics are in parentheses. The data were sampled from every fifth year through 1900, except for 1895. The district of Sydney is excluded because information on types of cases was not consistent with other districts. The dependent variable,"Settlement rate," is the fraction of disputes settled before trial. "Distance to railway" is the number of miles to the nearest railway terminus (including nearby colonies); the qualitative results are the same when other measures of frontier status are used.
Sources: The sample was obtained from various years of the *New South Wales Parliament: Votes and Proceedings*; information on railways from *Annual Report of the Railway Commissioner, NSW*, various years.

avoided the costs of trial by agreeing to settle. The average amount at issue is statistically insignificant, implying that the tendency to settle did not depend on the gross amount at stake, other things being equal, although this type of effect is more difficult to ascertain because of the level of aggregation in the data. However, given that settlement is conditional on the decision to bring a lawsuit, this result is consistent with symmetric expectations

of risk-neutral litigants under the English Rule. According to some theories, this rule tends to lower litigation, whereas others contend that it creates incentives for escalation.[57] The coefficient on average costs indicates that the settlement rate was lower when litigation was costlier; this is a necessary, but insufficient, condition for the escalation model.

The Smithian hypothesis is unambiguously supported by the cross-sectional evidence on types of cases, urbanization, and market access. Commercial debt and trade cases were far likelier to be settled relative to any of the other types of cases. Moreover, in similar regressions (not reported here) with a dummy variable for urban areas, the coefficient was positive (0.05) and significant (below the 1 percent level.) Regression 2 includes a variable representing the distance of a district from the nearest railway station, measured at five-year intervals.[58] The railway variable serves as a gauge for market access, and likewise measures the extent to which the scale of transactions affected learning and dispute resolution.[59] The estimated coefficient is negative and statistically significant, indicating that settlement rates were lower the greater the distance from the nearest station. The implication is that, in areas with limited access to markets and in districts characterized by lower transactions levels, litigants were less likely to reach an agreement out of court, after controlling for monetary costs and for differences in the nature of the case. It is conceivable that this finding simply reflects conflicts among transient miners, but the results remain the same after including a dummy variable for mining districts such as Silverton and Broken Hill. Instead, it seems plausible that in areas with easier access to markets the increased frequency and volume of transactions established greater familiarity with the underlying legal and economic rules and standards. Repeat interactions in the presence of reliable legal enforcement mechanisms appear to have created a forum in which disputes could be resolved privately rather than at trial.[60]

CONCLUSIONS

> *The* process *of exchange, trade, agreement, or contract necessarily introduces, quite early, the principle of . . . spontaneous order, or spontaneous coordination . . . perhaps the only real "principle" in economic theory.*
>
> James Buchanan[61]

[57] See, for instance, Shavell, "Suit"; Hughes and Snyder, "Litigation"; and Plott, "Legal Fees."

[58] Thus, in 1881 the district of Bourke was over 200 miles from the terminus at Dubbo, but by 1885 the line had been extended to Bourke, so the entry for that variable was 200 prior to 1885 and 1 thereafter.

[59] It should be noted that the same association holds for regressions with a dummy variable for frontier areas, and for dummy variables for access to railways in each decade.

[60] I also estimated population-weighted regressions that were run over different types of cases, with results that support the idea that settlement increased with commercial activity. In both debt and trade cases, the likelihood of settlement was lower in frontier districts than elsewhere. Proponents of the "lawless frontier" model might perhaps expect differences in the tendency to settle property disputes across frontier districts and other areas. However, one detects no difference between frontier and non-frontier regions in terms of conflicts dealing with trespass, grazing rights, rentals, mortgages, and other property matters.

[61] Buchanan, *Liberty*, p. 20 (emphasis in original).

Some scholars propose a dichotomy between *markets*, based on law and contract, and *communities*, where informal social norms order individual interactions. In so doing, they tend to underestimate the extent to which similar norms can be induced by individual rationality and by the increase in benefits that can be obtained from coordination and cooperation as markets expand and transactions multiply. In order to provide some perspective on these issues, I have considered the experience of New South Wales from the first years of self-sustaining economic growth up to the establishment of the Australian federal system. This is perhaps too subtle an issue to be unequivocally settled with empirical evidence, but the patterns that emerge from an examination of the resolution of civil disputes during this period are at least suggestive.

District courts in New South Wales were an important component of the institutional framework within which the colony was transformed from an underdeveloped dominion of Britain to the richest economy in the world. Over 300,000 cases were filed in these courts between 1860 and 1900, the majority of which were related to commercial transactions. My findings reveal systematic patterns to civil litigation that were related to the stage of economic development in the colony. Even though population growth was rapid, the aggregate number of disputes fell over time. Not only was litigation per person higher in commercial centers, where the volume of transactions was higher, it was also higher in frontier areas.

The "lawless frontier" hypothesis implies a secular increase in the number of disputes filed in the court system, as well as a shift in the composition of cases away from conflicts about property rights over time and across settled and unsettled regions. However, the composition of cases was stable during the period under review, providing little support for the idea that disputes about property predominated in this developing frontier society. An alternative hypothesis suggests that the elements of market institutions were established from the beginning of settlement and also in outlying regions, such that one would expect stability over time in the nature of causes and little difference between cities and frontier areas. In contrast to the predictions of the "lawless frontier" hypothesis, the institutional preconditions for an efficient market economy—flexible factor markets, private property rights, commercial law—were quickly established in New South Wales.

Nevertheless, it may have been necessary to adapt institutional structures to new circumstances, and to resolve issues of enforcement and uncertainty. As markets expanded, participants gained greater familiarity with legal precepts and institutions, which may have reduced uncertainty. This interpretation is speculative, but is consistent with the evidence on jury trials as well as settlements. The choice of judicial decision over trial by jury has been associated with the tendency to give precedence to legal and commercial certainty rather than to community norms. In New South Wales, com-

mercial issues of debt and trade were markedly less likely to be submitted before a jury than were personal issues. Jury trials were also more prevalent in outlying areas than in economically developed regions, despite the higher costs of such trials in sparsely populated districts.

Repeat market transactions not only reduced uncertainty, but were also likely to create incentives for cooperative behavior. I have used settlement rates (the fraction of disputes settled before trial) as an index of cooperation. The legal records examined here indicate not only that disputes per capita declined over time but that, of cases filed, litigants were likelier to reach agreements without recourse to costly trials. Significantly, at any given point in time disputants in urban areas were likelier to resolve conflicts through cooperative solutions than were their counterparts in frontier areas. Indeed, the tendency to settle a case was inversely related to the distance from the market. The results also indicate that settlements varied according to the type of case: settlement rates tended to be positively associated with economically motivated debt and trade causes, compared to subjective disputes such as libel and personal injury. The evidence on the propensity to settle disputes accords well with the idea that nonconfrontational norms and behavior were associated with commerce.

In short, the results support the view that the degree of cooperation was promoted by the extent of the market. As undeveloped areas gained access to transportation networks and as markets expanded, there developed a forum in which repeated interaction with potentially high benefits from coordination promoted cooperative solutions. As the scale of commercial activity expanded, it provided an incentive for the evolution of institutions that served to resolve conflicts, reduce transaction costs, and diffuse information about the underlying rules and norms. Thus, rather than substitutes, informal norms and formal law appear to have been complementary inputs into the process of economic development. This conclusion should not be surprising, since it is entirely in keeping with a tradition in economic thought that extends back to the eighteenth century: "*c'est presque une règle générale que partout . . . où il y a du commerce il y a des moeurs douces.*"[62]

[62] "It is almost a universal rule that wherever there is commerce there is civil behavior." Montesquieu, *De l'esprit*, p. 297.

REFERENCES

Alston, Lee, and Gary Libecap. "The Determinants and Impact of Property Rights: Land Titles on the Brazilian Frontier." *Journal of Law, Economics and Organization* 12, no. 1 (1996): 25–61.

Alston, Lee, Gary Libecap, and Bernardo Mueller. "The Development of Property Rights to Land: When is Violence Part of Institutional Change?" In *The Frontiers of the New Institutional Economics*, edited by John Droback and John Nye, 145–163. San Diego: Academic Press, 1997.

Axelrod, R. "An Evolutionary Approach to Norms." *American Political Science Review* 80, no. 4 (1996): 1095–111.

Buchanan, James. *Liberty, Market and State*. New York: New York University Press, 1985.

Butlin, N. G. *Investment in Australian Economic Development, 1861–1900*. Canberra: ANU, 1972.

_____. *Forming a Colonial Economy, Australia, 1810–40*. Cambridge: Cambridge University Press, 1994.

Castles, Alex C. *An Australian Legal History*. Sydney: Law Book Co., 1982.

Coase, R. H. "The Institutional Structure of Production." *American Economic Review* 82, no. 4 (1992): 713–18.

Coghlan, T. A. *Seven Colonies of Australasia*. Sydney: Govt. Printer, various years.

Cooter, Robert D., and Daniel L. Rubinfeld. "Economic Analysis of Legal Disputes and Their Resolution." *Journal of Economic Literature* 27 (Sept. 1989): 1067–97.

Ellickson, Robert C. "Of Coase and Cattle: Dispute Resolution Among Neighbors in Shasta County." *Stanford Law Review* 38 (Feb. 1986): 623–87.

_____. *Order Without Law: How Neighbors Settle Disputes*. Cambridge, MA: Harvard University Press, 1991.

_____. "Law and Economics Discovers Social Norms." *Journal of Legal Studies* 27, no. 2 (1998): 537–52.

Francis, Clifton. "Practice, Strategy and Institutions: Debt Collection in the English Common-Law Courts, 1740–1840." *Northwestern University Law Review* 80 (1986): 807–955.

Foster, William John, and Charles E. R. Murray. *The Practice of the District Courts of New South Wales*. Sydney: F. L. Edwards, 1870.

Friedman, Lawrence M. "Opening the Time Capsule: A Progress Report on Studies of Courts Over Time." *Law and Society Review* 24, no. 2 (1990): 229–40.

Greif, A. "Reputation and Coalitions in Medieval Trade: Evidence on the Maghribi Traders." This JOURNAL 49, no. 4 (1989): 857–82.

_____. "Institutions and International Trade: Lessons from the Commercial Revolution." *American Economic Review* 82, no. 2 (1992): 128–33.

Gunn, John. *Along Parallel Lines: A History of Railways of New South Wales*. Victoria: Melbourne University Press, 1989.

Hay, Bruce L., and Kathryn E. Spier. "Settlement of Litigation." In *The New Palgrave Dictionary of Economics and the Law*, edited by Peter Newman, 442–50. London: Macmillan, 1998.

Hirschman, Albert O. "Rival Interpretations of Market Society: Civilizing, Destructive, or Feeble?" *Journal of Economic Literature* 20, no. 4 (1982): 1463–84.

Holt, H. T. *A Court Rises*. Sydney: Law Federation of NSW, 1976.

Horwitz, Morton J. *The Transformation of American Law, 1780–1860*. Cambridge, MA: Harvard University Press, 1977.

Hughes, James, and Edward Snyder. "Litigation and Settlement under the English and American Rules: Theory and Evidence." *Journal of Law and Economics* 38 (April 1995): 225–50.

Hurst, Willard. *Law and Economic Growth: the Legal History of the Lumber Industry in Wisconsin, 1836–1915*. Cambridge, MA: Harvard University Press, 1964.

Jeans, D. N. *An Historical Geography of New South Wales to 1901*. Sydney: Reed Education, 1972.

Johnson, Paul. "Small Debts and Economic Distress in England and Wales, 1857–1913." *Economic History Review* 46, no. 1 (1993): 65–87.

Kercher, Bruce. "Commerce and the Development of Contract Law in Early New South

Wales." *Law and History Review* 9, no. 2 (1991): 269–325.
_____. *An Unruly Child: A History of Law in Australia*. Sydney: Allen & Unwin, 1995.
_____. *Debt, Seduction and Other Disasters: the Birth of Civil Law in Convict New South Wales*. Sydney: Federation Press, 1996.
Khan, B. Zorina. "Property Rights and Patent Litigation in Early Nineteenth-Century America." This JOURNAL 55, no. 2 (1995): 58–97.
Kolish, Evelyn. "Some Aspects of Civil Litigation in Lower Canada, 1785–1825." *Canadian Historical Review* 70, no. 3 (1989): 337–65.
Langum, David. *Law and Community on the Mexican California Frontier*. Norman: University of Oklahoma Press, 1987.
Lee, Robert. *The Greatest Public Work: The New South Wales Railways, 1848–1889*. Sydney: Hale and Iremonger, 1988.
Levine, Ross. "The Legal Environment, Banks, and Long-Run Economic Growth; Comparative Financial Systems." *Journal of Money, Credit & Banking* 30, no. 3 (1998): 596–620.
Mann, Bruce H. *Neighbors and Strangers: Law and Community in Early Connecticut*. Chapel Hill: University of North Carolina Press, 1987.
Montesquieu, Charles-Louis. *De L'esprit des Lois*. Paris: Garnier Frères, 1748.
Muldrew, Craig. "Credit and the Courts: Debt Litigation in a Seventeenth-Century Urban Community." *Economic History Review* 46, no. 1 (1993): 23–38.
Neal, D. J. *The Rule of Law in a Penal Colony*. Cambridge: Cambridge University Press, 1991.
New South Wales. *Annual Report of the Commissioners of Railways*. Various years.
_____. *Census of New South Wales*. Sydney: Government Printer, 1862, 1873, 1884, 1892, 1902.
_____. *Reports of Cases Argued and Determined in the Supreme Court of New South Wales*. Sydney: C. G. Maxwell, 1863–1900.
_____. *Statistical Register*. Sydney: N.S.W. Government Printer, various years.
_____. *Journal of the Legislative Assembly, Votes and Proceedings*. Sydney: Government Printer, various years.
_____. *Weekly Notes*. Sydney: Law Book Co., various years.
NSW Department of Railways. *Historical Notes on Australian Railways*. Sydney: Government Printer, 1970.
North, Douglass C. "Prologue." In *The Frontiers of the New Institutional Economics*, edited by John Droback and John Nye, 3–12. San Diego: Academic Press, 1997.
_____. "Economic Performance Through Time." *American Economic Review* 84, no. 3 (1994): 359–68.
Olson, Mancur. "Do Lawyers Impair Economic Growth?" *Law & Social Inquiry* 17, no. 4 (1992): 625–34.
Plott, Charles. "Legal Fees: A Comparison of the American and English Rules." *Journal of Law and Economic Organization* 3 (March 1987): 185–97.
Priest, George. "Measuring Legal Change." *Journal of Law and Economic Organization* 3, no. 2 (1987): 193–225.
Priest, George, and B. Klein. "The Selection of Disputes for Litigation." *Journal of Legal Studies* 13, no. 1 (1984): 1–55.
Reid, John Phillip. *Law for the Elephant: Property and Social Behavior on the Overland Trail*. San Marino, CA: Huntington Library, 1980.
Shavell, Steven. "Suit, Settlement, and Trial: A Theoretical Analysis Under Alternative Methods for the Allocation of Legal Costs." *Journal of Legal Studies* 11, no. 1 (1982): 55–81.
Smith, Adam. *Lectures on Justice, Police, Revenue and Arms*. Edited by Edwin Cannan. Oxford: Clarendon Press, 1896.

Sugden, R. "Spontaneous Order." *Journal of Economic Perspectives* 3, no. 4 (1989): 85–97.
Turner, Frederick Jackson. *The Frontier in American History*. New York: H. Holt & Co., 1947.
Viscusi, Kip. "The Determinants of the Disposition of Product Liability Claims and Compensation for Bodily Injury." *Journal of Legal Studies* 15, no. 2 (1986): 321–46.
Weber, Max. *Max Weber on Law in Economy and Society*. Edited by Max Rheinstein. Cambridge, MA: Harvard University Press, 1954.