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Constitutionalizing Patents: From Venice to Philadelphia

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Patent law today is a complex institution in most developed economies, and the appropriate structure for patent law is hotly debated around the world. A crucial feature shared among the diverse patent systems of the industrialized world, even before the recent trend toward harmonization, is that modern patent regimes are “constitutionalized,” meaning the self-restriction of executive and legislative discretion over the patent power. Given the lucrative nature of patent monopolies and the long history of granting patents as a form of patronage, the choice to confine patents within a legal framework that minimizes the potential for rent-seeking requires explanation. Why choose to constitutionalize patents? This paper answers this question by examining three salient constitutionalizing events through the lens of public choice theory—a theoretical framework all but absent in patent and innovation scholarship. Using interest-group analysis, we trace the constitutionalization of patent law from the Venetian patent statute of 1474, through the English 1624 Statute of Monopolies, to the Intellectual Property Clause of the United States Constitution. We argue that creating constitutional patent law institutions offered the opportunity to both increase the durability of the bargain between the state and the inventor and, in some cases, to limit the grant of patents to those most likely to increase the general welfare.

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1. INTRODUCTION

Patent law today is a complex institution in most developed economies. Bureaucracies, courts, and legislatures all play a role in shaping intricate doctrines and policies. Although patent systems differ among countries of the industrialized world,¹ they share one crucial feature: modern patent regimes are “constitutionalized” systems that limit monopoly rights to innovators, award those valuable rights through administrative processes rather than by political decisions, and check the grant through independent review by institutions other than those which make the initial award (*e.g.*, the judiciary). By “constitutionalize,” we do not mean the formal adoption of a document labeled a constitution. Rather, we are referring to the development of social institutions designed to restrict executive and legislative discretion.² Given the lucrative nature of patent monopolies,³ the long history of granting patents as a form of patronage, and the aggressive pursuit of patronage in most societies, the choice to confine patents within a legal framework that reduces the potential for rent-seeking⁴ by current office holders requires explanation. Why choose to constitutionalize patents?⁵

¹ Increasing harmonization is now the norm, as reflected, for example, in the TRIPS and NAFTA treaties. See Letterman (2001) stressing the trend toward global IP harmonization.

² See Brennan and Hamilton (2001) stating “the idea of [constitutional] ‘choice’ is not limited to some explicit, deliberative process, but is intended to include a considerably wider range of processes by which social order may emerge from individual decision making.” See also Mueller (1989) describing institutions that take individuals out of the state of nature as a “ ‘constitutional contract’ establishing the property rights and behavioral constraints of each individual.”

³ A patent confers a legal monopoly for the process or item claimed in the patent. A legal monopoly does not mean, of course, that substitute goods are unavailable and, indeed, many patents confer little or no market power despite their legal monopoly status. See *Jefferson Parish Hospital Dist. No. 2 v. Hyde*, 466 U.S. 2, 38 n.7 (1984). We use the term “monopoly” throughout this article to refer to the legal monopoly grant, not an effective economic monopoly.

⁴ Rent-seeking has been defined as “behavior in institutional settings where individual efforts to maximize value generate social waste rather than social surplus” (Buchanan, 1980). Mueller (1989:229) elaborates, tying the term to the traditional evaluation of losses imposed by monopolies: “The government can, for example, help create, increase, or protect a group’s monopoly position. In so doing, the government increases the monopoly rents of the favored groups, at the expense of the buyers of the group’s products or services. The monopoly rents that the government can help provide are a prize worth pursuing, and the pursuit of these rents has been given the name of rent seeking.”

⁵ Jaffe and Lerner (2004) write that the “evolution of a modern patent system required the institutionalization of limits on...executive discretion” that has “gradually but systematically been increasingly constrained by specific patent rules.” Our paper seeks to explain through public choice analysis the origins of these institutional constraints and why they evolved as they did.

This paper provides an answer by examining three salient constitutionalizing events through the lens of public choice theory. First, the ground-breaking Venetian statute of 1474, the earliest modern patent system; second, the British experience with patents that led to the 1624 Statute of Monopolies; and lastly, the American Founders' adoption of Article I, Section 8, Clause 8 of the Constitution together with the First Congress's adoption of the Patent Act of 1790.⁶ The short answer to the question we pose is that creating constitutional patent law institutions offered the opportunity to both increase the durability of the bargain between the state and the inventor and, in some cases, to limit the grant of patents to those most likely to increase the general welfare.

Our analysis provides important insights into the types of institutional features that are desirable for modern patent systems, including strong constraints on the type of patents that can be issued, an independent institution capable of reviewing patent grants, and the need for a strong sense of security in the validity and scope of the property right, to maximize the value of the bargaining chip offered to inventors. These lessons are particularly relevant in light of recent patent law reform initiatives within the United States (e.g., FTC, 2003; also NRCNA, 2004) and developing countries' efforts to comply with TRIPS.⁷ Regarding the latter, we believe one of the unanticipated consequences of what is currently perceived to be economic imperialism is that in the long run prudently designed patent institutions will prove to be more conducive to maximizing social welfare through innovation.⁸

In Part 2, we briefly discuss key features of the public choice theory of institutions, to support the more detailed analysis in later sections. In Part 3, we examine the 1474 Venetian patent law, and explain its emergence as a result of the political and economic structure of the Venetian city-state. In Part 4, we turn to the English Statute of Monopolies of 1624, showing how it emerged

⁶ As Doron Ben-Atar pointed out to us, our choices echo Pocock (2003), which traces the general history of republicanism from Renaissance Italy through seventeenth century Britain to eighteenth century America.

⁷ See, e.g., The Patents (Amendment) Act, 2005 (No. 15 of 2005), *Gaz. India Extraordinary* pt. II, sec. 1 (April 5, 2005).

⁸ This is not to suggest that developing countries should simply mimic American patent institutions, or that the creation of IPRs in developing countries will lead to sustained economic growth without the presence of foundational institutions such as respect for private property rights and enforcement of contracts. But we do believe that carefully designed patent institutions, tailored to domestic cultural norms, form an important ingredient in enhancing social welfare and the production of public goods. Maskus and Reichman (2005) argue for "a long period of experimentation" in developing countries that would balance pro-competitive effects and private property interests. An interesting case study over the next several years will be India, which recently amended its patent laws to recognize product patents on pharmaceuticals.

from the struggle between crown and Parliament, and resulted in the recognition of common law courts as a neutral forum for judging the legitimacy of royal grants of monopoly. We then examine in Part 5 the creation of the patent clause of the U.S. Constitution and the Patent Act of 1790.⁹ We conclude with a discussion of the insights gained from considering these constitutional events from an interest-group perspective.

2. “CONSTITUTIONS” AND INTEREST GROUPS

The public choice perspective begins with the premise that individual self-interest motivates actors in politics just as it does individuals in other aspects of their lives. Political actors must therefore be accounted for in terms of their self-interest,¹⁰ rather than simply labeling them “statesmen” and assuming public-spiritedness, the approach associated with the public-interest theory of government.¹¹ Thus, “good government is much more a matter of having rightly constructed institutions that channel self-interest in valuable directions than it is a matter of exhorting people to deny their basic nature when acting publicly” (Gwartney and Wagner, 1988).¹²

Of course, rooting our explanation in self-interest implies only that incentives matter,¹³ not the absence of other motivating factors beyond crass material concerns. In fact, “[t]he self-interest postulate implies that the choices of both the humanitarian and the egocentric change in a systematic way in response to

⁹ In a second article (“The Politics of Patent Law,” in progress), we will extend this analysis to the history of U.S. patent law from 1793 to 1952.

¹⁰ Ekelund and Davidson (2001:516) note “[r]egularities of self-interest, competition and economizing behavior on the part of all agents are the guideposts that must be followed in order to achieve generality of explanation.” See also Shugart and Razzolini (2001:xxv) note that public choice theory is seen as challenging the “established paradigm...customarily referred to as the public-interest theory...that presumes unselfish benevolence on the part of the government actors to whom ordinary citizens delegate decision-making authority.”

¹¹ Public interest theory’s development is discussed in Morriss et al. (2005:214-216). See also Crowley (1998).

¹² Epstein (2004:652) states “modern public choice literature postulates self-interest to all political players, and asks how they respond to the incentives created by the rules of the political game.”

¹³ Gwartney and Wagner (1988:7) note that incentives “influence personal choices in a predictable manner. If something becomes more costly, people will choose less of it. If something becomes valued more highly, people will choose more of it. The likelihood an option will be chosen by an individual is inversely related to its personal cost and is directly related to the expected personal benefits.” Buchanan and Tullock (1962:3-4) note, “[t]he analysis does not depend for its elementary logical validity upon any narrowly hedonistic or self-interest motivation of individuals in their behavior in social-choice processes.”

changes in personal costs and benefits” (Gwartney and Wagner, 1988:8), not that they lack other motivations. Moreover, self-interested individuals may agree to provisions that appear to be publicly-spirited, but can nonetheless be best explained by self-interest. In essence, public choice relies on utility maximization, rather than wealth maximization. Thus, for example, a revenue-maximizing Leviathan may find it worthwhile to bind himself to respecting property rights, because doing so will induce his subjects to invest in productive enterprises. The result is that the subjects generate higher levels of income than if property were subject to arbitrary seizure by the Leviathan, yielding greater revenue for the Leviathan through taxation than he could obtain through direct seizure (Brennan and Hamilton, 2001:134).¹⁴ Of course, we do not contend that our approach is the only way to understand the history of patent law—intellectual history, for example, offers valuable insights not dependent on interest group politics (Mossoff, 2001:1275). But we do contend that patent law institutions cannot be fully understood without considering their relationship to interest groups.

Individuals do not simply go to the store to purchase constitutional provisions the way they do to buy guns or butter. The political marketplace differs from the economic marketplace in a number of ways.¹⁵ One crucial difference is that political transactions lack a third-party enforcement mechanism. That is, “[i]n political transactions, third-party enforcement is not possible simply because one of the parties to the agreement, the government, can subsequently change the rules or renege without fear of legal sanction” (Crain, 2001:183; also Crain and Tollison, 1979:560). Since bargains that cannot be guaranteed for the future are less valuable than those that can be,¹⁶ there is a demand for a means of creating durable political bargains. Constitutional arrangements can supply the institutions to meet that demand.¹⁷

Written constitutions are a direct means of providing more durable agreements than legislation or executive decrees. Because the costs of changing written constitutions are higher than the costs of changing statutes or decrees,

¹⁴ For a thorough discussion of the Leviathan model, see Mueller (1989:268-271). See also Brennan and Buchanan (1980).

¹⁵ In describing these differences, Buchanan and Tullock (1962:19-23) observe that “one crucial difference” is “the absence of alternatives” in political exchange.

¹⁶ Crain (2001:184) notes “[t]he value of political transaction and the potential gains from trade depend on the probability that parties will live up to the agreement and on its expected durability.”

¹⁷ As Adam Mossoff pointed out to us, modern views of the permanency of constitutions are shaped by the success of the U.S. Constitution. In earlier times, constitutions appeared less durable. All that is necessary for our purposes, however, is that constitutional provisions be *more* durable than nonconstitutional ones, not that they meet an absolute standard of durability.

provisions enshrined in a written constitution are more durable than those in legislation and decrees.¹⁸ Written constitutions also indirectly assist in the creation of durable bargains by creating mechanisms to enforce political bargains. For example, Landes and Posner (1975) used the need for durable bargains to explain the puzzle of why politicians tolerate the existence of an independent judiciary that, at times, strikes down the legislation passed by the politicians. In their analysis, an independent judiciary with the power to strike legislation serves as a guarantor of legislative bargains.¹⁹ The independent judiciary looks to original legislative intent, and so prevents later executives from changing the original agreement without explicitly amending the statute through the legislature. An independent judiciary thus increases the value of legislative bargains to interest groups by increasing the certainty that the bargain will be kept—and so gives the politicians something more valuable to offer interest groups in the political marketplace.

There are other means of “constitutionalizing” institutions besides enshrining them in a written document, however, as the success of Britain’s unwritten constitution attests.²⁰ The explanation for why governments routinely make it more difficult to repeal than to enact legislation is thus similar to Landes and Posner’s explanation for the independent judiciary (Crain, 2001:186). In explaining institutions in Venice and England, institutions that were not the result of a constitutional convention but rather emerged from the struggle of interest groups in a political marketplace, we focus on the durability of the bargains that these institutions enable as one key feature of patent law institutions. In the case of patents, restriction of the legal monopoly over a particular idea is limited to new, useful ideas, preventing what was once a common practice of granting patents on existing ideas as a form of political patronage. In England’s case, this restriction of politicians’ power is guaranteed by the independent judiciary’s ability to void patents for ideas that, for instance, are not new or useful. This limitation on patent power reduced the cost of allowing royal agents to grant patents, making a bargain between the executive and Parliament possible.

¹⁸ Crain (2001:187) states that “[c]onstitutional rights are an especially durable type of political agreement, evidenced by the observation that constitutional change occurs infrequently when compared to other types of political agreements.” Anderson and Hill (1988:207) observe that constitutions are “seen as relatively permanent in that procedures for change require a lengthy ratification process or something more than simple majority approval.”

¹⁹ Crain (2001:183) also notes, “The absence of an enforcement mechanism creates uncertainty about whether—and for how long—political agreements will be maintained. This means, of course, that political transactions are less likely to go forward in the first place.” See also Macey (1987:66-70).

²⁰ See Chimes (1967:2) asserting the success of England’s constitution.

For each of these three “constitutional” arrangements, we examine the costs and benefits to particular interest groups of institutional changes by framing “constitutional order” as “a mutually advantageous treaty among what would otherwise be warring factions—a treaty which promotes the substitution of wealth-creating trade for wealth-reducing plunder” (Gwartney and Wagner, 1988). Such a treaty is necessary because state power allows interest groups who control the state to gain by imposing costs on others. So long as benefits are concentrated among a few and costs spread over many, the few can extract substantial “economic rents”²¹ from the many without provoking the many to organize to overturn the bargain.²² Thus a monopoly on the production of salt, of which there were at least three granted by the crown in Elizabethan England, raised the cost of salt for consumers, transferring monetary benefits to the holder of the monopoly.²³ If part of the price of obtaining a monopoly is production of new knowledge, as with a patent of invention, the additional costs of the rents transferred to the patent holder may (or may not) be worth paying to induce the innovation.²⁴ For a monopoly on an age-old method of

²¹ Economic rents are defined as “that part of the payment to an owner of resources over and above that which those resources could command in any alternative use” (Buchanan, 1980:3). See also fn 4 above discussing rent-seeking.

²² Copyright law provides numerous examples, such as the Sonny Bono Copyright Term Extension Act, which added 20 years of protection to extant and future copyrighted works, and the Digital Millennium Copyright Act, a statutory initiative that enhances copyright protection. See Pub. L. No. 105-298, 112 Stat. 2827- 2828 and Pub. L. No. 105-304, 112 Stat. 2860, respectively. Both are codified in various provisions of Title 17.

²³ See fn 166 below, and sources cited therein. It should be noted that the salt monopoly was justified by contemporaries on national security grounds so as to avoid importing salt from Spain and France, two countries with which England was engaged in war. Thus there was, at least initially, a claimed public benefit for this grant. We thank Thomas Nachbar for this point.

²⁴ See Gwartney and Wagner (1988:34), “[t]his agreement to restrict the scope of permissible economic activities—this ratification of a constitutional contract—represents, even if only metaphorically and not literally, the establishment of a government to act as an instrument for promoting production and trade through deterring the various forms of plunder.” Mazzoleni and Nelson (1998:281) nicely capture patent law’s cost-benefit dynamic:

In some areas, patent rights certainly are economically and socially productive in generating invention, spreading technological knowledge, inducing innovation and commercialization, and providing some degree of order in the development of broad technological prospects. However, in many areas of technology this is not the case. In a number of these, strong broad patent rights entail major economic costs while generating insufficient additional social benefits. And in some strong broad patents are simply counterproductive. One needs to be discriminating and cautious on this front.

Landes and Posner (2003:310) state that although there are “powerful economic reasons in favor of creating property rights in inventions there are also considerable social costs.”

producing salt, however, the costs represent a pure wealth transfer from consumers to patent holder. Creating a binding bargain to allow patents of monopoly only in circumstances where there is reason to believe the patent will be wealth-creating, rather than merely wealth-transferring, is thus a second key institutional feature.

Interest groups will value enshrining special interest provisions that operate to their advantage in constitutions more highly than when their privileges are awarded solely through legislation. Interest groups will not always seek a constitutional solution, however, since constitutional provisions cost the interest group more to obtain, as well as providing greater benefits. Boudreaux and Pritchard (1993:117-123) examine the process of amending the U.S. Constitution and develop a theory of interest group costs that helps explain when interest groups will seek constitutional protections. They predict that interest groups are willing to incur the costs of obtaining constitutional provisions when they have high “maintenance costs” or when they expect opposition to their proposal to grow in the future.²⁵ The prospect of opposition arising in the future also enhances the desirability of a constitutional provision. Where the losers from the policy are unknown today, but will be identified later as a result of the policy going into effect, enshrining the policy in a constitution, which is difficult to change, rather than in a statute is more likely to be worthwhile (Boudreaux and Pritchard, 1993:122).

This theory of constitutional institutions relies upon a species of trust problem that is at the heart of the demand for rules (Brennan and Hamilton, 2001:131-132). A legislature that allows the executive to issue patents of monopoly for a limited time to those who invent (or bring to the jurisdiction) new technologies may enable the country as a whole to gain by inducing additional innovation. But allowing the executive complete discretion to choose which patents to issue will likely lead to disaster. If there is no check on the executive’s behavior, wealth-transfer monopolies will dominate invention monopolies, imposing significant social losses, because the executive’s short-

²⁵ According to Boudreaux and Pritchard (1993:118-121), “[m]aintenance costs” refer to the cost of maintaining the group’s coalition to protect its gains. Interest groups with “[h]igh maintenance-costs...will not anticipate being an effective political force in the future.” As such, they “are likely to demand the greater durability provided by amendments.” Temporary groups face higher maintenance costs than those already organized for other reasons. Boudreaux and Pritchard use the example of those who supported Prohibition (a high maintenance cost group, allied only for ideological reasons) and labor unions (low maintenance cost). The latter can anticipate being able to regularly lobby the legislature, and so is willing to accept the cheaper alternative of legislation to accomplish its goals; the former has a serious free-rider problem in maintaining its coalition and so will prefer the more durable, but costly, constitutional amendment.

term interests are maximized by selling privileges regardless of their social utility. Faced with a choice of allowing the executive complete discretion or banning government-granted monopolies altogether, a rational legislature might choose the latter. Enshrining a rule or institution that commits the executive to issue only invention monopolies enables the legislature to trust the executive and opt to allow patents for inventions.²⁶ The cost of reaching such a bargain is greater than zero, however, and thus some level of rent-seeking may be tolerated in preference to incurring the costs of bargaining for more precise restrictions. We must therefore consider the costs of bargaining,²⁷ as well as the costs that might be avoided and the benefits gained from a potential bargain.²⁸

In brief, we propose the following outline of the decision by individuals whose consent is required to agree to an institution that provides state-enforced monopoly rights to innovations. There exists a set of innovations for which allowing the grant of monopoly rights produces a net increase in a society's wealth. The size of this set increases as the cost to the society of the monopoly granted decreases. Granting monopoly rights for things and processes outside this set produces a net decrease in wealth for society as a whole. Such grants may result in a net increase of wealth for the monopoly holder, however, producing an economic rent for which potential monopolists are willing to compete. Such competition benefits those in a position to grant or deny the monopoly rights.

Further, what matters to the potential monopolist is the sum of expected benefits from the grant. All else equal, therefore, a potential patent holder will, for example, prefer a patent with longer duration to one with a shorter duration, broader proprietary scope to narrower scope, and a more certain grant to a less certain one, where "certainty" refers to the likelihood that the grant will be upheld by the legal system. Combining these three things, patent holders will trade duration and breadth for certainty in some circumstances (e.g., a narrow, 10-year sure thing may beat a 20-year iffy proposition). This trade cuts the cost to non-patent-holders because it clarifies the status of uses

²⁶ Brennan and Hamilton (2001:133) note "[t]he rational based reason for rules here is that my adopting the rule induces behavioral changes in others (potential trustors)."

²⁷ Shugart and Razzolini (2001:xxxv) argue that "[c]onstitutional choice in this model requires an analysis of two types of costs involved in making any collective decision. The first of these are *decision-making costs*, the direct and indirect (opportunity) costs of gathering information, negotiating, and reaching agreement on a common course of action. The magnitude of these costs depends on the fraction of the voting population whose consent is required for a particular option to be selected."

²⁸ Shugart and Razzolini (2001:xxxv) continue: "[t]he second category of costs is *external costs*, which measure the reduction in wealth or welfare that members of the minority can expect to endure as a result of actions taken by the majority."

of the innovation covered by the patent during the shorter period (i.e., they now are certain they must license an innovation for which a patent has been granted rather than challenging the grant).²⁹ By increasing certainty, therefore, a patent system can provide shorter grants of monopoly to induce any particular level of effort at innovation. Shorter grants in turn reduce the cost to the non-patentees of the grant, and the greater certainty allows the cost to be reduced without significantly reducing the value to the patent-holder.

If an institution can be created that limits the grant of monopoly rights to the net-increase set, decision-making individuals will be willing to agree to the grant of the rights. If the patent institution allows unchecked grants of the power to grant monopoly patents by a single individual (a king, for example), we would expect the set of patents issued to exceed the net-increase set, since the grantor could receive benefits through the rent-seeking competition without paying the cost of the resulting grants. The challenge, one successfully met in Renaissance Venice, Britain in 1624, and in the American Constitutional Convention and First Congress, is to design an institution that limits patents to the net-increase set, through a combination of *ex ante* devices to restrict the issuance of patents and *ex post* checks (such as an independent court review) on patents issued, whose cost does not exceed the benefits produced by the patent system.

Our methodology thus can be described as seeking to understand the processes of institutional development “in the context of some *initial* set of institutions, along with some regularized behavioral motivations of economic agents.”³⁰ We thus set out on our road to Philadelphia in 1789 more than three hundred years earlier in the Republic of Venice, with a stopover in Elizabethan and Stuart England, seeking interest groups whose behavior explains the evolution of constitutional patent institutions.

²⁹ See Arewa (2006) describes how, in the modern context, uncertainty in intellectual property rights can be used by rights holders to block rivals.

³⁰ Ekelund and Davidson (2001:514) describe institutional change as “economizing individuals and groups interacting in the shadow of a given set of political and market processes establishing property rights, ultimately alter[ing] existing institutions.”

3. RENAISSANCE VENICE

3.1. THE VENETIAN PATENT STATUTE OF 1474

The Middle Ages (1000-1500 A.D.)³¹ are widely considered to be a period of technological stagnation and intellectual darkness, or as Edward Gibbon (1983) wrote, a society that witnessed “the triumph of barbarism and religion.” But scholars have recently cast this characterization in doubt, arguing that, although the Aristotelian aversion toward the useful arts remained for the most part,³² technology was beginning to be viewed more favorably,³³ and indeed, several noteworthy technological advancements were made during the Middle Ages.³⁴ In many states, attempts to promote technological innovation within the confines of the state or to import such from abroad led to the grant of privileges, monopolies, and importation franchises to local guilds or to artisans from afar (Walterscheid, 1994:707; also Prager, 1952:117-126; Bugbee, 1964).

But it was not until the Renaissance, specifically Renaissance Italy, that the first true patent was issued and the first true patent statute was enacted. The former occurred when the Republic of Florence issued a patent in 1421 to the eminent architect and inventor, Filippo Brunelleschi, for his ship, which was designed to transport Carraran marble for his famous Duomo of Florence (Bugbee, 1964:17-18).³⁵ Brunelleschi’s ship sank, and with it the Florentine

³¹ These dates are round numbers. While historians note that there is no official start, or for that matter, end date, the Middle Ages are generally considered to begin in A.D. 476, marking the formal abdication of the last Western Roman emperor, Romulus Augustulus, and end in 1453, when Constantinople fell and the Hundred Years War ended.

³² Aristotle (1981) rejects Hippodamus’ assertion that a law be enacted “to the effect that all who made discoveries advantageous to their country should receive honours.” Indeed, historically, science was more intellectually oriented and enjoyed an aristocratic following, whereas technology, with its focus on action and empiricism, was considered the province of the lower classes.

³³ See, e.g., Gies and Gies (1994:13), on the point that Middle Age thinkers were beginning to accept “technology as part of human life, inferior to intellectual and spiritual elements but necessary and natural. Technology made life easier, freeing the mind from material concerns and supplementing man’s innate powers.”

³⁴ Mokyr (1990:31-56) details technological advances made during the Middle Ages. Cantor (1993:228-229) notes technological innovations in horsepower, waterpower, and windpower.

³⁵ See also Frumkin (1943:144). Gies and Gies (1994:524) state that Brunelleschi “pioneered patent protection for inventors,” but Walterscheid (1994:707) asserts that it is not clear whether the granting of patents started in Venice or in Florence. Mandich (1960:379) suggests that the “first true patent” was granted in Venice in 1416. For more on Brunelleschi’s ship and his patent, see King (2000:112-113).

patent system.³⁶ It was the Italian textile guilds that, reflecting the growth of commercial activity, filled the void, enacting private rules granting exclusive rights to those members of the guild who invented “certain...designs and patterns” of silk or wool.³⁷ Indeed, in the Renaissance city-states of Italy and most of Europe at that time, commerce and the arts were “dominated by guilds” (Prager, 1944:713),³⁸ whose private rules were the primary features of the legal landscape of innovation during the early Renaissance.

The Venetian Republic, on March 19, 1474, enacted the first known general patent statute, with overwhelming support in the Venetian legislature.³⁹ This statute, which sought to encourage technological advancement by issuing private grants and importation licenses, established a foundation for the world’s first patent system, leading one historian to proclaim that “the international patent experience of nearly 500 years has merely brought amendments or improvements upon the solid core established in Renaissance Venice” (Bugbee, 1964:24; also Mandich, 1948:166). Or, to paraphrase the noted American philosopher Alfred North Whitehead, all Western patent systems consist of but a series of footnotes to the Venetian patent statute.

The Venetian statute included every feature that modern patent systems deem fundamental. It had a utilitarian purpose of encouraging innovation set forth in its preamble;⁴⁰ provided inventors with exclusive rights⁴¹ if their inventions proved to be useful, novel, and non-obvious⁴² and were reduced to practice;⁴³

³⁶ Bugbee (1964:19) cites several reasons why the grant of patent rights ended, including “the conflict between the Major Gilds [sic], a decree of 1447 limiting State-governed incentives for new crafts and technological innovations to tax exemptions alone, and the ascendancy of the Medici (and selective patronage) after 1434.”

³⁷ Long (1991:870) notes that, “[i]n promoting attitudes of ownership toward intangible property—craft knowledge and processes as distinct from material products—the guilds developed the concept of ‘intellectual property’ without ever calling it that.”

³⁸ Walterscheid (1994:704) observes “[t]he example of glassmakers of Venice is particularly instructive. At the time of the Renaissance, Venetian glasswork was recognized as the finest in Europe.... There were detailed guild regulations covering a variety of matters, including legal workdays, election of guild officials, judicial procedures, apprenticeships, and relations between masters and patrons.”

³⁹ Mandich (1948) reports a 116-to-10 vote in favor, with 3 abstentions.

⁴⁰ The statute is reprinted in Chisum et al. (2004:11-12). The preamble reads: “We have among us men of great genius, apt to invent and discover ingenious devices; and in view of the grandeur and virtue of our City, more such men come to us every day from divers parts.”

⁴¹ See Chisum et al. (2004:11), “[i]t being forbidden to every other person in any of our territories and towns to make any further device.”

⁴² See Chisum et al. (2004:11), “every person who shall build any new and ingenious device in this City, not previously made in our Commonwealth.”

⁴³ Chisum et al. (2004:11) note “...reduced to perfection so that it can be used and operated.”

required disclosure in exchange for monopoly rights;⁴⁴ limited the monopoly granted by both geography and time;⁴⁵ and provided an enforcement mechanism and remedy.⁴⁶ The statute, which has been characterized as “a considerable success” (Walterscheid, 1994:710), vastly expanded the issuance of patents in Venice.⁴⁷ By the middle of the sixteenth century, the Venetian rate of patents per capita may have approached the American rate of the 1950s (Prager, 1952:133).

Venice had, like the other Italian states of the fifteenth century, issued individual patents and monopolies in the years prior to 1474. One survey (Bugbee, 1964:20-22) lists thirteen issued between 1416 and 1472, many of which contained either implicit or explicit requirements for demonstration of the patented technique or device. Although Bugbee concludes that this practice constituted a “pattern of extending grants and privileges to those who would introduce new techniques,” we are not quite as certain that the evidence supports his conclusion. Certainly the existence of these grants is evidence that it was possible to obtain from the Grand Council⁴⁸ a monopoly right for an innovation, but the question that the evidence does not answer is whether thirteen successful grants was a large proportion of attempted or possible grants.

A closer look suggests that the pre-1474 practice was more ad hoc than pattern, for three of the thirteen grants were to the same individual, Antonio Marini (Mandich, 1960:379-380). When this is considered, we see that only eleven individuals successfully obtained grants in the 58 years between the first grant and the patent statute. Further, the patents were issued at irregular intervals: one in 1416, six between 1443 and 1456, two in 1460, one in 1469, and three in the first years of the 1470s (Mandich, 1960:379-380). Such episodic issuance of grants is hardly a “pattern,” and suggests the opposite interpretation: that obtaining a patent from the Grand Council was either too

⁴⁴ See Chisum et al. (2004:11), “... shall give notice of it to the office of our General Welfare Board”

⁴⁵ See Chisum et al. (2004:11), “[i]t being forbidden to every other person in any of our territories and towns to make any further device conforming with and similar to said one, without the consent and license of the author, for the term of 10 years.”

⁴⁶ See Chisum et al. (2004:11), “[a]nd if anybody builds it in violation hereof, the aforesaid author and inventor shall be entitled to have him summoned before any magistrate of this City, by which magistrate the said infringer shall be constrained to pay him hundred ducats; and the device shall be destroyed at once.”

⁴⁷ See Prager (1952:132), “[t]he yearly average number of patents issued by Venice was more than tripled during the next fifty years.”

⁴⁸ The Grand Council governed the city and was comprised of the most influential Venetian families (Skinner, 1978; also Bouwsma, 1968).

costly or valued so little as to not be procured often. That over 100 patents were issued between 1474 and 1550 (Bugbee, 1964:24; also Mandich, 1948:207-223) is further evidence that the net benefit of a patent monopoly rose significantly after the statute.

This sketch outlines the puzzle to be solved. Why did Venice create a general, administrative patent law to replace the legislative grant of quasi-patents that existed throughout Renaissance Italy? What combination of institutional features and interest group dynamics led Venice, rather than Florence or one of the other city-states, to be first? In short, why Venice? Why the fifteenth century?

Prager (1952:123-128) argues that two trends combined in Renaissance Italy to create the modern patent system. First, the Italian states' experience with "quasi-patents," state-granted monopolies for "operations connected with mining, water, etc.," made "monopolies for inventions' gradually [become] a familiar institution." Second, the Italian states had numerous guilds which regulated the conduct of various professions and trades. Many Italian guilds adopted regulations that granted temporally-limited monopolies on innovations, beginning with the silk weaving industry, including the development of new patterns of silk weaving, as well as the invention of new machinery. Because Venetian guilds were "powerless to grant or allow monopolies by action of their own," however, Prager argues that the regulations required monopolies to be issued by the state, making them the forerunners of modern patents. Prager's answer to the questions of "Why Venice?" and "Why the fifteenth century?" is that "quasi-patents were most developed" in Venice and "that the silk patent law came when the idea of intellectual property was gaining approval." Thus, "[t]he conclusion seems justified that it was this ancient, newly vitalized idea which expanded the medieval tradition of quasi-patents into the first modern patent system" (Prager, 1952:131-132).

Prager's explanation, the only in-depth attempt to explain Venice's primacy of which we are aware,⁴⁹ suggests that the contours of the modern patent system were inevitable, first expressed in fifteenth century Venice only as the result of

⁴⁹ Mandich (1948:176) offers an account of the adoption of the Venetian statute, but does not explain the reasons for its adoption other than to note that the statute "does not spring from untilled soil; the individual grants that we saw are its predecessors." This does not provide a causal explanation, however, since the "soil" in other Italian city-states had also been "tilled" by the grant of individual quasi-patents and yet did not produce general statutes (see Mandich (1948:170) noting Florentine patent.) Mandich (1948:206) concludes that Venice is an example of "how a customary practice is formed; how it is confirmed by a statute in 1474... ." He does not explain why Venice uniquely "confirmed" the customary practice.

the historical accident of the combination of a strong-state/weak-guild society and the “idea” of patents reaching sufficient intellectual development. Legal concepts undoubtedly have power, and the discovery of the efficacy of a general patent system by the Venetians surely prompted other European states to consider copying the Venetian system’s features. But Prager’s explanation is too ad hoc to suffice. To say that Venice was first because the idea of patents first expressed itself there is ultimately tautological, as we know patent law first expressed itself in Venice only because Venice was first. Moreover, general histories of Venice (at least those in English) rarely mention patent law in indices or, as far as we can tell, give it more than passing reference in the text, suggesting that the appearance of patent law in Venice appears unremarkable, at best, to historians concerned with Venice rather than with patents (e.g., Finlay, 1980; also Queller, 1986; Norwich, 1986; Chambers, 1970; McNeill, 1974).⁵⁰ The second half of Prager’s explanation points us in the direction in which the answer lies. The strength of the Venetian state relative to the guild institutions gave the state an advantage in producing patent rights if the state could solve the problem of making a durable bargain. To dig deeper, we turn to the political and economic forces at work in fifteenth century Venice and ask who benefited from the creation of a general patent law?

3.2. VENICE IN THE FIFTEENTH CENTURY

Fifteenth century Venice was wealthy and “acclaimed to be the most dazzlingly beautiful city in the world” (Norwich, 1986:280). Its population was likely between 100,000 and 150,000 by the latter part of the century (Chambers, 1970:123), a substantial number for a Renaissance city. As Lane (1973:238) writes, in the late fifteenth century, “[t]he extent of [Venice’s] domains, the financial strength of the government, and the general air of opulence in the city fostered self-confidence.”

Venice’s monetary riches gave it a correspondingly rich intellectual life. Venetian businessmen and bureaucrats often spoke Greek, and the works of Greek writers were widely available (Chambers, 1970:150-151). Foreigners were welcomed and, after the 1474 statute, were frequent applicants for patents (Mandich, 1948:181). Venetian printing in the fifteenth century was dominant, making it “the great publishing capital;” an estimated half of “all the known books printed in Italy before 1500” were printed in Venice (Chambers,

⁵⁰ Lane (1973) mentions the 1474 law in a single sentence. He also has only two entries for “patents” in his index and those refer to a minor mention of the existence of a patent and to the passage of the statute, with little comment. Italian readers of draft versions of this article confirmed that the Italian language general histories of Venice treat the topic similarly.

1970:152). How far down in Venetian society education extended is open to debate, but it is clear that Venice had a comparatively well-educated and wealthy population during the fifteenth century, with the resources available to tap the scientific and humanistic treasures of classical Greek literature.

Venice shared dominance of fifteenth century Italy with four other states: Milan and Florence in the north, the Papal States in the center, and the Kingdom of Naples in the south (Lane, 1973:228). To the east was the Ottoman Empire, which offered both opportunities for profitable trade and a military threat sufficient to sometimes induce the Italian states to set aside their differences and ally against the Turks.⁵¹ When not fighting the Turks, the Italian states often warred amongst themselves, with shifting alliances maintaining a balance of power throughout the century.⁵² Venice's success in these wars gave it an expanding set of territories on the Italian mainland,⁵³ which she used as a source of food, wood, and raw materials for manufacturing, and to guarantee overland routes for trade with northern Europe (Lane, 1973:225-226).⁵⁴

The larger competition among the Italian states and with the Ottoman Empire produced three important features of the Venetian state. First, the expenses of the wars of the fifteenth century brought a need for regularized revenue, leading Venice to create a direct income tax system in mid-century that raised sufficient revenue so that Venice had no trouble selling bonds

⁵¹ The "Peace of Lodi," for example, united the five main Italian states against the Turks. Venice's policy against the Turks was "to maintain control of the sea, to defend cities that could be defended from the sea, to pick up more when that was easy, and to retaliate for Turkish acts of aggression by seaborne raids... [while] avoiding any offense to the Ottoman sultan that might require her to confront on land the full power of the Turkish army" (Lane, 1973:234-235).

⁵² Lane (1973:237), e.g., describes the 1482-1484 war in which the Papal States and Venice fought Naples, Milan and Florence; Venetian victories prompted the Papal States to change sides and the Pope to place Venice under an interdict. The strength of Venice can be measured by the Venetian response to the Pope's interdict: Norwich (1986:361) writes that the:

Venetian representative in Rome declined to forward the papal Bull to his government, obliging [Pope] Sixtus to have it sent by special messenger to the Patriarch, who in his turn pleaded that he was too ill to pass it on to the Doge and Senate.... Meanwhile the Pope was informed that Venice intended to appeal to a future Council – an intention which she made public to the world by nailing a copy of her letter to the door of the church of S. Celso in Rome.

⁵³ See Law (2000a:x-9), "Venetian territorial expansion on the Italian mainland was so rapid and extensive as to alarm contemporaries..."

⁵⁴ "In the eastern Mediterranean, Venice enjoyed a powerful trading position in Constantinople, Syria and Egypt and one that was, up to the 1570s, little challenged by the merchants of other Christian powers, with the exception of Genoa... Venetian trade with northern Europe...continued to be significant up to the 1570s..." (Logan, 1972:21).

paying only five percent both at home and abroad to finance the government (Lane, 1973:238).⁵⁵ The Venetian state's finances were thus, for the most part, secure.

Second, expansion increased Venice's reliance on international trade. Venice was "a commercial rather than an industrial center" (Queller, 1986:252),⁵⁶ with an economy built around trade.⁵⁷ Through a combination of treaty rights, geographic location, and military force, Venice had become a major trading center by the thirteenth century, dominating the Adriatic (Lane, 1973:60-64) and beyond.⁵⁸ The growth of Turkish power in the fourteenth and fifteenth centuries also increased Venetian dominance of the Adriatic, as there was nowhere else for the lesser states to turn for protection (Lane, 1973:198; also Mallett, 1984; and McNeill, 1974:69). As a result, Venice built great wealth on trade throughout the Mediterranean during this period, keeping the treasury full and serving as the middleman between the goods of the East and those of Europe (Lane, 1973:200).

Third, although primarily focused on trading, Venice also had some important local industries, such as glass and other luxury goods,⁵⁹ and engaged in notable engineering to maintain and expand her lagoons and canals, and to service her fleet.⁶⁰ And the Ottoman threat to trade routes spurred investment in internal manufacturing over the course of the fifteenth century (MacKenney, 1987). Thus, by the middle of the fifteenth century, Venice had a stable and growing economy, an increasing interest in manufacturing, and a larger territory in which her policies applied directly.

⁵⁵ McNeill (1974:72) argues that "[e]fficient financial management was, in fact, the real secret of Venetian military and political power. By the fifteenth century, the Republic enjoyed an annual income larger than that of any of its Italian rivals, and larger in all probability than that of most of the kingdoms of Europe that bulked far bigger on the map."

⁵⁶ Chambers (1970:33) notes "[t]he Venetian empire was essentially a commercial enterprise..."

⁵⁷ See Chambers (1970:36) on the point that Venice's wealth "was not a wealth based upon money...nor to any great extent upon industrial production...its basis remained the widely diversified import-export business and freight carrying..."

⁵⁸ Chambers (1970:38) describes the range of Venetian trade and notes that "[a]s a great commercial organism, the Venetian empire remained strong in its readiness to adapt to changed opportunities."

⁵⁹ See McNeill (1974:76), "Venice developed the production of luxury goods – glassware, soap, silks, jewelry – for export as well as for sale within the city itself."

⁶⁰ See, e.g., Wills (2001:50) noting "an early version of Henry Ford's assembly line" used in shipbuilding in Venice's Arsenal.

3.3. VENETIAN SOCIETY AND INTEREST GROUPS

This rich trading society was divided into three main classes:⁶¹ the patriciate, the *cittadini originarii*, and the *popolo*. The patriciate, approximately two percent of the population, was closed in 1297,⁶² admitting almost no new members “until it voted itself out of existence, at Napoleon’s behest, in 1797” (Finlay, 1980:41-44). Members of the patriciate had the sole right to enter the Great Council and to participate in much of the government. The patricians’ formal governing powers placed the republic’s government in the hands of “a small, interrelated, and familiar political class, where the oligarchs confronted one another face-to-face from day to day” (Queller, 1986:51).⁶³ This is what held the government together: “the single *source* of government—a compact patrician class that had a secure monopoly on all the shifting positions” (Wills, 2001:111).

Government offices were temporary, however, with patricians “usually in a particular office for no more than a year at a time” (Finlay, 1980:46). The elaborate provisions instituted to prevent the development of factions personalized politics and resulted in the competition among the patriciate being one over the benefits of office. Queller (1986:29), a critical observer of Venice, concludes that the patriciate, like other elites, “used the government largely for its own benefit...except in Venice, since the early fourteenth century, the patriciate was a closed caste with a monopoly upon political authority.” Wills (2001:112), a more sympathetic observer, concurs: the “genius” of the Venetian constitutional system was the “initial purpose of locking in,” which “was a unique way of achieving unity out of the very conditions of division.” One important way in which it did so was by providing lucrative jobs to the poorer members of the ruling class, something that occurred regularly throughout the fifteenth century.⁶⁴ Impoverished nobles “clung to their status as their sole remaining asset” (Queller, 1986:53) and devoted considerable time

⁶¹ When we refer to “classes” we mean only that members of the three social groups had similar individual interests, not that the political process is “simply a means through which this class dominance is established and then preserved...” (Buchanan and Tullock, 1962:12).

⁶² Law (2000b:125) reports that the Great Council “came to embrace, rather than represent the whole political class.” Logan (1972:25) describes limited instances in which additional members were admitted in 1381 and 1646-69.

⁶³ See also Davis (1962:15), “the Venetian nobility was remarkable for its policy of exclusiveness.” Chojnacki (1974:47-48) summarizes the historical view of the Venetian patriciate as a closed political class, but notes an influx of new families over time nonetheless due to demographic and other changes.

⁶⁴ Queller (1986:30-34) describes the competition among nobles for jobs, and states the “patrician government was, in a very important sense, a welfare scheme for the poorer members of the ruling class.”

to policing the patrician membership to ensure that offices reserved for nobles were not filled by non-nobles.⁶⁵ Indeed, Queller (1986:84) colorfully summarizes “the real and enduring slogan of the Venetian Republic” as “‘Dayla, dayla,’ or ‘Gimme, gimme!’”

Just beneath the patricians in society, the *cittadini* (approximately five percent of the population (Wills, 2001:123)) did not engage in manual labor and had to live in Venice for at least twenty-five years to gain their status.⁶⁶ They had the right to serve as bureaucrats in the chancery and to ship cargo on state galleys. Their role as bureaucrats was especially important as the high turnover in the patrician offices meant that “secretaries provided vital continuity in administration” (Finlay, 1980:45-46; also Hay and Law, 1989:271). While the tenure of patricians in office was often measured in months, the *cittadini* “were likely to serve in the same offices for decades” (Davis, 1962:24). Equally important was their role as merchants.⁶⁷ The *cittadini*’s interests thus lay in their positions as the economic engines of Venice, in activities as merchants controlling trade with the East, and in their lucrative positions as permanent secretaries to a revolving cast of patrician officeholders.⁶⁸ Moreover, the Ottoman threat to trade routes spurred investment in internal manufacturing over the course of the fifteenth century (MacKenney, 1987), further enhancing the *cittadini*’s importance.

At the bottom of the social and political pyramid, the *popolo* was organized into guilds and fraternities based on occupation and neighborhood (Finlay, 1980:47). Although lacking in formal involvement in politics,⁶⁹ “popular opinion was a part of Venetian politics and cannot be neglected. People turned out in huge crowds on some occasions and were not hesitant about making themselves heard.”⁷⁰ Their role in government could only be indirect, however.

⁶⁵ See Law (2000b:x-125), “[b]ut to preserve its hereditary and exclusive nature, the composition of the [great] council needed constant supervision; and offices reserved for the privileged nobility had to be controlled to prevent them being filled by unqualified persons.”

⁶⁶ Grubb (2000) sets out a compelling case for distinguishing amongst subgroups within the *cittadini*. For our purposes, however, it is not necessary to draw these finer distinctions.

⁶⁷ See Wills (2001:97), “the main activity of notables...was as merchants.”

⁶⁸ Both patricians and *cittadini* participated in trade, which the Venetian state regulated to ensure its openness to all with capital to invest. McNeill (1974:60-64) describes a system of regulation of trade. The results were impressive: the *doge* in 1423 estimated that ten million ducats were invested annually in state-regulated trade, producing four million ducats of annual profits.

⁶⁹ The *popolo* had “no part to play in the life of the state” under the Venetian political system MacKenney (1987:2).

⁷⁰ According to Finlay (1980:49), “[t]he *popolo* did more than gather in crowds or grouse about a new law; they influenced the politics of the patriciate.” This influence must be seen in the

Immigrants were welcome to join the *popolo*⁷¹ but, as noted above, could become *cittadini* only by lengthy residence. Extensive economic ties among patricians, *cittadini*, and *popolo* also existed, keeping all three groups in contact with one another.⁷²

The common people were organized into associations by trade, as “[a]ll the craftsmen in Venice were required to join the appropriate *arte* by swearing to the statute of their craft” (Lane, 1934). The guilds were both “branches of the state or city administration, through which the government, or the ruling oligarchy, enforced its will upon the craftsmen” and “associations of craftsmen for the furtherance of their own interests” (Lane, 1934:73).⁷³ Although the guilds offered the *popolo* the opportunity to decide many economic issues of “immediate concern to their business,” they allowed them influence on broader policy questions such “as tariffs and commercial treaties only by appearing as petitioners before the governing nobles.”⁷⁴

The Venetian guilds were not the stereotypical European guild, controlling techniques, enforcing barriers to entry, and stifling innovation.⁷⁵ Venetian guilds were small and fragmented, as was Venice’s workforce generally, and their regulatory activities were supervised by the patriciate (Hay and Law, 1989:272). Unlike guilds elsewhere that emphasized rigid demarcation of professional and craft boundaries, the Venetian guilds “were often federations

context of the general quiescence of the populace; MacKenney (1987:29) calls “the absence of *furor populi*” the “distinctive feature of Venetian history.”

⁷¹ See Lane (1973:201), “[a]mong the general mass of craftsmen and merchants were many immigrants. Welcomed for their skills and attracted by the city’s reputation for relatively plentiful food and equal justice, immigrants replenished its population after each visitation of war and plague.”

⁷² See Finlay (1980:51), “[p]atricians were in no way isolated from the populace. Numerous commoners had very close economic and social ties to patricians—as customers, creditors, debtors, employees, dependents, and tenants.”

⁷³ See also MacKenney (1987:9), “[t]here were numerous bodies which sought to control the life of the populace directly or indirectly through the guilds.”

⁷⁴ The guilds played an important role in the lives of workers, providing old age pensions, sick benefits, and other social functions. The members’ enthusiasm for guild activities varied considerably among guilds. As Lane (1973:320) writes, “[t]he amount of democracy and of internal solidarity differed greatly from guild to guild.”

⁷⁵ See Lane (1973:320), “[e]conomic historians of the liberal school generally picture guilds as enemies of industrial progress, preventing improvements, particularly labor-saving innovations such as machines, or holding up wages and restricting the labor supply when market conditions made lower wages and expansion of the labor force necessary.” Mokyr (2002:259) notes “[i]n pre-modern Europe these guilds enforced and eventually froze the technological status quo,” while Kellenbenz (1974:243) states “guilds defended the interests of their members against outsiders, and these included inventors who, with their new equipment and techniques threatened to disturb their members’ economic status.”

of related trades” that gave the Venetian economy greater flexibility (MacKenney, 1987:4). Indeed, Lane concluded from his study of the important Venetian shipbuilding industry that the primary goal of the guilds was to make their members’ occupation “profitable” and to create “a monopoly of as large a field of production as possible,” while attempting “to improve the conditions of employment of their members.” According to Lane:

regulations created through the guilds did not touch the technical details of the process of constructing a ship, nor did they determine whether the masters worked as shipyard owners or as hired wage earners. The guilds gave no standardizing formulation to the technique of their crafts, and exercised no decisive influence upon the forms of industrial organization in which their members were employed (1934:86-87).

Lane’s analysis thus casts the Venetian guilds into a slightly different light than the stereotype of European craft guilds typified by an 18th century Prussian guild’s ordinance that no artisan “shall conceive, invent, or use anything new” (Mokyr, 2002:259). Rather than controlling the details of production, the Venetian guilds’ primary role was safeguarding the boundaries of the craft,⁷⁶ allowing individuals within each craft to compete through innovation.⁷⁷ Instead of stifling innovation, guild regulations limited the size of enterprises, the involvement of merchant capital in manufacturing, the role of middlemen, and the ability to control more than one workshop. Venetian guilds had rules expressing “a clear concern within them to regulate economic relations through the law of contract” (MacKenney, 1987:19-20) and provided an environment conducive to innovation by allowing individuals to alter how they worked so long as the appropriate guild performed the work.⁷⁸

3.4. VENETIAN POLITICS

Venice’s complex system of government rested on division of authority amongst numerous bodies and officials together with a series of offices selected by complicated voting procedures among the patrician class. The executive, the *doge*, was weak relative to other contemporary states’ executives, hemmed in by an elaborate set of restrictions on his actions set out in his oath

⁷⁶ In fact, the guilds “were constantly engaged in jurisdictional disputes” (Lane, 1973:320).

⁷⁷ Lane (1973:321) notes that their main influence was to channel competition into increasing quality rather than cutting costs.

⁷⁸ Chambers (1970:21) states “the many guilds were relatively humble bodies of craftsmen and artisans: they never represented predominant economic interests or attempted to dominate communal institutions.”

of office.⁷⁹ Nonetheless, the doge wielded considerable influence because he had life tenure in a system in which most officeholders held office only briefly.⁸⁰ He influenced promotions in the bureaucracy and his responsibilities cut across the divisions of authority within the Venetian system (Finlay, 1980:113-118). But “[t]he doge was never transformed into a thoroughgoing executive, with a corps of bureaucrats ready to translate commands into action” (Finlay, 1980:124).⁸¹ Allowing any member of the patrician class to bestow favors was feared as the basis of faction. In rejecting a 1492 proposal to subsidize poor members of the patriciate, for example, the Council of Ten stated “it cannot be allowed that anyone should try to make himself mighty by handing out public money” because “by this means the land be ridden with factions” (Cozzi, 1974).⁸²

The system of selecting officeholders included both voting by the elite and a system of random selection to choose nominating committees.⁸³ The elaborate

⁷⁹ Finlay (1980:110) outlines the oath’s requirements.

⁸⁰ See Wills (2001:99), “[h]ow, thus hemmed in, could [the *doge*] exercise any personal leadership at all? He could build coalitions within the various parts of the government, aided by the fact that he had life tenure while the makeup of most government panels was constantly shifting because of their members’ brief terms (which kept the Larger Council continually holding elections.” Hay and Law (1989:266) observe, “the office was potentially influential and surrounded with ceremonial. The doge presided over all the councils of the constitution, and as one of the few life appointments provided an element of continuity in the conduct of government.”

⁸¹ Hale (1993:74) states “Doges of republican Venice...were commonly so old when voted into office that few had the chance to generate an aura of personal rule.” See also Bazel (2003:88) noting that the Venetian city-state “seems to be the foremost example of a constitutional, or rule of law, regime that did not turn into a dictatorship. The ruler position in Venice (the dogeship) was not hereditary, and the power of the doge was rigidly constrained.”

⁸² Chojnacki (1974:49) argues that there were “bitter” struggles within the patriciate over whether trade policy would favor a “strong monopolizing aristocracy,” which would have predisposed many against allowing monopolies for inventions to be granted politically.

⁸³ See Queller (1986:55-57) discussing system of selecting officeholders. The system worked as follows: First, four nominating committees of nine members each were chosen by lot from the Great Council’s membership. This was done by the selection of balls from four urns, each of which was high enough to prevent those drawing balls from seeing inside the urns. Three contained a mix of gold and silver balls. The fourth contained sixty balls, thirty-six of which were golden. The gold balls were inscribed with codes to prevent members from bringing their own balls with them. Once the urns had been filled, the nobles were seated along benches in the hall and summoned individually in random order to draw balls from one of the three urns with thirty golden balls. If the noble drew a silver ball, he returned to his seat. If he drew a gold ball, he went to the fourth urn and drew again. If he drew a golden ball, he was selected as a member of a nominating committee. If he drew a silver ball, he returned to his seat. As each group of nine was selected, it withdrew to begin the selection of names to nominate for offices. Families were also precluded from having multiple members on the nominating committees.

precautions against special influence in choosing the candidates for offices merely shifted the lobbying to nominations.⁸⁴ In the late fifteenth century, election rules were being regularly violated, with breaches of ballot and nominating committee secrecy and nobles seeking nominations (Queller, 1986:59-61). Despite the Venetian ideal that the office sought the man, rather than the reverse, elections were “heated and vigorous” because of the value of the offices to the officeholder (Queller, 1986:53). In short, Venetian government was characterized by

rapid rotation in office, diverse responsibilities within individual magistracies, dedication to collective decision making, a multitude of temporary commissions, overlapping competencies of councils, complex and lengthy voting procedures, and a consistent weakness of executive authority at almost all levels of government. Inefficiency, confusion, and bureaucratic conflict were prices that Venetian patricians were apparently willing to pay for maintaining their republican order (Finlay, 1980:38).⁸⁵

The Venetian political system has spawned its own mythology and countermythology, whose influence reached the American founding fathers.⁸⁶ As Norwich (1986:282) summarized it, despite their lack of political participation, ordinary Venetians accepted the oligarchic rule of the patriciate

The nominating committee members drew numbers from yet another urn. Each number corresponded to a given office and the drawer of the number acquired the right to nominate someone for the position. The name was announced and if the person received six votes, he was then nominated. If not, the nominator proposed another name. All four committees worked independently, ultimately each bringing a list of candidates back to the Great Council. Once the nominations were complete, the nominating committees were dismissed and not allowed to vote in the election itself. Before the voting could take place, the nominees and certain specified relatives left the room as well. The remaining council members then selected from among the nominees for each office. Voting was done by secret ballot, with each member of the council voting yes or no on each candidate; the candidate with the most yes votes won, so long as he received at least a majority of yes votes. And “[i]f none of the four candidates received a majority, the process was voided and the election deferred until the next meeting of the Great Council.”

⁸⁴ According to Queller (1986:57), “[a] great deal of illegal electioneering—and *all* electioneering was illegal—centered upon the nominations, for, if one desiring office could find one of those fortunates who drew the golden balls to nominate him, he would stand a good chance of election, since the nominating committees put up at most four candidates.”

⁸⁵ Cozzi (1974:298) reports that, “[i]n the Republic, which never had any illusions about human nature, the electoral system was set up in a way that would offer the greatest possible protection.”

⁸⁶ Hay and Law (1989:260-261) describes the “long tradition of writings in praise of the republic and creating what historians have called the ‘myth of Venice.’”

because “the civil service was open to all, commerce and the craftsmanship for which the city was famous provided a source of pride and satisfaction as well as rich material rewards, and few citizens ever seriously doubted that the administration—quite apart from being outstandingly efficient—had their own best interests at heart.”⁸⁷ The myth held that this miracle was “a consequence of providential guidance and constitutional excellence” (Finlay, 1980:32). But even contemporaries found the myth hard to accept. The French ambassador to the Holy Roman Empire attacked Venice in 1510: “Merchants of human blood, traitors to the Christian faith, they are secretly dividing the world with the Turks; ... they wish to make Europe their province and hold it captive with their troops,” while a friend of Machiavelli claimed that “[a]gainst a patrician in civil cases, no justice can be expected; in criminal cases, the common people are wronged, patricians protected” (as quoted in Finlay, 1980:36).⁸⁸

Neither the myth nor the counter-myth of Venice’s enemies is wholly accurate. What is clear from both, however, is that the Venetian political system’s elaborate procedures and divisions of authority were motivated by “fear of faction” (Queller, 1986:75)⁸⁹ and that the republic successfully avoided the dangers of political factions far longer and more successfully than its contemporaries.⁹⁰ More importantly for our purposes, to do so Venice created a constitutional structure that diverted the energies of the ruling class into the personal rewards from holding office while reducing the ability of the state to provide lasting bargains to particular interest groups within the ruling class. The constant turnover in patrician office holders made political bargains short-lived; the constitutional structures impeding factions prevented the development of parties that could deliver long-term commitments; and the

⁸⁷ Wills (2001:112-114) describes the public service orientation of patriciate and rejects Queller’s critique. See also Martin and Romano (2000) recounting myth.

⁸⁸ “The chorus of celebration has been upset by discordant voices and the historian who—even after a lifetime’s work on Venetian material—persists in coming to positive conclusions runs the risk of denunciation” (Hay and Law, 1989:261).

⁸⁹ Queller concludes his survey of attempts to influence elections by stating “What was really feared and hated...was faction, sect, or party. These were anathema” (1986:83).

⁹⁰ Finlay (1980:288) argues that “[i]f Venetian politics was unexciting, even monotonous, at least it was not dangerous. This was something of which to be proud, and the myth of Venice is both an expression of patrician self-congratulation and a reflection of the achievement of the ruling class. The patrician republic gave Venice five hundred years of domestic peace and stability.... A commonplace, entirely unexceptional political life thus gave birth to the extravagant and hopeful notion that at least one society had transcended the difficulties and dangers inherited by other political communities. Not all republics have been so fortunate.” See also Hay and Law (1989:268), “[t]he checks and balances which operated both because of and in spite of the constitution might also help to explain why faction did not prove as damaging in Venice as it did elsewhere....”

relative wealth of Venetian society and stability of its government finances provided sufficient spoils to satisfy the patrician officeholders without requiring slaughtering the goose that laid the golden eggs.⁹¹ Wills (2001:73) summarized Venetian government: “The life of the lagoon republic seemed, by contrast [to the rest of Europe], a seamless continuity.... Individuals rose or fell, but the corporate entity perdured.”

The alternative to a general patent law was provision of individual monopolies by the state as a reward to inventors. The practice of quasi-patents documented by Prager, the simplicity of the concept of a state-granted monopoly to a particular inventor (or other person), and the prevalence of such practices elsewhere⁹² all suggest that this alternative was available to fifteenth century Venice. Why did Venice opt for a general patent law instead? Answering the questions of “Why Venice?” and “Why the fifteenth century?” becomes easier when the above description of Venice and her interest groups is considered.

3.4.1. *Durable Bargains*

Setting aside the mythological selfless qualities of the Venetian patriciate, the reality of its behavior suggests that a system of providing individual patents through legislative or executive action in response to rewards from the would-be monopolist would not have been an unwelcome additional source of patronage and income. The structure of Venetian government, however, made such bargains virtually worthless—a society in which an early sixteenth-century proverb summed up Venice thus: “A Venetian law lasts but a week” (Finlay, 1980:37) was not one in which legislative bargains would have a high price. Virtually everything about Venetian government contributed to the instability of interest group bargains: no officeholder except the doge held office for more than a short period, and the doge’s longevity was offset by his lack of

⁹¹ The advantages of confining the elite’s ability to extract rents to this limited arena were apparently recognized in neighboring areas. Chambers (1970:101) reports that “the artisans, smaller tradesmen and peasantry seem generally to have welcomed Venetian rule as a lesser evil than unrestricted urban oligarchy or oppression by either native or Venetian landlords.”

⁹² Prager (1952:115) argues that individual monopolies were not widely available, as they were seen as conflicting with “Zeno’s law,” a Roman precedent from 480 A.D. that prohibited monopolies and which was frequently reenacted. Prager notes, however, numerous examples of local grants of monopolies, which he distinguishes as “quasi-patents” rather than patents (1952:122-126). But the frequent reenactment of Zeno’s law suggests the opposite interpretation to us: if governments were not regularly granting monopolies, there would be no need for those opposed to them to seek the reenactment of Zeno’s law to prevent further such grants. For a similar argument on a different topic, see, e.g., Wills (2001:96) noting that limits on the doge’s powers demonstrated that there were real powers to rein in.

direct executive power; elections to offices included strong elements of randomness; and the structure of the government was aimed at preventing organization of factions around interests. A more durable means of issuing monopolistic favors was necessary if those favors were to have value.⁹³

The groups one might expect from a twenty-first century vantage point to have the strongest economic interests in either fostering or controlling innovation—the guilds—were deliberately excluded from political power. Moreover, because the focus of Venetian guilds was on maintaining the boundaries of their employment, rather than on the details of how their work was accomplished, the guilds lacked the motive to oppose innovations. Guilds elsewhere were stronger and able to use guild rules to offer a measure of protection for members' innovations and importations of intellectual property.⁹⁴ Because Venetian guilds were too weak to offer such protection, innovators had to turn to the Venetian state for protection.

If not the patricians or the guilds, who benefited from patents? Two groups received important benefits from providing durable monopolies for new inventions: the inventors and the *cittadini*. In evaluating benefits, it is important to keep in mind that Venetian patents were valid only within Venetian territory, as the 1474 statute made explicit. That territory reached its zenith in the fifteenth century with the creation of the *terrafirma* state on the Italian mainland,⁹⁵ giving Venetian patents their largest geographic scope.⁹⁶ Venice thus innovated in patent law just as the value of patents in Venice reached their peak.⁹⁷

Venice was also fertile ground for innovation. As one of the major trading centers in Europe, perhaps *the* major center, goods and travelers from around

⁹³ Crain (2001:184) states that “legislative agreements, like market contracts, would be worth little without some type of enforcement mechanism.”

⁹⁴ See Bugbee (1964:19) describing Genoese and Florentine guild rules.

⁹⁵ Mallett (1984:20-33) discusses the military history of the creation of the *terrafirma* state, while Chambers (1970:24) notes the “astonishing increase of Venetian territory” in the first part of the fifteenth century and that “no ‘free commune’ or republic” in Italy expanded “on the scale of fifteenth-century Venice” (1970:54).

⁹⁶ Bugbee (1964:25) notes that many patents issued after 1474 “were enforceable...throughout the extensive Venetian empire.” Although not formally valid beyond Venice’s expanding borders, Venetian patents may also have had value in Venice’s zone of influence. Venetian power reached well beyond the boundaries of Venetian territory, with Venetian influence reaching “over a great sweep of the known world, from Bruges and London to Trebizond, Aleppo, Alexandria and beyond.” While the terms of a Venetian patent might not formally extend throughout this vast area of Venetian influence, a patent in Venice provided access to the larger territory through Venetian traders.

⁹⁷ Note that we do not contend that Venice received a net benefit from patents, but merely that Venice adopted institutions that reduced the rent-seeking losses.

the known world traveled through Venice, constantly bringing new ideas to the republic. Venice's navy had an extensive shipyard that Wills terms "the technological marvel" of its time (2001:17) and "in its time the largest industrial complex in the world" (2001:49). Venice's interest in manufacturing was growing and her relative wealth, peace, and commercial freedom meant that those with new ideas could prosper in Venice, and easily (for the time) reach world markets with their goods. Venice herself also demanded important services connected with improving and maintaining the lagoon and canals.⁹⁸ Thus, innovators were drawn to Venice for the access to markets, demand for technology, and commercial freedom she offered.

Those seeking monopolies from the Venetian state must have found it a frustrating experience compared with dealing with more centralized autocracies elsewhere. No sooner would one have concluded negotiations with a Venetian official, than a new round of elections would bring, seemingly randomly, a new occupant to a position. The structural inability of the Venetian state to conclude individual interest group bargains helped make Venice a success, but impeded the individual arrangements innovators demanded. A more stable means of obtaining monopoly rights was thus in the interest of inventors.

Immigrant inventors, or even resident inventors, would not have had the political capital necessary to secure a general patent statute by themselves. The *cittadini*, however, would have. Bureaucratizing patents increased the value of the *cittadini's* positions within the Venetian state by giving them a new set of benefits to bestow. As a largely merchant class, they would have seen the benefits of increased innovation in providing additional goods to sell abroad, and as primarily commercial interests they would have had little reason to oppose monopoly rights for innovators since the merchant-middleman's share came off the top. Moreover, the very lack of a means of creating stable interest group bargains through political officials that had made valuable a general, bureaucratic approach, meant that the patricians were giving up little by allowing the *cittadini*-dominated bureaucracy to handle patents. Further, by using a bureaucratic allocation of patents rather than allowing, for example, the doge to award the patents, Venice may have reduced the ability to rent-seek in obtaining patents.⁹⁹ Lastly, the stability of state finances meant that giving up

⁹⁸ Wills (2001:17) notes "the perpetual struggle to keep lagoon and land in a proper relationship."

⁹⁹ See Mueller (1989:245), "[h]aving a committee award grants or licenses instead of a single administrator can discourage rent seeking by increasing the number of people who must be won over to achieve the award."

the potential revenue source of selling monopolies, so important in England as we discuss below,¹⁰⁰ would not have been a problem for the Venetian elites.¹⁰¹

Is our explanation an improvement on Prager's? We think so. Understanding interest group politics across more than five centuries is a risky business, but the broad outlines of a public choice flavored account are here. Our analysis provides answers to two questions that Prager's does not: Why Venice? Why the late fifteenth century? It does so through an explanation that rests on the self-interested behavior of interest groups in Venetian society.¹⁰²

3.4.2. *Why Not Florence?*

Answering the question "Why Venice?" is incomplete, however, without a parallel explanation of why not other city-states. Space precludes a comprehensive survey of the numerous fifteenth century Italian city-states, but a comparison with Florence, a major rival to Venice and the place where Bugbee (1964:47) located the first modern "patent," supports our analysis. Given that Florence was the first to grant a patent, the idea of the patent was available there. Moreover, Florence had an impressive tradition of technological innovation¹⁰³ and a high regard for lawyers (McNeill, 1974:102), both of which should have made it fertile ground for an innovation like a general patent law. Finally, Florence shared a number of economic characteristics with Venice which ought to have created demand for similar innovations.¹⁰⁴ The challenge then is to explain why Florence did not generalize the Brunelleschi patent into a general patent law. As we argued above, the structure of Venetian government made individual interest group

¹⁰⁰ See below fns 184-217.

¹⁰¹ Revenue issues can be critical in determining constitutional structure (Boudreaux and Pritchard, 1993:117).

¹⁰² There may be other answers as well. One might examine the intellectual climates of various Italian city-states in search of the proper mix of republican ideas on the limits of arbitrary power, economic freedom that produced innovation, and ideas about private property that promote patents of innovation. Given the widespread quasi-patent practice, however, we think the crucial questions lie with understanding which institutional structures produced durable interest group alliances in favor of limitations on the power to grant monopolies.

¹⁰³ See Brucker (1969:213) noting Florence's "long tradition of technological skill and innovation." McNeill (1974:57-58) argues that Florence "surpassed" Venice with respect to creativity and innovation in the fourteenth century.

¹⁰⁴ For example, both city-states were wealthy trading societies. Brucker (1969:87) summarizes Florence's position: "Her economic assets were formidable: a large and industrious population; a massive industrial plant; entrepreneurial expertise; a vast commercial and financial network. By the standards of the age, Florence was a wealthy city." Like Venice, Florence had extensive commercial ties throughout Italy, giving it an extended area of trade dominance, one that made a monopoly granted by Florence valuable (Brucker, 1969:53).

bargains difficult to sustain—in simpler terms, it was hard for offices to stay bought when their occupants rotated frequently—rendering the grant of individual monopolies of low value, and spurring the institutional shift to a general patent law. Our answer to the question “Why Venice?” is that the other Italian states had substitutes for a general patent law that offered interest groups a cheaper alternative while Venice did not. Was that true of Florence?

Prager’s analysis of Florence suggests it was: he argues that, because Florentine guilds were more powerful than their Venetian counterparts, they offered an alternative means of procuring the benefits of a patent monopoly through guild rules.¹⁰⁵ In public choice terms, an innovator seeking a monopoly on an innovation would find it less costly to work through his guild to secure monopoly rights than to work through the state on an individual basis (as with Brunelleschi’s patent) or for a general patent law.

For this explanation to suffice, it must be true that (i) Florentine guilds were powerful enough to offer durable bargains (and so more powerful than their Venetian counterparts); (ii) Florentine guilds offered a less costly means of securing monopolies than Florentine government; and (iii) Florentine guilds lacked internal interest groups that would oppose rewarding innovation and which were capable of blocking guild actions to protect inventors. To determine if these necessary conditions were true requires a brief examination of Florentine guilds.

Guilds were an important and powerful part of Florentine society. They were the product of a lengthy clash between merchant-bankers and artisans, resulting in the former assuming senior partner status in the guild structure; and guild membership was a prerequisite for political office (Trexler, 1991). As a result, “[t]he gild [sic] was not the occupational organization it seemed, but a filter mechanism for controlling access to political office. The classical gild defended the interests of powerful generalists, the power brokers of Florentine society, whose affinity to their gild brothers was based more on family and patronal ties than on occupational ones” (Trexler, 1991:15). Florentine guilds thus had the political heft necessary to protect any bargains they made.

Florentine guilds were certainly more powerful, at least on paper, than their Venetian counterparts, and appear to have had sufficient authority to enforce durable bargains. For example, “[s]tudents of the Lana guild [which controlled the woolen industry] have emphasized that this organization was a monopoly

¹⁰⁵ Prager (1952:131) writes that “[i]n Venice the gilds [sic] were powerless to grant or allow monopolies by actions of their own. *This accordingly, was the first modern patent statute. It was apparently enacted in response to ideas prevailing in gild circles, which were influenced by the ideas of industrial and intellectual property.*” [emphasis in original].

of the manufacturers, who employed it to control the industry and to exploit the subordinate personnel.” Moreover, “the guild’s authority over *lanaiuoli* and *sottoposti* [groups of workers] was complete and absolute, and ... extended to the most minute details of the production process” (Brucker, 1969:64). Guilds thus apparently had the means to impose binding regulations on members and so to offer valuable monopolies through regulation within specific industries. The first necessary condition is thus satisfied.

Compared to Florentine government, the guilds also appear to be a more satisfactory source of durable commitments. Florentine government shared many of the characteristics of Venice that made legislative monopoly grants worth little, including random elements in the selection of officeholders,¹⁰⁶ short tenure in office,¹⁰⁷ strong factional politics,¹⁰⁸ a myth of disinterested governance¹⁰⁹ combined with the political dominance of an aristocratic class (Hibbert, 1980:28), and frequent attempts to use government to gain advantages over rivals.¹¹⁰ Further, no particular industry, not even the powerful woolen industry, dominated Florentine politics, making government subject to shifting coalitions among interest groups.¹¹¹ Much of the political elite also disdained the turmoil of commercial activity,¹¹² making it unlikely to be sympathetic to utilitarian arguments for patent protection. Florentine society

¹⁰⁶ Hibbert (1980:26-27) describes Florentine government as being based on random selection of eligible guild members (those who were neither in debt, had recently served, or were close relatives of current office holders).

¹⁰⁷ Trexler (1991:27) summarizes Florentine government.

¹⁰⁸ Brucker (1969:151) observes “[i]n the background of every controversial public issue were private rancors and animosities, real or imagined grievances, particular interests to be attacked or defended.”

¹⁰⁹ See Hibbert (1980:27), “[t]he Florentines were immensely proud of this system which, upheld by them as a guarantee of their much vaunted freedom, they were ever ready to compare favourably with the forms of government to be found in other, less fortunate Italian states. Venice, admittedly, was a republic, but it was a republic in which, so its detractors soon pointed out, various noble families played a part in government which would have been impossible for such families under the constitution of Florence.”

¹¹⁰ See Brucker (1969:151), “[t]he scramble for privileges and immunities, for tax concessions and judicial dispensations, influenced Florentine public life at every level.”

¹¹¹ See Brucker (1969:132), “[t]he great range and variety of business activity produced an entrepreneurial class with diverse interests and needs. Although woolen cloth manufacturers formed the most potent interest group in the commune, they did not enjoy a political monopoly. They shared power with bankers, traders, and druggists, and also with professional men (lawyers, notaries, physicians), rentiers, and a few artisans whose economic interests did not always coincide with those of the textile manufacturers.”

¹¹² According to Brucker (1969:88), the elite manifests “a lack of enthusiasm for entrepreneurial activity; a preference for the life of the rentier and the country gentleman; the enhanced attraction of legal or humanistic training and a bureaucratic career.”

also became more conservative in the fifteenth century,¹¹³ making it more resistant to policy innovations. Even as the Medici consolidated their power in the mid-1400s, politics continued to center on “the preoccupations of [Florence’s] leading families—and their supporters—with status and influence.” Medici rule itself, described as a “veiled tyranny,” tended to rely heavily on indirect influence through placing supporters in various positions of power (Hay and Law, 1989:253-257). The Florentine state thus would have been a high-cost provider of patents relative to the guilds in most instances, and so our second necessary condition is also satisfied.

What of the internal incentives of the Florentine guilds? Would they have prevented innovators from seeking monopoly privileges or welcomed the notion of rewarding innovation? The stereotypical account of craft guild-based economic regulation focuses on their incentives to resist change and stifle innovation. For example, guilds are often characterized as “enemies of industrial progress” (Lane, 1973:320).¹¹⁴ Such guilds would be unlikely to promote innovation. Unlike craft guilds, however, Florentine guilds were primarily political organizations. According to Trexler (1991:15), guild membership was sought after, not so much for “occupational affinity,” but as an avenue to enhance one’s “political and social influence and governmental position.” Similarly, MacKenney (1987:33) concludes that in Florence, “the guild leadership represented an aristocracy not artisan society directly.” Florentine guilds thus do not appear to have had internal incentives to oppose either innovation or policies that rewarded innovation. Moreover, there is some evidence of the issuance of quasi-patents by Florentine guilds in 1377 and 1409 (Prager, 1952:130). The third necessary condition is also satisfied.

This is not quite the entire story, however. Florentine guilds were powerful on paper but in practice their regulatory activities were less extensive, and recent scholarship questions the extent of their power. As Brucker (1969:64-65) notes, “behind the façade of massive regulation and control, existed a relatively free industrial enterprise, whose economic functions were determined as much by the requirements and pressures of the market as by the authoritarian dictates of the guild consuls.”¹¹⁵ Enforcement of rules was lax; penalties were often reduced. Finally, the guilds were in decline by the end of the fourteenth

¹¹³ “The most notable characteristic of Florentine (and Italian) history in the later Quattrocento is the spirit of conservatism which pervades every phase of human activity” (Brucker, 1969:256).

¹¹⁴ Prager (1952:128) notes, “[i]t has often been pointed out that guilds were the archenemies of invention and inventors.”

¹¹⁵ According to Brucker (1969:65), “[t]he surviving records of business companies indicate that the operations of these firms were not seriously hampered by the imposing body of regulatory legislation on the books.”

century, weakening their authority during the period in which patents developed in Venice.¹¹⁶ Even in their decline, the guilds may still have been better positioned than the Florentine government to provide a durable bargain. But although Florentine guilds were more powerful than their Venetian counterparts, the scholarship suggesting the Florentine guilds were less powerful in practice than on paper does not allow us to simply assume the guilds offered a cheaper alternative to a government-based general patent law. We must therefore dig deeper to explain the different outcomes in Florence and Venice.

Thus far we have concentrated on the supply side of the equation, showing that in Florence a competing supplier (the guilds) was positioned to offer innovators intellectual property rights at a lower cost than the Florentine government might have been able to do. What about the demand side? Was there an interest group in Florence that would have played the roles of the *cittadini* bureaucrats and businessmen in Venice and benefited from creating a general patent law? Would Florentine inventors have created the same pressures for protection?

There is evidence that Florence lacked interest groups that would have played the role of the *cittadini* and inventors in Venice in seeking state-issued patent rights. First, while Venice was expanding its territory and influence during the fourteenth century, Florence was quietly declining.¹¹⁷ The rewards of policy innovations that granted monopolies within the state's zone of influence were thus increasing in Venice and declining in Florence. The more conservative, less entrepreneurial, and less innovative culture in Florence would have also reduced the size and influence of any inventor class relative to its influence in Venice. Indeed, the collective character of guild knowledge is itself incompatible with the individualist assumptions about invention necessary to support a patent system built around individual rights.¹¹⁸

Second, the Florentine social order offers an additional reason to suspect that the demand for a general patent law was smaller than it would have been in Venice, because the powerful interests within Florentine society would prefer to address such issues through the guilds. As in Venice, guilds in Florence were not merely trade associations. Also as in Venice, guilds were organizations devoted to maintaining political control in the hands of an oligarchic merchant

¹¹⁶ See Brucker (1969:98), “[t]he communal government had steadily whittled away the rights, privileges and immunities of the guilds.”

¹¹⁷ Brucker (1969:87-88) states “evidence of wealth and prosperity, so impressive to the visiting foreigner, disguised some serious weaknesses.”

¹¹⁸ We are grateful to Doron Ben-Atar for pointing this out to us.

class with diverse economic interests.¹¹⁹ Unlike Venice, however, Florentine guilds played a larger role in mediating intra-oligarchic disputes (Brucker, 1969:63-64) as well as helping the oligarchs control the general population. As Trexler (1991:27) summarizes:

A complex subgovernmental system of clientage built upon concepts of *familia* was one of the social instrumentalities that filled this gap. *Familia* possessed a more sacral binding force than did the government contract; defiance of government brought only banishment, but violation of personal allegiance to a patron led to fatal vendettas. To understand Florentine government one must, to borrow Karl Morrison's words, conceive of it as "a league of Mafia families."¹²⁰

The guilds provided a means for the elite to mediate intra-group conflicts, manage the economy, and control the lower classes. The picture of Florence that emerges from the historical literature thus resembles the modern-day interlocking directorates of South Korean *chaebol*¹²¹ more than a hot-bed of technical innovation. Florentine merchant families lived in a world in flux due to changing business conditions,¹²² but they used their guild structures to provide order to deal with that chaos.¹²³ Social institutions like the guilds mediated the changes introduced by the vagaries of trade, thus making them the most likely institution to also address questions raised by technical innovation. Government was slow to change, occupied with internal power struggles among the powerful families such as the Medici.¹²⁴ Patent law's explicit utilitarian goal of encouraging change was thus not something we

¹¹⁹ See Brucker (1969:63-64), "[a]lthough the [Lana] guild had jurisdiction over the personnel of the entire industry, its membership was limited to the *lanaiuoli*, while the subcontractors and salaried laborers were rigorously excluded. The guild had many functions. It possessed a broad mandate to protect the industry's welfare, and this might prompt the consuls to agitate for favorable legislation in the commune or to arrange for the bulk purchase of such essential commodities as oil and wood."

¹²⁰ Molho (1995:118) also reports that after 1434 "power in Florence was overwhelmingly exercised by personal influence, expressed through political patronage, instrumental friendship, and marriage alliance. Now, more often than not, crucial decisions on key policy issues were taken in the shadows, in the privacy offered by the fortress-like walls of the Medici Palace, or in the country estates of Medici lieutenants."

¹²¹ On the chaebol system generally and the concentration of control in a few families, see Song (2002).

¹²² See Brucker (1969:58), "[t]he business world was in constant flux."

¹²³ The cloth industry ("Lana") guild "provided some unity and order for this large, decentralized industrial complex" (Brucker, 1969:63).

¹²⁴ Brucker (1969:136) states that the pre-Medici government that lasted from 1382-1432 was "conservative," moving toward more oligarchic control.

would expect to see recognized as a social goal in Renaissance Florence. Rather, the goal was to manage external shocks to the Florentine economy and mediate conflict among Florentine interest groups.

Managing intellectual property rights through the guilds was thus the course dictated by the interest groups within Florentine society. The guilds were in a position to offer a rival source of intellectual property rights, no interest group within the government had the incentive to compete with the guilds by lowering the price of patents through a general patent law, and the economically powerful focused on mediation of intra-group conflict rather than encouraging innovation. Florence's failure to develop a general patent statute before Venice, despite the Brunelleschi patent, is therefore both consistent with our analysis and not surprising.

3.4.3. *Why Not Before the Fifteenth Century?*

Answering this question is easier. Although many of the features of Venetian society that help explain why the provision of monopoly rights through a general, administrative patent law, rather than through legislative or executive grants existed before the late fifteenth century, three factors help explain why it took until then for the practice to appear.

First, monopoly patent rights granted by Venice became more valuable in the late fifteenth century. After its expansionist wars and growing dominance of trade, fifteenth century Venice offered a particularly rich prize for innovators, making the creation of a means of securing monopoly rights valuable. By shifting patents from individual executive or legislative grants to a bureaucratized system, Venice created a durable means of allowing monopolies in innovations that served the interests of both innovators and the *cittadini*-dominated bureaucracy. Moreover, Venice's rise continued through the 1400s, producing an ever-increasing class of innovators¹²⁵ who could lobby for policy changes.

Second, as Prager has thoroughly documented, monopolies were illegal in both ancient Greece and imperial Rome.¹²⁶ In the face of categorical prohibitions in ancient laws on monopolies, such as Zeno's Law of 483,¹²⁷

¹²⁵ See Walterscheid (1994:710), after the fall of Constantinople in 1453 "there was a significant influx into Venice and the other Italian city-states of craftsmen and artisans from the east."

¹²⁶ See Prager on Greece and Rome (1952:112-115).

¹²⁷ See *Corpus Juris Civilis v. XIII, Title LIX* (1932:120), Zeno's law states: "We order that no one shall be so bold as to monopolize the sale of clothing of any kind, or of fish, combs, copper utensils, or anything else having reference to the nourishment or the common use of mankind, no matter of what material it may be composed, whether he does so by his own authority, or under that of a Rescript already promulgated, or which may hereafter be promulgated...."

developing legal means of providing monopolies took time and the investment of intellectual capital. In short, the heavy weight of tradition, as well as the persuasive authority of Greek and Roman writings against the practice, meant that the cost of adopting a policy that protected monopolies was high. It is not surprising, therefore, that it took time and a degree of pent-up demand before such a policy could be adopted.

Third, the utilitarian goal of patent laws, encouraging innovation, would be most highly valued where political entities saw themselves in competition with rivals for trade.¹²⁸ The competitive environment of fifteenth century Italy provided just such an incentive to search for both technological innovations and policy innovations to encourage them. Although such competition did not begin in the fifteenth century, the growth of technological change during the Renaissance and the competitive environment that existed in Italy among the various city-states surely made such policy innovations more desirable.

The constitutional event that occurred in Venice in 1474 was the creation of an administrative means for issuing patents, divorcing them from the direct rent-seeking of the grant of monopoly rights by the executive or legislature that existed elsewhere in Europe.¹²⁹ This innovation put in place the first of the institutional features that define modern patent law.

From Venice, the use of monopoly patents to reward both innovators and importers of new techniques spread throughout Europe,¹³⁰ due in part to the migration of Venetian artisans and craftsmen.¹³¹ It is not simply the existence of monopoly rights that concerns us, however, but the institutional structure of

Blackstone (1769:115) expressly mentions Zeno's law prohibiting monopolies, quoting "No one shall exercise a monopoly over any ... material, whether by his own authority or under that of an imperial rescript heretofore or hereafter promulgated."

¹²⁸ See Walterscheid (1994:706), "[t]he European patent custom arose out of the desire of rulers to encourage the development of new industries within their realms." There are, of course, other means of encouraging innovation besides the grant of monopolies.

¹²⁹ Of course, so long as rents were available, interest groups would seek them in the administrative arena as well. Checking that required the later innovations discussed below.

¹³⁰ Prager (1952:139) notes "a patent system almost identical with that of Venice grew up everywhere, before 1600." Mokyr (1990:79) states that the Venetian patent system "was followed widely and by the middle of the sixteenth century the idea had penetrated much of Europe." Walterscheid (1994:711) discusses the spread of the patent system into German states (also Pohlmann (1961)), while Prager (1944:40) discusses the spread of the patent system to France.

¹³¹ Mandich (1948:205) notes that Italian immigrants were among the first to seek monopoly patents, while Greenstreet (1972:4) says "[f]amiliar with the Venetian law and fearful of local competition, the glassmakers asked for and received patent protection wherever they settled abroad." See also MacLeod (1988:11), "[e]migrant Italian craftsmen, seeking protection against local competition and guild restrictions as a condition of imparting their skills disseminated knowledge of their patent systems around Europe."

patent law. The mere grant of a monopoly to a crown's favorite is not enough to tie a practice to modern patent law, regardless of the reason given for the crown's generosity. The first of the northern European states to follow Venice down this path in a noteworthy fashion was Britain.¹³² We thus turn next to examining the British experience.

4. ENGLAND AND THE STATUTE OF MONOPOLIES

Histories of patent law focus much attention on England's 1624 Statute of Monopolies.¹³³ It is one of the most famous Parliamentary enactments and is largely regarded as the foundation of the present British patent system.¹³⁴ It was also a constitutional milestone more generally. Alan Smith calls it "the first statutory limitation of the royal prerogative and as such a landmark in constitutional history."¹³⁵ Although the Statute certainly appears to be a landmark, with no new legislation on monopolies for over two hundred years thereafter (Greenstreet, 1972:7),¹³⁶ recent scholarship suggests this emphasis is misplaced.¹³⁷ It can be argued that the Venetian statute is a more advanced scheme, providing for a procedural mechanism for obtaining patents as well as an enforcement mechanism. In fact, some have asserted that the Statute of Monopolies was not so much a statutory advancement in the area of patent law as it was a response to royal abuses and a codification of the common law.¹³⁸

¹³² We caution the reader that we are not suggesting that England explicitly copied from the Venetian Statute of 1474 in creating the 1624 Statute of Monopolies. Rather, we contend that Venice's accomplishments were widely known in Europe by the 1600s, and so the idea of limitation of patent rights to patents of inventions was available to Parliament.

¹³³ Hulme (1896a:141) states that "in practice the Statute of Monopolies has been regarded as the first and final source of authority." Although we rely on the standard historical accounts of English patent custom, we are well aware that most "were written by lawyers or economists with present-day causes to plead" (MacLeod, 1988:3-4 notes the interests of J.W. Gordon, H.G. Fox, William Hyde Price, E. Wyndham Hulme, and others). We have kept these biases in mind, controlling for them by keeping the lodestar of interest-group politics firmly in mind.

¹³⁴ Sherman and Bently (1999:208) note that the Statute of Monopolies "is now widely accepted as laying down the foundations of patent law." Kyle (1998:203) notes that "the Statute of Monopolies...is [w]idely regarded as the foundation statute of patent and copyright law."

¹³⁵ See Smith (1973:175), "it was the first limitation of the Crown's prerogative by an Act of Parliament. It was the shape of things to come."

¹³⁶ See also Mossoff (2001:1275), after the Statute of Monopolies "never again will the crown and Parliament battle over patent monopolies."

¹³⁷ Sherman and Bently (1999:208), e.g., assert that contemporary accounts do not give any particular emphasis to the Statute, making the development of English patent law a more gradual process rather than the result of a statutory innovation.

¹³⁸ Heald and Sherry (2000:144) state that "[t]he Statute of Monopolies...codified the common-law prohibition on monopolies expressed in Darcy," while Hulme (1896b:44) notes

Other current work has shown convincingly that natural rights theories also played a more important intellectual role in the creation of modern patent law.¹³⁹ We step back from these contested interpretations and focus on the one unambiguous feature of the Statute and the struggles over monopolies that produced it: the dispute between crown and Parliament over who would evaluate the validity of individual grants of patents of monopoly. The innovation introduced in England was not the overcoming of the common law's long-standing prohibition on all monopolies, as the crown continued to issue monopoly grants, but the assertion of the right to have claims to monopolies adjudicated in a neutral forum against a utilitarian standard.

4.1. THE RISE OF MONOPOLIES UNDER THE TUDORS

English monarchs, like their counterparts across the Continent,¹⁴⁰ rewarded favorites and sought to control trade behavior through the grant of monopoly rights.¹⁴¹ Parliament, too, played a role in creating monopolies, through protective legislation for guilds and towns.¹⁴² Although the common law was firmly opposed to monopolies long before 1624,¹⁴³ the monarch had the power to dispense with the application of the common law in specific instances, which allowed the grant of monopolies through the monarch's prerogative power. Indeed, Edward III made aggressive use of letters of protection, which served much the same purpose as patents of monopoly, to provide incentives to foreigners to bring new technologies to England.¹⁴⁴ As a national market

“the general policy of monopolies is found to conform strictly to the type recognized as admissible by common law, of which the Statute of Monopolies conveys a condensed and imperfect version.”

¹³⁹ Mossoff (2001:1257) contends that “natural-law philosophers shaped much of the initial common-law definition of patent rights.”

¹⁴⁰ See above fn 41.

¹⁴¹ See Greenstreet (1972:5), “[i]n England the grant of monopolies by the Crown had been widely used by Edward II and Edward III as a means of promoting and regulating trade and as a source of revenue.”

¹⁴² See Price (1906:6), “[i]nstances of grants of monopoly must be sought, not in the royal patents, but in acts of Parliament confirming and protecting local advantages that were being threatened [by the development of a national economy.]”

¹⁴³ See Fox (1947:9), “[m]onopolies constitute an interference with the common law right possessed by every member of the community to carry on any trade or business he chooses in such a manner as he thinks most desirable in his own interests.”

¹⁴⁴ According to Fox (1947:45), Edward III used “inducements held out to those aliens who were skilled in the arts and had carried them to a state of perfection which it was desirable to transplant to English soil.”

grew in England and Wales, the value of a royal patent as a prohibition of competition also grew.

During the 15th and 16th centuries, the English crown was fairly active in granting importation franchises and monopolistic privileges.¹⁴⁵ Over time a systematic patent regime evolved.¹⁴⁶ But why England rather than France or one of the other European states? We contend that England took the lead in the grant of monopoly patents because it offered a jurisdiction where such monopolies had the greatest value,¹⁴⁷ the central government's other policies were consistent with granting national monopolies,¹⁴⁸ and the central government lacked the resources to invest directly in its own monopoly endeavors.¹⁴⁹ Thus, a crucial element in making patents valuable, the national scope of the rights granted, provided a greater incentive to seek patent rights in England than elsewhere on the Continent.¹⁵⁰ This in turn provided English monarchs with a more valuable privilege to grant, leading to abuses which then spurred reforms by increasing the costs imposed by patents on English society.

¹⁴⁵ See MacLeod (1988:11), “[a]cquisition of superior Continental technology was the predominant motive for the issue of patents under the guidance of Elizabeth I’s chief minister, William Cecil, later Lord Burghley.” Other European states followed similar policies. See, e.g., Coxe (1787) discussing the successful European practice of issuing patents of importation.

¹⁴⁶ Price (1906:14) asserts that the “extension” of the patent system “was a natural...result of the effort to nationalize the country” and offered a means of central control. Hulme (1896b:44) discusses the transition of English patent law under the Tudors. See also Hulme (1900).

¹⁴⁷ See Price (1906:4), “[a]dequate guaranty of monopoly over a wide industrial area is an essential prerequisite of success for [patents], and hence Italy, Germany, and the Netherlands offered no congenial field. Isolated industrial centres within these countries, whether autonomous or not, could not protect an inventor against infringement beyond their own borders, so that the advantages of an extended market were not sufficiently attractive to encourage the divulging of a secret of manufacture.” Fox (1947:28) calls Germany a patchwork of principalities, Italy a “muddle pattern of small, independent jurisdictions,” France a “feudal association of provinces,” and describes a Spain composed of four kingdoms.

¹⁴⁸ “Not only did economic organization in France foster local exclusiveness, but the efforts of the central power were calculated to strengthen rather than to supersede guild regulation in its expanded form of national monopoly” (Price, 1906:5).

¹⁴⁹ Price (1906:5) states “the financial resources of the French monarchy tempted the state into a more active intervention in industry than was possible to the poorer English government, so that monopolies were less likely to be granted to private individuals.”

¹⁵⁰ See Price (1906:7), “[t]he period covered by the reigns of Elizabeth [I], James I, and Charles I was not the beginning of industrial monopoly. It was important chiefly because of its national and systematic character, whereas hitherto monopoly had been much more a local phenomenon. The system of monopolies under royal patronage was in fact a somewhat reactionary attempt to reconstitute monopolies along national lines.”

4.1.1. *Elizabeth and the Expansion of Patents of Monopoly*

Monopolies granted to induce innovation or importation of new technology made up only a small fraction of royal grants of monopoly privileges until the reign of Elizabeth I.¹⁵¹ With England still largely agricultural and lagging behind much of the rest of Europe in the industrial arts,¹⁵² the Queen made aggressive use of patents of monopoly to encourage the growth of domestic manufacturing and to lure skilled foreigners to England's shores (Fox, 1947:61). For example, more than fifty patents of monopoly were granted from 1561 to 1590 (Greenstreet, 1972:6). In addition to expanding the number of patents, Elizabeth anglicized them as well. Over the course of her reign there was a gradual shift from the award of patents to foreigners to their award to locals (Fox, 1947:61). English scientific knowledge was growing rapidly during this period as well, as "in the eighty years before 1640 England, from being a backward country in science, became one of the most advanced" (Hill, 1965:15). There were thus more new ideas with potentially patentable consequences. Not only did scientific knowledge grow, but so did legal knowledge, caused by the "invasion of the universities and the Inns of Court by the gentry" (Neale, 1949:291).¹⁵³

Patents were not simply granted on request. Particularly during the early years of her reign, Elizabeth required an investigation into the nature of the invention and the potential impact of the award on the "fortunes of interested parties" (MacLeod, 1988:12). Thus, while one can argue that patent custom "began to flourish" in England under Elizabeth (Walterscheid, 1997:69), her time in power does not present a simple evolution toward a modern notion of patents. After an initial tendency to reward innovation, later important

¹⁵¹ Greenstreet (1972:5-6) describes Henry VI's patent to John of Utynam for stained glass in 1449 as the only example of English patent for invention "until well into the next century;" the next was not until 1552, for Normandy glass. Hulme (1896b:44) cites Elizabethan monopoly patents as the first, finding nothing like them recorded in earlier Patent Rolls.

¹⁵² "Elizabethan England was primarily an agricultural community. Its chief wealth was in land and its ruling class was the landed gentry—the middling and big businessmen of a rural society" (Neale, 1949:19). Kishlansky (1997:6) notes "[a]t the beginning of the seventeenth century most British people were farmers." Kenyon elaborates (1978:15), describing England as "a small, poor country with a single crop economy; her dependence on the exports of unfinished woolens put her on a par with the modern African cocoa state...her industries made a miniscule contribution toward the gross national product."

¹⁵³ Neale observes that the education many received gave heavy emphasis to the classics and the Bible, which "...trained members to see issues of high principle in the details of proposals which came before them, probably made their speeches longer, and made it far more improbable that they would meekly submit to proposals put before them." See also Russell (1971:181).

innovations were denied patents;¹⁵⁴ three of the most odious patents (for vinegar, starch, and playing cards) were created late in her reign (Hulme (1896b:53),¹⁵⁵ when the “exhaustion of the Crown’s reserves of patronage” forced her to increasingly rely on patents to reward courtiers (Farmer, 1967:3).¹⁵⁶ Elizabethan practice remained centered on the monarch’s grant of monopoly rights, a practice that sometimes coincided with invention and discovery, and sometimes did not.¹⁵⁷ The question is thus what prompted England to move beyond the royal prerogative and the net benefits to the Crown as the basis for patents and to credibly limit them to cases of invention by creating a neutral forum for their adjudication.

The answer lies in two things: the nearly perpetual search by English monarchs, at least from the Tudors on, for new sources of revenue, and in the struggle between crown and Parliament over the limits to the crown’s powers. The fifteenth century was a time of great inflation¹⁵⁸ (largely due to population increase) (Russell, 1971:11) and the crown’s revenues in nominal terms at the end of the century were little different from what they had been at the start.¹⁵⁹ For example, a price index of basic commodities rose from 100 in 1510 to 685 in 1597, including an increase of 180 points in 1597 (Russell, 1971:6).¹⁶⁰ The

¹⁵⁴ For example, inventions covering a method of armor plate, a land reclamation method, a water closet, and a stocking frame (Fox, 1947:74).

¹⁵⁵ Price also (1906:8) reports that, “[i]n the course of the third decade (1581-90), more obvious abuses crept in.”

¹⁵⁶ Smith (1984:240) observes “[o]ne way she could reward [her courtiers and officials] without direct cost to the Crown was by granting them patents of monopoly” at a time when “the Queen was saving every penny she could for the war and had even less money than usual to bestow on her courtiers and officials.” Patents could be extraordinarily valuable. Prestwich (1966:62-63) details the profits from the monopoly of issuing licenses to keep taverns and sell wines by retail given by James I to some favorites. These men then “sublet” it to a syndicate of three, who sold shares in it. One of the investors in these shares paid £540 for his share in 1605 and valued it at £1,500 one year later. Other piecemeal shares were “flipped” among favorites, with one selling for £500 a day after it was bought for £100. In another case, “Lady Bedford, a notorious court-beggar,” received a £1,000 payment for procuring the monopoly of gold and silver thread for the patentees (Prestwich, 1966:278).

¹⁵⁷ Monopolies served many royal interests. For example, until 1695 “favored printers and booksellers” were given monopolies so that they “then shared the state’s interest in suppressing illegal publications” (Starr, 2004:25). Starr (2004:28-29) also describes patents granted to booksellers after 1500.

¹⁵⁸ See Russell (1971:5), “rapid rise in prices” began about 1510 and lasted until “at least” 1620.

¹⁵⁹ Russell (1971:31-38) describes problems with revenues and their failure to keep up with inflation, noting that the basis for assessments were “ridiculous” and out of line with actual property values.

¹⁶⁰ Kishlansky (1997:16) notes “[b]asic agricultural commodities were four times more expensive in 1600 ... as they had been in 1500.”

crown “was the most important victim” of the price increases, since “defective administration and lack of overall control made it slow to adopt” innovations to raising revenue from its lands (Kenyon, 1978:17). In real terms, crown revenue had fallen by forty percent between 1509 and 1601. This forced the crown to liquidate capital; Elizabeth sold £37,000 in land in her last five years (Scott, 2000:72).¹⁶¹

With respect to the prerogative power, there was no question that the crown had the right to issue some patents of monopoly. Even the common law allowed the monarch to create monopolies if they were for the benefit of the realm.¹⁶² But the royal prerogative was technically limited by the common law, even under Elizabeth and her predecessors. For example, Parliament voided a monopoly on the importation of sweet wine granted by Edward III in 1373 as violative of the common law (Fox, 1947:58), and a series of statutes under both Edward III and Richard II reaffirmed the freedom of trade.¹⁶³

The problem was the exercise of the royal prerogative was unchecked by the common law courts. Cases involving the prerogative power were brought before the Court of Star Chamber (or other conciliar or non-common law courts) or the Privy Council,¹⁶⁴ bodies that were much more sympathetic to the royal prerogative than to the common law’s antipathy toward monopolies, and which were also thought to be more “consonant with royal dignity” than the common law courts (Fox, 1947:120). And, as Hulme has written, “to dispute the Queen’s licenses before the Council or in the Court of Star Chamber...constituted a risk which few individuals cared to run, as the Courts were apt to regard non-compliance with the requirements of the patentee as evincing a want of respect for the Queen’s authority” (Hulme, 1896a:151).¹⁶⁵ As a practical check on the prerogative power, therefore, these courts were of limited use. While technically restricted by the common law to instances in which the monopoly would benefit the realm, the absence of an effective review mechanism meant that the only route to void a monopoly was by securing passage of a bill overturning it in Parliament or by persuading the

¹⁶¹ Kenyon (1978:54) notes a drop of £40,000 in revenue due to land sales over fifteen years.

¹⁶² Hulme (1896a:143) notes “the well-known citation from the *Year Book* (40 Ed. III, fol. 17, 18) to the effect that the Crown has power to grant many privileges for the sake of the public good, although prima facie they appear to be clearly against common right.”

¹⁶³ Fox (1947:59) lists these statutes.

¹⁶⁴ Holdsworth (1924:284) notes that “throughout the sixteenth century the moving force of the constitution was the Council, and that it exercised an active control over all machinery of government, and over the whole administration of the law.”

¹⁶⁵ In fact, prior to *Dary v. Allen* (1602), there were only four common law reported cases relating to monopolies, and only two involving patents. As Fox (1947:120) notes, “[a]ctions at law concerning patents were, to all intents and purposes, forbidden.”

monarch to revisit the grant, both costly and time-consuming endeavors whose success was far from certain. Thus, a grant of monopoly privileges by the monarch was a valuable and durable commodity (at least so long as one remained in favor with the Crown).

Not surprisingly, given the lack of an effective check, abuses began to appear. During her reign, for example, it became increasingly common for Elizabeth to bestow what many viewed as unwarranted privileges upon favorite courtiers such as Sir Walter Raleigh (Mitchell, 1990:43; also Bugbee, 1964:37; Fox, 1947:74-75). As MacLeod has written, “without a committed, firm hand guiding the system to well-defined ends, malpractices began to creep in that were to bring it into disrepute and ultimately endanger its existence.”¹⁶⁶ Some of the late-period patents granted rights to established techniques or items and so constituted attacks on established industries, spurring opposition to the most egregious (Price, 1906:9). Elizabeth’s court had become “the Mecca of patronage, a place and incomparable profit to be had through the favour of the great ones of the land” (Neale, 1949:213), making the abuse of patents no surprise.

Monopoly patents also offered an opportunity for the crown to make money indirectly, as William Hyde Price’s description of the starch monopoly makes clear, the “courtiers who successively enjoyed it were in debt to the queen, and she apparently hoped to reimburse herself by helping them at the expense of her subjects” (Neale, 1949:15). Although Price concludes that Elizabeth rarely directly benefited financially from patents, and that invention patents were generally not given for political reasons, he also notes that the Queen was quite willing to use patents as a substitute for direct payments to reward her servants and courtiers (Neale, 1949:16-17).¹⁶⁷ Hulme (1896a:144) is less charitable, concluding that the patent system under the Tudor dynasty was deprived “of all constitutional value.”¹⁶⁸ Regardless of whether one views Elizabeth as a

¹⁶⁶ See MacLeod (1988:1265-1266), “[d]uring Queen Elizabeth’s reign, the Privy Council’s records are replete with patent monopolies issuing regardless of whether an industry was new to the realm or not, which was the original purpose and justification for the issuance of such letters patent.” Benedict (1985:314) notes that during the 17th century, the Crown “could bestow a monopoly in the privilege of selling salt as easily as he could bestow an escheated manor.”

¹⁶⁷ Fox (1947:80) reports “[t]he sovereign was thus under almost constant pressure to extend the use of the prerogative, and the limitation with which the common law had surrounded its exercise were at times neglected.” Monopolies were a relatively attractive favor to grant, since many of the others “had to be paid for by assuming the odium of collecting some of the more unpopular parts of the Crown’s revenue.” See Russell (1971:250).

¹⁶⁸ Hulme notes that “[i]n the place of the open letters for the furtherance of the national industry, we now find the Crown entering into secret negotiations for the purpose of attracting skilled foreigners into its own service.”

crafty extractor of maximum rents¹⁶⁹ or simply skilled at shifting costs to the public through patents in lieu of paying cash,¹⁷⁰ Elizabethan patent custom left patents for invention embedded in a patronage system of broad scope, where the royal prerogative was checked only by Elizabeth's keen sense of what the country could bear.

The country proved willing to bear quite a lot under Elizabeth.¹⁷¹ Despite her generous use of the royal prerogative, Elizabeth did not face serious opposition from Parliament over her grants of monopolies until 1601.¹⁷² The lack of resistance was due in part to a fierce loyalty enjoyed by the Tudors, particularly as England faced peril from foreign lands; the presence of members of the Privy Council in Parliament, where they had great influence; the fact that most public legislative initiatives came from the crown; and the Queen's ability to repeatedly mollify the concerns of members of Parliament.

In 1601, however, monopolies were denounced in the Commons as "the whirlpool of the prince's profit." Complaints against monopolists' agents' acceptance of bribes to refrain from bringing infringement actions were heard, and the quality of the goods produced by monopolies censured. Even in the face of the "almost unanimous" indignation" against monopolies (Russell, 1971:250), Elizabeth was ultimately able to persuade them not to diminish her royal prerogative (Price, 1906:19)¹⁷³—the "chiefest flower in her garden and principal and head pearl in her crown" (Inlow, 1950:21). Her powers of persuasion, however, may have been a result more of her savvy political skills, rather than oratorical flair.¹⁷⁴ As William Hyde Price (1906:19) explains:

The power and skill of the Tudors were manifest in Parliament. The membership of the House of Commons was doubled. Elizabeth added sixty-two new borough members. All these were likely to be strongly

¹⁶⁹ See fn 21 above for a definition of "rents."

¹⁷⁰ Officials were generally not paid, or at least not paid adequately, and so posts were sought "partly for the prestige, and for the opportunity they might create to offer the same 'favour' to other people, and partly for the perquisites of office" including fees paid by the public (Russell, 1971:45).

¹⁷¹ See Reese (1940:169) noting "the nation not only consented to [the Tudor's] exercise of arbitrary powers, but cooperated in it."

¹⁷² Opposition in Parliament would not necessarily be related to the overall economic impact. What Smith (1984:122) terms the "political nation," of "that comparatively limited group of men whose cooperation was essential for the effective government of the country" constituted only about 2,500 men of whom approximately forty percent held court or government places worthy of a gentleman.

¹⁷³ Smith (1984:132-133) also describes legislation in Elizabethan Parliaments.

¹⁷⁴ Smith (1984:132) discusses Elizabeth's political skills.

attached to the crown as long as commercial and industrial interests were cared for. The older rural constituencies were very largely represented by lawyers resident in the metropolis. Both economic and legal interests demanded extensive and effective national government, and the result as a natural alliance between the lawyers and traders. As long as these two interests were satisfied the crown could count upon a Parliament free from opposition.

The crown was not the only source of privilege, however, that reduced the burden of Elizabeth's grants of monopolies. During this period, Parliament regularly passed trade-restricting legislation whose "rigid enforcement" could have produced "very serious results." Although this type of legislation was unstable, with statutes regularly repealed or modified at subsequent sessions, the crown's exercise of "the wide discretionary power it claimed" could provide immediate relief for affected interests as well as allowing trade to continue (Price, 1906:9). Thus, even the broadest monopoly patents in established industries sometimes served a trade-increasing purpose, reducing the losses imposed on consumers from Parliament's legislation.

Moreover, Parliament offered its members multiple opportunities to rent-seek without challenging the crown. Members sought to bring themselves to the Queen's attention as an entrée to the patronage opportunities at court.¹⁷⁵ They also handled private matters for their constituents,¹⁷⁶ as "the landed classes" knew "that in Parliament they could have attainders reversed and difficulties about their landed estates resolved" (Smith, 1984:133). Private bills dealing with such matters "were pursued in the Commons with a zeal and expenditure of time that endangered public business and the accepted ideal of short parliaments."¹⁷⁷ These bills were an "elaborate business" which "could be quite expensive." London even retained lobbyists to work on private bills in its interests (Neale, 1949:372-377).

It seems fair, therefore, to summarize the situation in the late 16th century in England as follows: the monarch possessed a right to grant monopoly patents

¹⁷⁵ "[I]t looks as if men who wished to scale the political heights realized that a seat in the Commons was likely to be a vital step in their careers" (Smith, 1984:133; also Neale, 1949:144).

¹⁷⁶ See Neale (1949:150-151), "[i]n medieval theory the Commons were attorneys for their constituencies, as the election writs enjoined, they were to be given 'full and sufficient power' to consent to the business of parliament for themselves and the communities they represented. This conception was still alive in the sixteenth century."

¹⁷⁷ See also Neale (1949:322), "an obvious source of supplementary income [for members] was the private bill. [The distribution between public and private bills was] 'unclear... But our parliamentary officials must have looked at the problem in a very simple way. Could they extract fees from someone? If so, it was a private bill.'"

for innovation and other reasons covering the entire nation, limited only by the ability of those injured by the monopoly to secure relief from Parliament. This was not a coherent national policy promoting innovation, but rather the fitful beginnings of what would someday be such a policy.¹⁷⁸ Elizabeth had maximized the value of monopoly patents by giving them national scope¹⁷⁹ and by the high cost of overturning her grants due to her skill, prestige, and political capital. Crucially, however, there were few substantive limits on the crown's ability to grant patents of monopoly. Elizabeth "asserted and retained to the end of her reign her absolute right of jurisdiction in all cases of dispute arising out of these grants" (Hulme, 1896a:151). Since a challenge to a monopoly patent would be tied to larger issues of royal power, mobilizing a coalition against any particular patent in Parliament was more costly than it would have been had the issue been solely the appropriateness of a specific monopoly. Moreover, Elizabeth had successfully spread patronage among factions, which diverted M.P.s into competition for favors and away from a demand for general reform.¹⁸⁰ The lack of party politics in Elizabethan parliaments¹⁸¹ also raised the organizational costs of attempts to overcome the monarch's grant of a monopoly.¹⁸² (She also limited Parliament's ability to challenge her by limiting the number of parliaments (Neale, 1949:367)). The one place where a monopoly patent might have been effectively challenged was in the common law courts, but that avenue was closed to potential litigants since royal prerogatives could be contested only in the courts dominated by the crown.¹⁸³ Unsurprisingly, therefore, the number of monopolies increased in the late 1500s as did the size of the rents created by the grants. But, despite Elizabeth's successes in preserving her prerogative, Parliament in general and the Commons in particular had grown more independent and powerful during her reign (Neale, 1949:13), which would cause trouble for her successor, James

¹⁷⁸ Fox (1947:73-74) states "this policy of systematic supervision and regulation of industry on a national scale and its corollary of reward for meritorious invention and introduction of new industries did not suddenly spring into being as a *fait accompli*."

¹⁷⁹ Fox (1947:81) asserts that "[t]he genius of Elizabeth lay in the application of that monopolistic regulation as a national rather than as a local phenomenon."

¹⁸⁰ See Neale (1949:223), "[f]action was inseparable from personal monarchy. But hitherto, in the magical hands of Elizabeth, it had been used to guarantee her independence."

¹⁸¹ Neale (1949:29) asserts "[t]here were no party politics in the Elizabethan period."

¹⁸² Contested elections were also rare under Elizabeth (Neale, 1949:67).

¹⁸³ See fns 204-205. Price (1906:18) expresses doubts that this was due to a deliberate policy, suggesting that "[t]here is good ground for accepting the claim that the protection against the [common] law was a measure of temporary expediency, although this excuse was probably unduly pressed." Nonetheless, patents did receive what even Price terms "arbitrary protection" from the common law.

I. Elizabeth's reign also produced lawyers, whose number greatly increased,¹⁸⁴ another burden she bequeathed to James.

4.1.2. *Curtailing Abuses*

This increase in the rents derived from monopoly grants sowed the seeds of change. As the total losses caused by monopoly patents grew, particularly in a time of "serious economic depression" like the period leading up to the Parliament of 1601 (Smith, 1984:131),¹⁸⁵ a policy change that restricted such grants became more valuable and a wider coalition seeking a change became more worthwhile.¹⁸⁶ "Dutiful and restrained" complaints surfaced in the Parliament of 1597 (Smith, 1984:131),¹⁸⁷ and public hostility to monopolies continued to grow, most notably in the Parliament that began in 1601.¹⁸⁸ Sentiment against monopolies was so strong that the proponent of an anti-monopoly bill was able to divert the Commons from both the Speaker's preferred agenda and the House's alternative to consider his bill out of sequence (Neale, 1949:380). Neale (1949:402) sees in the antimonopoly campaign in 1601 "that note of transition to early Stuart times which is apparent in so many aspects of late-Elizabethan history," noting that the open popular discussion of the issue shocked some M.P.s unaccustomed to Parliament's initiative

Although "opposition to [monopolies] was often led by men who themselves had been unsuccessful in the scramble for patents" it was "the merchants whose activities and profits were limited by the restrictions which monopolies placed on trade" who were the "principal critics" (Farmer, 1967:8). Moreover, at the end of Elizabeth's reign, Essex attempted "to establish a monopoly of patronage" and his near success gave the losers less hope that tomorrow would

¹⁸⁴ As Neale (1949:292-295) notes, Parliament experienced a "notable increase of members with a legal education." By 1593, 43% of M.P.s had a legal education and 54% had attended a university or the Inns of Court or both. Lawyers exerted an influence out of proportion to their numbers. See also Ruigh (1971:396), "[a]s a result of their forensic training, their skill in drafting legislation, and their acquaintance with past precedent, lawyers were the natural leaders of the House, despite the numerical majority enjoyed by country gentlemen."

¹⁸⁵ Russell (1971:248) describes the economic problems of the late 1590s.

¹⁸⁶ Hulme (1896b:54) describes the policy change.

¹⁸⁷ The Speaker included a mention of the petition in his closing remarks. See also Neale (1949:406).

¹⁸⁸ Reese (1940:171) asserts that "[t]he struggle over monopolies was the climax of a decade when tempers were often on edge..." See also Smith (1984:241), "[t]he unpopularity of [monopolies], as revealed in no uncertain terms in the Parliament of 1601, illustrated the dangers of adding to the cost of living in such ways, especially at a time of severe economic hardship when the principal problem of the lower orders was one of sheer physical survival."

bring their turn at the trough (Neale, 1949:233). Facing the threat of Parliamentary action on the subject of monopolies,¹⁸⁹ and spurred by the increasing size of the losses imposed by her grants of monopoly patents, Elizabeth delivered her “Golden Speech” and the “Proclamation Concerning Monopolies.” The speech, to her last Parliament, proclaimed her commitment to the public good;¹⁹⁰ and the proclamation revoked several extant monopolies (Fox, 1947:78-79). More significantly, she agreed to allow the common law courts to resolve disputes relating to patents not subject to revocation (Greenstreet, 1972:6);¹⁹¹ and “[u]pon this pleasant but deceptive note the bill was withdrawn” (Fox, 1947:77). This has been termed “the only notable purely Commons victory of the reign” (Smith, 1984:131). Importantly, Elizabeth did not concede the point before a “generous subsidy” had been granted her by Parliament (Price, 1906:21),¹⁹² making clear the connection between patents and royal revenue.

Through this action, Elizabeth brilliantly distanced herself from settling the abuses associated with existing patents and shifted the responsibility for the proper exercise of patent rights to the patentees themselves. This meant that a patentee who felt wronged by alleged infringers would have to enforce his rights in a common law court without assistance from the crown, and those who desired to challenge the validity of patents were immune from the Crown’s influences.

A test case was brought almost immediately involving Edward Darcy, who held the patent of monopoly on playing cards, including the sole right to import, make, and sell playing cards. The case resulted in the landmark opinion

¹⁸⁹ For instance, “An Act for the explanation of the Common Law in certain cases of Letters Patent” was introduced in commons to restore common law freedom of trade (Fox, 1947:75). The Commons formed a committee on monopolies, as it had in 1597; the committee was made up of “‘all the knights of the shire, ten named men, and divers others,’ together with the knights and citizens of London, the barons of the Cinque Ports, and Dr. Caesar.” See also Notestein (1971:439).

¹⁹⁰ Fox (1947:79) states “the character of Elizabeth is demonstrated at its best by the manner in which she handled the grievance of monopolies on this occasion. In a measure she took out of their mouths the words which the members of the House of Commons were preparing to address her. She did not treat the nation as an adverse party but readily promised to address their grievances and promptly put her promise into execution.”

¹⁹¹ In Hulme’s (1896a:151) account, the bill “wrung from the Queen a concession that her grants should be left to the law *without the force of Her Prerogative*, whereupon the bill was dropped.”

¹⁹² Parliament “used the extra leverage which their growing financial contributions gave them in the monopolies crisis of 1601 when they forced the Queen to concede the substance of their demands” (Smith, 1984:240).

of *Darcy v. Allen*¹⁹³ (known as the “Case of Monopolies”).¹⁹⁴ A London merchant allegedly infringed Darcy’s patent, and Darcy brought suit. Edward Coke, the attorney general at the time, and Nicolas Fuller made arguments on behalf of Darcy and the defendant, respectively. Coke argued that only the queen, by exercising her prerogative, could rescind an abusive monopoly. Fuller, countering Coke’s position, asserted the supremacy of the common law in this regard, noting “commonwealths were not made for kings, but kings for commonwealths” (Price, 1906:24). But Fuller did allow for one exception, which, according to Price, became a “legal classic,” namely, monopoly patents were permitted under the common law “when any man by his own charge and industry, or by his own wit or invention doth bring any new trade into the realm” (Price, 1906:24).¹⁹⁵

Despite the egregious nature of the monopoly in question and the clarity of the common law’s position on monopolies, the case required three arguments, and the court did not give a decision until 1603 (Price, 1906:23). According to Coke’s report, the court invalidated the patent, confirming Fuller’s position that the common law courts had the power to judge the validity of patents.¹⁹⁶ *Darcy* was the “first complete judicial pronouncement upon the common law

¹⁹³ Corre (1996:1262) discusses *Darcy*’s illustrious history. Even by the standards reserved for great cases, *Darcy v. Allen* has proven exceptionally durable. Within living memory, England’s Court of Appeal has cited Edward Coke’s official *Reports* as good law, and judges in the United States have consistently recognized the authority of *Darcy*. There was extensive reference to the case in the famous Slaughter-House Cases, which upheld the validity of a state-sanctioned private monopoly and which still stands as one of the critical expositions of the post-Civil War amendments to the U.S. Constitution. As recently as 1991, Coke’s report was quoted at length in the opinion of a U.S. Supreme Court Justice. And a leading casebook on American antitrust law begins with a long excerpt from Coke’s report. The case also illustrates how useful assistance from the Crown could be. The case against Darcy, who was a groom in the Queen’s Privy Chamber, had been quashed by the Privy Council. Corre (1996:1312-1313) notes that this order was ignored and the 1601 common law case ultimately proceeded to judgment against Darcy. This back-and-forth gives a sense of the competition between the various courts.

¹⁹⁴ Price (1906:22-23) recounts that “[a]s soon as the proclamation had guaranteed immunity to those who sought to test the validity of the queen’s patents, a London Haberdasher infringed the patent held by Edward Darcy for the sole importing, making, and selling of playing-cards.” Hulme (1896a:151) also terms it a test case.

¹⁹⁵ Historian David Sacks (1992) notes that Fuller presented a natural rights, labor theory (pre-Lockean) to justify the inventor’s ownership interest in his new “trade.” Sacks cites Fuller’s argument that “an artificer’s skill and occupation are his ‘patrimony, which is as land is to a gentleman.’”

¹⁹⁶ Saving face, the court then declared that the Queen had been “deceived” into issuing the playing card patent, going on to strike the patent as contrary to the common law. Nachbar (2005:1333) has noted that Coke’s report of *Darcy* “has been largely discredited” and therefore, “it’s not clear how much of [*Darcy*’s] status should be attributed to its reasoning.”

principles concerning monopolies” (Fox, 1947:87).¹⁹⁷ But although *Dary* was a significant decision, it is important to keep it in perspective. As Mossoff (2001:1269) suggests, the key to understanding *Dary* was that “no one...was out to repudiate the Queen’s royal prerogative *in toto*, but rather the judges simply enunciated the first common-law rule for adjudicating the *legitimacy* of a grant of monopoly privileges” (emphasis in original).¹⁹⁸

4.2. JAMES I AND THE STATUTE OF MONOPOLIES

Elizabeth’s death brought James VI of Scotland to the English throne and he addressed the subject of monopolies almost at once. As James entered London, he was greeted with a speech by the “gifted lawyer and orator, Richard Martin” written in consultation with James’ ally Sir Robert Cecil, that, among other topics, promised reform of monopolies (Croft, 2003:50). James responded with a proclamation, again prearranged with Cecil, suspending the monopolies Martin had denounced, a gesture intended “to demonstrate that the king listened to the grievances of his subjects” (Croft, 2003:50-51).

Coming from Scotland, “a poor nation whose inhabitants eked subsistence from a grudging soil,” and where even the “comparatively well off made a staple diet of oats, lived in houses of mud and stone, and wore heavy, coarsely woven plaids” (Kishlansky, 1997:78), James found England “rich beyond his imagination” (Kishlansky, 1997:67).¹⁹⁹ Indeed, James characterized the first years of his reign as a “Christmas time” (Kishlansky, 1997:83).²⁰⁰ But James also inherited a Parliament intent on expanding its role beyond “rubber stamp[ing] the proposals of the Privy Council” (Notestein, 1971:5) in a manner characterized as “truculent and aggressive” (Smith, 1973:176).²⁰¹ Elizabeth had resisted Parliament’s attempt to gain this new role, but “[w]ith the new

¹⁹⁷ Nachbar (2005:1327) states *Dary* “broke no new legal ground; the rule it applied had been widely established for some time.” Corre (1996:1321-1324) also argues the case was not seen as a landmark when first reported.

¹⁹⁸ Nachbar (2005:1327) states “*Dary*’s significance is as evidence of an important political compromise between crown and parliament over the exercise of royal authority.”

¹⁹⁹ Prestwich (1966:10) writes “[i]n 1603, when James rode south from the miserable poverty and wrangling politics of Scotland, he came into what he considered a Promised Land, flowing with wealth and rich in trade...The wealth of England intoxicated James; he had waited and intrigued long for his inheritance...”

²⁰⁰ He bought many presents: “In Scotland his annual revenue had been something less than £50,000; in England he spent £47,000 on jewels in 1604 alone” (Kishlansky, 1997:83).

²⁰¹ Farmer (1967:5) makes a similar, more colorful assessment: James “inherited a Parliament whose members had long been clearing their throats in preparation for an attack on royal authority...” Similarly, Tanner (1971:5) notes that the Parliament James inherited “was not the same deferential assembly which had been bullied and browbeaten by Henry VIII.”

monarch...[Parliament] hoped to assert themselves and gain influence at Westminster” (Notestein, 1971:5-6), which it did at first with five sessions in fewer than seven years (Neale, 1949:368).²⁰² James’s difficulties were increased as he encountered a Parliament in which legislative tactics were beginning to appear.²⁰³ As Neale (1949:222) concluded, in many instances “a process of repeated but piecemeal encroachment” on royal power and privilege under Elizabeth “culminated under the Stuarts in the formulation of a principle and a right.”²⁰⁴

James also inherited a political class anxious for spoils.²⁰⁵ The final years of Elizabeth’s reign “had been marked by an extreme miserliness which had displeased her courtiers and ministers,” and the rise of James I “in 1603 and the end of war in 1604 raised both their hopes and their expectations” (Smith, 1984:255). And James, lacking Elizabeth’s “saving spirit,” soon obliged (Tanner, 1971:8),²⁰⁶ resulting in the rise of royal expenditures from £300,000 or less per year at the end of Elizabeth’s reign to “well over £500,000” a year in 1614, with the “vast bulk” of the increase going to James’ “own pleasures and also his lavish rewards to favourites and courtiers” (Smith, 1984:255).²⁰⁷ By 1607, even James was complaining of “this eating canker of want” on his finances.²⁰⁸

Monopolies again appeared as a grievance raised in Parliament.²⁰⁹ James initially sounded themes similar to those made by Elizabeth, convincing Parliament that he intended “to govern without lavish bounty to favorites” (Price, 1906:25). As Price notes, at first “[w]ith pledges of this sort, the House of Commons was content and turned to subjects of greater urgency, such as

²⁰² See also Kishlansky (1997:80), “[s]ome members recalled the battles the Commons had fought (and mostly lost) with Elizabeth over their privileges and recognized that the time to take a stand was at the beginning of a new reign.”

²⁰³ Neale (1949:385-387) discusses the tactical measures that had begun to be used.

²⁰⁴ See also Neale (1949:307), “[t]he House of Commons reached maturity in Elizabeth’s reign. The instrument was tempered with which the Crown was to be resisted and conquered.”

²⁰⁵ James invoked this as a defense to the charges of extravagance. “The best answer...was the one James made: most members of both Houses had either received some of it, or asked to do so” (Russell, 1971:261).

²⁰⁶ For example, in 1603 James “created more knights in four months than Elizabeth I had in forty-four years” (Kishlansky, 1997:24).

²⁰⁷ See also Russell (1971:260) describing expenditures under James.

²⁰⁸ Quoted in Tanner (1971:42).

²⁰⁹ Indeed, James’ first Parliament included “[f]our very considerable figures in Elizabethan Parliaments” who had opposed Elizabeth on monopolies and “were likely, if necessary, to stand up against the Privy Council of the new sovereign” (Notestein, 1971:61).

privileges of its own members, and the foreign trading companies.” Indeed, James set up “an intricate mechanism of investigation” to examine patent claims (Price, 1906:25) and reviewed Elizabeth’s monopolies (Fox, 1947:94).

Despite these efforts at establishing an institution internal to the crown that would restrain abuses of monopoly grants, “Elizabeth’s policy of trade interference formed an irresistible temptation to James I” (Fox, 1947:93); he soon resumed granting “odious monopolies”²¹⁰ to favorites.²¹¹ In part, James was surely motivated by the nearly empty treasury he inherited from Elizabeth (containing only £200 and 3,000 dresses) (Reese, 1940:162). The result was yet another public uproar. By 1606, monopoly patents were an important topic in the new Committee of Grievances (Price, 1906:26).²¹² As Elizabeth had done, James promised relief, agreeing that the common law courts should be allowed to adjudicate patents (Price, 1906:26). But James also took legal positions that alarmed the merchants and lawyers, successfully asserting a claim that he had an absolute prerogative in some areas that allowed him to levy taxes on trade at will (Croft, 2003:73).²¹³ A further petition in 1610 showed Parliamentary disappointment with the lack of execution on those promises, with “[p]articular remonstrance made against the unwillingness of the crown to fulfil [sic] its pledge that certain patents should be judged in the courts” (Ruigh, 1971:27; also Fox, 1947:95), for *Dary* had remained an isolated case.

James replied “in his usual style” and promised that the lawsuits would proceed (Price, 1906:28). Taking a leaf from Elizabeth’s playbook, James tried to assuage Parliament in 1610 through a proclamation limiting monopoly patents. This proclamation, called the *Book of Bounty*, affirmed that monopolies were against the common law, but reserved the right to grant monopolies for new contributions, essentially restating the result in *Dary*.²¹⁴ For example, in the *Book of Bounty* James suspended all monopolies with the exception of

²¹⁰ Holdsworth (1936:487) nicely captures the mind-set of James I.

²¹¹ See Reese (1940:162), “[a]lthough he was always poor, James lavished gifts upon his friends, and gave costly pageants in their honour.”

²¹² Fox (1947:95) states “in 1606 patents of monopoly had become so great in number as to form one of the important matters considered by the Committee of Grievances, and a petition dealing with the monopolies was presented by it to the King at the close of the session.” Notestein (1971:166-169) describes the Parliamentary discussion of the specific patents.

²¹³ Ruigh (1971:2) notes that James’ “ideal parliament...was a deliberative body (deriving its authority and privileges from the crown) whose primary duty was to supply the extraordinary needs of the monarchy. It was to restrict its discussions precisely to matters wherein its advice had been requested.” As Ruigh notes, “[n]ever during his entire reign did James summon a Parliament that fulfilled his expectations.”

²¹⁴ Fox (1947:96) notes that “Coke observes [the *Book of Bounty*] to have been a result of the judgment in *Dary v. Allen*.”

“awards to corporations and companies of arts and for promoting commerce” (Bugbee, 1964:38). As Fox states, “the suspicion is inescapable that James [issued the *Book*], to a certain extent, with tongue in cheek, in an effort to lull the minds of people into a feeling of security and with no real intention of limiting his own use of this facile tool for regulating trade” (Fox, 1947:97). Perhaps suspecting as much, Parliament was not quite satisfied with the proclamation (Fox, 1947:104).²¹⁵ Relations between James and the 1604-1611 Parliament grew steadily worse, with the Commons attacking two of James’ servants and listening to “proposals for a petition to exclude all Scots from court” (Russell, 1971:279-280). James complained that the list of Parliament’s grievances in 1610 was “as long as a tapestry” (Russell, 1971:278) and that Parliament’s “questioning of his right to impositions would leave him with no more power than ‘a Doge of Venice’” (Scott, 2000:63). When the “Great Contract,” intended to resolve the persistent structural financial problems of the monarchy, collapsed in failure in 1610,²¹⁶ James dissolved Parliament in February 1611. The failure of James to control Parliament was “the failure of a system.... The Elizabethan system, without Elizabeth, had broken down and was not to be restored.”²¹⁷

James called his second Parliament (Reese, 1940:191) in 1614 (the so-called “Addled Parliament”) (Price, 1906:28) under financial pressures; the annual deficit was approaching £200,000 per year and the total debts were £680,000 (Tanner, 1971:46). The subject of monopolies continued to be important. The Commons ordered the holders of a patent of monopoly for trade with France to appear before it and members asserted Parliament’s ability to fine and imprison monopolists (Roberts, 1966:21). However, after it resolved that it would not vote James any revenue until he removed various impositions, James dissolved Parliament and imposed a tax on beer in place of the lost subsidies (Russell, 1971:283). Even a sympathetic biographer, J.P. Kenyon (1978:69), terms it “a particularly spectacular fiasco.” Had this Parliament not been dissolved suddenly, the 1621 attack on monopolies might have come seven years earlier (Roberts, 1966:21).

James’ situation differed significantly from Elizabeth’s. She had been able to dominate Parliament, but her dominance had not prevented the growth of an

²¹⁵ MacLeod (1988:14) notes that “despite the establishment of the Commission for Suits to investigate the claims of patentees and James’ declaration of self-restraint in the *Book of Bounty* (1610), the Commons found increasing cause for complaint.”

²¹⁶ Kishlansky (1997:86-88) describes the “Great Contract” proposal and its collapse.

²¹⁷ D.H. Willson quoted in Roberts (1966:17).

independent spirit among its members,²¹⁸ particularly among the newly aggressive contingents of lawyers and merchants (Farmer, 1967:5).²¹⁹ Just before James took the throne, “the Tudor constitution was by now standing on an uncertain foundation: on little more than the masterful nature and unique personality of an aging Queen.”²²⁰ Even if James had been Elizabeth’s equal in political skill, he would have faced difficulties with a restive and increasingly independent Parliament (Smith, 1973:172).²²¹ James’ court was viewed by Parliament as “extravagant and scandalous” (Prestwich, 1973:144), and so viewed with good reason--by 1608 he had increased the crown debt six-fold to almost £600,000 despite five years of peace (Prestwich, 1973:148).²²² James’ relations with his parliaments were also strained by persistent rumors of Catholic sympathies and of his homosexuality. James’ own revenue measures were ineffective²²³ or offensive.²²⁴ His policies were viewed with suspicion²²⁵ and his manner of communicating with the Commons raised hackles.²²⁶ The

²¹⁸ Smith (1973:176) asserts that “James’ difficulties arose primarily because there was a new spirit in Parliament, rather than in the Crown.”

²¹⁹ Ruigh (1971:3) also writes of “merchants and Puritans, whose numbers increased with every session.”

²²⁰ Sir John Neal quoted in Prestwich (1973:140).

²²¹ Several commentators have noted James’ political shortcomings as compared to his predecessor. “Elizabeth had possessed a sense of practicalities and of conduct totally lacking in James” (Prestwich, 1973:147-148). See also Prestwich (1973:365), “James lacked royal presence.” Russell (1971:257-258) quotes Notestein that “few kings have been so fitted by nature to call forth an opposition.”

²²² A substantial amount of James’ debt resulted from his extensive gifts to Scots. By 1610 he had given away, primarily to a group of eleven Scots, “£88,280 in cash, a potential £144,100 in old debts to be collected and £11,093 in annuities” (Croft, 2003:75). John Hoskins, a prominent parliamentary critic of royal extravagance, voiced a general feeling when he stated in the House of Commons in 1610 that “the royal cistern had a leak, which, till it were stopped, all our consultation to bring money unto it was of little use” (Smith, 1984:255).

²²³ Prestwich (1973:149) notes customs farming was introduced under James, but the royal customs officials still paid, leading to redundant expenditures. The “Great Farm” did increase royal revenues (Croft, 2003:72).

²²⁴ Prestwich (1973:149) reports new customs duties imposed in 1608 on 1400 articles, an increase of between 30-40 percent, purely to raise money rather than for the constitutional purpose of regulating trade. Many in Parliament saw these duties as an attack on property rights (Smith, 1973:167).

²²⁵ According to Smith (1973:165), “many of [James’] ideas and policies aroused the mistrust and dislike of the Commons.”

²²⁶ James “bombarded the Lower House with a multitude of tactless messages in which he often strayed from the strict point at issue to indulge in general remarks about his own power and the nature of the Commons privileges,” while Elizabeth had “intervened in Commons debates only occasionally, but usually with decisive effect” (Smith, 1973:168),

post-Elizabethan Houses of Commons was a more difficult political environment for the king than what Elizabeth had faced,²²⁷ and James proved miserable at maneuvering in it.²²⁸ He even irritated the Lords by “lavish creation of new hereditary peerages” (Smith, 1973:170). Under James, the Commons became “a strident debating forum in which the grievances and ideas of the upper crust of society were presented” (Jones, 1973:193).²²⁹ A distrust by the Commons of the Privy Council and a “readiness to see it as having an interest contrary to that of the Commons” were both new features of the political scene (Russell, 1971:267). During James’ reign, Parliament also became a place where “by adopting a ‘mild temper of rebelliousness,’ an ambitious man could bring himself to the notice of court and county—perhaps to the point of being offered royal largess and preferment in return for conformity.”²³⁰

James was a strong defender of the divine right of kings²³¹ and their powers.²³² His view that “all the Commons’ privileges derived from the Crown and [that] he could withdraw them at will” (Croft, 2003:60) brought James and the Lower House into repeated conflicts during his reign.²³³ Nonetheless, James was the “*de facto* victor in the important struggles over impositions in

²²⁷ Smith (1973:169) notes that James faced a growing committee system that eroded his power. Notestein (1971:442-443) reports the importance of the committee on monopolies in 1601 in prompting Elizabeth’s speech. See also Neale (1949:365), “In early-Stuart parliaments one of the virtues of the committee of the whole House was that it got the officially-minded Speaker out of the chair.”

²²⁸ See Smith (1984:255), James’ “greatest weakness as an administrator in England was his laziness.” James also chose ineffectual Speakers for the Commons (Smith, 1973:169).

²²⁹ Tanner (1971:6) also notes the increased importance of Commons. See also Ruigh (1971:95), “the House of Commons became more independent and argumentative and less easily managed” as a result of increased demand for seats among gentry.

²³⁰ See Ruigh (1971:93), quoting an undated letter from Sir Fulk Greville to Lord Conway.

²³¹ Coke informed James that the latter was “defended by his Laws...to which the King replied in great fury ‘Laws! My Lord Chief Justice, ye speak like a fool. I am not defended by my laws, but by God. And see that ye forget it not in the future!’” (Fox, 1947:115-116). In the same vein, Reese (1940:158) concludes that “No King of England has ever come to the throne with more confidence than James I in his fitness to occupy it.” Croft (2003:49) describes James as “Imbued with a sense of his own regality and believing passionately in the divine right of kings....”

²³² See Fox (1947:94), “James had a fixed belief in the propriety and efficacy of the full use of the royal prerogative.”

²³³ Croft (2003:78) describes the conflict between James and Commons in 1610 over his prerogative rights. See also Russell (1971:268), “To people of this distrustful temper, such a claim suggested that James intended to take their privileges away, and they met it by arguing that their privileges were of right, and no king could ever take them away.”

1610 and 1614” (Smith, 1984:268).²³⁴ Moreover, from 1603 to 1618, economic conditions in England were generally favorable, with relatively stable food prices, a trade boom, and rising prices for industrial goods indicating increased demand. This contrasted with the “grimness of life for the bulk of the English people” at the end of Elizabeth’s reign due to war and natural disasters (Smith, 1984:251-254).

James proceeded to rule without a Parliament until 1621 (Morrill, 1984:351-353),²³⁵ preventing any further Parliamentary action on the subject of monopolies or anything else during the remainder of the 1610s. James attempted various schemes to raise revenue, including a disastrous attempt to prohibit the export of unfinished cloth to shift the finishing process from the Netherlands to England.²³⁶ Moreover, this period included what Smith (2003:268) terms “the most blatant period of corruption in England during the whole century and a half from the reign of Henry VIII to the Restoration.” Honors were sold at an unprecedented rate.²³⁷ Without Parliament, however, James lost £100,000 in annual revenues, producing a deficit for the year of £137,000 and debt of £900,000 by 1615 (Reese, 1940:191), spurring him to look for alternative revenue sources (Price, 1906:31).²³⁸ Monopolies proved one of them and grants proliferated.²³⁹ During this time, James’ rule was characterized by what Price (1906:28) charitably terms “the greatest diversity in policy and counsels.” As a result, “[t]he irregular methods of dealing with patents gave to them an insecurity that impaired their potential or speculative value as well as their actual values....” Patents were annulled “for reasons of

²³⁴ At the start of the Parliament of 1624, “no one could forget that James had ‘broken the necks of three parliaments’” (Ruigh, 1971:1, quoting James in Cobbett’s Parliamentary History).

²³⁵ See also “James I, King of England,” *Columbia Encyclopedia*, online at <http://www.bartleby.com/65/ja/James1Eng.html>.

²³⁶ Croft (2003:94-95) describes the Cockayne scheme (see also Smith, 2003:254; Farmer, 1967:34; and Russell, 1971:283-284).

²³⁷ 563 new knighthoods were granted in 1616-1620, compared to 501 in the ten years before 1616; 48 peerages were created in 1603-1620 compared to 18 during Elizabeth’s entire reign; so many baronetcies were sold that their price fell from £1,095 to £600 (Kenyon, 1978:78).

²³⁸ Smith (1973:167) also notes “the four subsidies, which were all that he obtained before 1621, were merely a drop in the ocean.” Royal favors offered James an important revenue source. “What the king gave with one hand he often took with the other” and officials had to provide James with “large loans of uncertain duration” and many of James’ expenses. See Kishlansky (1997:45).

²³⁹ Fox (1947:98) notes that “after the suspension of parliamentary government in 1614, the abuse of monopolies continued. Despite James’s high-sounding words in the *Book of Bounty*, the use of the royal prerogative persisted practically unchecked.” Prestwich (1973:280) notes the complaint that “the eight or nine monopolies of the beginning of the reign had now become ‘so many score.’”

state,” patentees complained of the need for enforcing their patents against infringement, policy generally was “opportunistic,” and “the government assumed an attitude that was as erratic as it was indulgent.”²⁴⁰ Unlike Elizabeth,²⁴¹ James and his advisors did not evenly distribute favors among the political class, and those excluded from the rewards opposed those they held responsible for their exclusion,²⁴² something which came to a head in 1624.²⁴³

Alternative revenue streams and even the considerable efficiencies introduced by Lionel Cranfield²⁴⁴ eventually proved inadequate, as James’ profligate spending continued.²⁴⁵ The crown debt had reached £900,000 (Kenyon, 1978:77) and the prospect of war after 1618 required additional revenue, prompting James to call Parliament in 1621.²⁴⁶ The Commons quickly voted him two subsidies at the opening (worth approximately £160,000), but also immediately raised grievances (Croft, 2003:110-111). Bacon urged James to make a preemptive strike on the subject of monopolies by curtailing the most notorious and abusive (Kishlansky, 1997:99). James rejected the advice, concerned that to do so would repeat the experience of 1614 when he was accused of trading reform for money. Moreover, James insisted that “[t]he highest legal officers of the realm vetted the legality of every patent. If there were abuses, they were in the overstepping of rights, not in their granting” (Kishlansky, 1997:99). Nonetheless, in his opening speech, James “tried to

²⁴⁰ See also Reese (1940:161), under James “the favourite’s whim was his master’s law.”

²⁴¹ For Smith (1984:122-124) “The high proportion who benefited [from Elizabeth’s patronage] is an indication that she wanted to spread the favours at her disposal as widely as possible...” He continues “The Queen, determined throughout her reign to ensure a wide distribution of patronage, made it plain that no one faction leader would be allowed to monopolize her confidence and thus control the patronage machine.”

²⁴² “Buckingham...made very large demands upon the royal purse, which were highly unpopular among those members of the political nation who did not have his favour and who were therefore virtually excluded from the Crown’s patronage” (Smith, 1984:272). Russell (1971:286-287) notes “Power at court after the dissolution of the Addled Parliament and the fall of Somers set rested mainly with the large tribe of the Howards...” until the rise of Buckingham. Kenyon (1978:76) writes that by 1670 Buckingham’s “control over the King was so absolute that he could almost be regarded as wielding the power of a regent” and his control of patronage “was particularly resented.” Ruigh (1971:258) notes that “preferment at court was principally channeled through” Buckingham.

²⁴³ Russell (1971:287) describes Buckingham as liberal in his distribution of favors until 1624.

²⁴⁴ Farmer (1967:35) estimates Cranfield’s cost-cutting as worth over £120,000 a year by 1621.

²⁴⁵ According to Croft (2003:103), in 1620 “James gave away one-third of the new revenues from trade to ravenous courtiers, although court pensions already swallowed up nearly a sixth of the Crown’s total income.”

²⁴⁶ Smith (1984:273) notes that the “principal reason” for the Parliaments of the 1620s “was the financial needs of the Crown.”

excuse monopolies as necessitated by the absence of parliamentary subsidies.”²⁴⁷

First among the grievances Parliament wanted redressed as a condition of granting revenues was monopolies, the abuses of which “had alienated businessmen and consumers” (Prestwich, 1973:283). Monopolies were at the head of the list for several reasons. James had the bad luck to call Parliament in the depths of an economic depression, which many blamed on James and the monopolies (Kenyon, 1978:80),²⁴⁸ and so both the burden of and James’ culpability for the monopolies had grown. Coke seized on the issue as a vehicle for his feud with Bacon, despite both being privy councilors,²⁴⁹ just one of the feuds amongst James’ advisors.²⁵⁰ In a measure of anti-monopoly feeling in the Lower House, Parliament also expelled Sir Robert Floyd, who held the monopoly on recording wills, sentenced Sir Francis Mitchell without a hearing, and impeached and fined Sir Giles Mompesson²⁵¹ £10,000 over their monopoly on licensing ale-houses (Farmer, 1967:35, 52).

Moreover, stung by the long gap between Parliaments, the Commons was in no mood to defer to the crown and accept promises of good behavior as it had at the beginning of James’ reign.²⁵² Indeed, Alan Smith concludes that the

²⁴⁷ See Prestwich (1973:290), “[b]y levying impositions, granting licenses, and authorizing surveyorships and monopolies, James lost the support of many influential merchants.” See also Ruigh (1971:5).

²⁴⁸ Smith (1984:254) notes the impact of the outbreak of the Thirty Years War in 1618, the resulting “currency manipulations and debasements in Germany and eastern Europe which were disastrous for English cloth exports there” and the impact of the collapse of the Cockayne project after 1614.

²⁴⁹ Coke used the debate to attack Bacon because of Bacon’s 1616 defeat of Coke in expanding the role for the courts of equity and actions as Chancellor promoting equity at the law courts’ expense (Prestwich, 1973:157, 299). Smith (1984:268) argues that James’ disputes with Coke “should be seen essentially as a difference in personalities rather than a conflict of principle between the prerogative and the common law.” He contends that Coke and James generally agreed on “fundamental constitutional principles” (Smith, 1984:261). Tanner (1971:37), however, argues that Coke was “pursuing a definite policy, the object of which was to establish the Bench as an independent authority arbitrating between the Crown and the subject.” Even if Smith is correct, this does not detract from the force of our argument, since whatever the motives, Coke chose the supremacy of the common law as the means by which to carry on the struggle.

²⁵⁰ Privy Councillors “were much occupied in feuds with each other” (Russell, 1971:293). Coke successfully brought Bacon down through a revival of the medieval practice of impeachment, and Bacon resigned rather than face trial in the Lords. See Croft (2003:111).

²⁵¹ Roberts (1966:24-25) describes Mompesson’s problems.

²⁵² James contributed to the problem. As Russell (1971:292) notes, in the midst of a severe economic downturn, “the king was unwise to say in his opening speech that none of his subjects were in poverty except through their own fault” See also Ruigh (1971:92), “More and more,

Commons under James were “obsessed with questions of privilege” (Smith, 1973:173).²⁵³ Issues relating to sovereignty and power struggles between the crown and Parliament were very much at the forefront during this time,²⁵⁴ making the Elizabethan argument to protect the monarchy’s privileges not only ineffective, but counter-productive with some members.²⁵⁵ James complained that the 1621 Parliament was made up of “fiery and popular spirits,” “ill-tempered spirits,” and “evil-afflicted and discontented persons” (Kenyon, 1978:45), and left nothing “unattempted in the highest points of sovereignty ... except the striking of coins,” and that “we cannot with patience endure our subjects to use such anti-monarchical words to us” (Scott, 2000:63). Worse, by the 1620s, committees in Commons had “nearly all significant business” before them and were “dominated by men who were unusually critical of the King’s actions” (Smith, 1973:173).²⁵⁶ Further, some members had developed skills in political action and so acquired influence independent of the Crown’s.²⁵⁷

The Parliament did not simply move against individual monopolists, however. It attempted a systematic solution consistent with Parliamentary notions of the subordination of the monarch to the law. On the third day of the 1621 session, Sir Edward Coke²⁵⁸ moved to establish a Committee on Grievances and the House of Commons directed that body to prepare a petition on monopolies (Fox, 1947:103). The seizure of the initiative by private members (as had also happened in 1604 and 1614), a “striking and important” development (Smith,

Parliament was regarded as a panacea for the ailments of the commonwealth, and the frequency of demands for its convention increased throughout the reign of James.”

²⁵³ Russell (1971:294) states that Parliament “voted two subsidies early in the session, and then concentrated on grievances.”

²⁵⁴ In 1621 “Many in the country were already worried that the English Parliament was losing ground, just like its continental equivalents, for the seven-year gap since the 1614 Parliament (which in any case had been a disaster) was the longest since 1515” (Croft, 2003:111).

²⁵⁵ See, e.g., Reese (1940:200) describing impeachment of Lord Chancellor Bacon, a strong defender of the prerogative.

²⁵⁶ Ruigh (1971:2-3) also notes the impact of the rise of the committee system. Elsewhere, Smith is critical of Notestein’s claim that private M.P.s dominated the committees, arguing that this contention was “demolished” by Lambert’s article (Smith, 1984:261, citing Lambert (1980)). Since we rely on the rise of committees only for other points, the Notestein-Lambert dispute is not relevant to our thesis.

²⁵⁷ Ruigh (1971:126) describes how Southampton not only engineered election of supporters, but organized them within Parliament in 1621.

²⁵⁸ Coke played a major role in creation of the English system. MacLeod (1988:18) reminds us, “[n]ot only had [Coke] served as a law officer and Chief Justice, but he had appeared for the plaintiff in *Dary v. Allen* (1602)...and had investigated many patent and trade disputes since 1593. As an M.P. he had introduced (with William Noy) the 1621 bill against monopolies and served on the committee that considered the bill of 1624.”

1973:171; Prestwich, 1973:291), symbolized James' loss of control of the Commons. The next day a bill was introduced against promoters of monopolies, "who were characterized as being 'like the frogs of Egypt'" (Smith, 1973:103). In its pursuit of the monopolies issue, "the House showed an increasing willingness to act in an executive and judicial capacity, calling people before them for questioning, and issuing executive orders" even bringing some monopolists to formal trials before the House (Russell, 1971:295). Moreover, debate in the Commons explicitly linked monopolies reform and the grant of subsidies to the king (Prestwich, 1973:294).

The importance of the monopolies debate for the struggle for power can be seen in the cast of characters. Coke used the issue to attack "both Bacon and Montague, the one his legal rival, the other the occupant of the Treasurership to which Coke by desert and ability had the greater claim" (Prestwich, 1973:295). The king's favorite, Buckingham, who had dominated English politics, was closely tied to various monopolies and Parliament's inquiry had made him, "seeing monopolies 'beaten upon the Anvil every Day, almost every Hour,' ...a frighten[ed] man."²⁵⁹ Thus three of the most important figures of James' reign played important roles in the debate.

A bill passed the House of Commons but failed in the Lords, "from no unfriendliness to the purpose of the measure; the objections were merely based upon its form, which was thought to be unflattering to the king" (Price, 1906:33).²⁶⁰ Crucially, the bill stated that the question of whether a thing was a monopoly was to be decided by "Judges of the Law" (Fox, 1947:106), introducing the crucial innovation of a third-party enforcement mechanism to prevent abuses. The importance of this step, finally accomplished in the next session's successful passage of the Statute of Monopolies, can be seen in James' defenders' assertion that he "was unfavourably disposed to many of the monopolies, but he desired that their revocation should be an act of grace on his part rather than a display of parliamentary independence" (Fox, 1947:116). James' conflict with this same Parliament produced "the first constitutional split between Crown and Parliament," a December 1621 Protestation of Parliament's rights, which so enraged James that he tore it from the Parliamentary journals (Reese, 1940:201; also Farmer, 1967:53).²⁶¹ While the

²⁵⁹ See Prestwich (1973:296) quoting the Commons report.

²⁶⁰ See also Kyle (1998:207-212) recounting the debate and the reasons stated for refusing the bill in the Lords, and concluding that "it is probable that the Lords viewed the bill as a threat to court patronage and specifically their own ability to receive benefits from grants of the King and to use their influence to reward clients and servants."

²⁶¹ Scott (2000:96) attributes the dispute to religious differences and Parliament's fear that events in Europe threatened the survival of Protestantism.

pages were gone, James could not undo the Commons' assertion of its authority in a wide range of areas, and thus the overthrow of "all the Tudor limitations which had warned them off matters of State or ... religion," and the Commons' claim to the right to speak on virtually any topic (Tanner, 1971:49).

James attempted to repeat Elizabeth's success in deflecting Parliamentary attention through a suggestion that he would revoke the three worst monopolies chosen by Parliament. This too proved insufficient for Parliament. Asserting its own right to revoke monopoly patents, something to which James objected (Smith, 1973:175), Parliament condemned at least thirty-five by the end of the session (Smith, 1973:105-106).²⁶² The King resisted these attacks, with Lord Cranfield arguing on his behalf that James "would not have the Name of a Patent odious amongst us; neither doth he think, that a Patent which is against some Ten particular men, is a grievance to the Kingdom, and, if we take away such, we deprive his Majesty of all Means to reward his Servants" (Prestwich, 1973:311). Cranfield also defended a monopolist against the Commons, arguing that the monopolist "had but a Pension out of the Profits of Said Patent, and so have also many other Members of this House out of other Patents" (Prestwich, 1973:312). The general reform failed, however, as James soon dissolved Parliament. The session passed nothing more than the two subsidy bills, a meager legislative record (Jones, 1973:193). The dissolution came, as it had in 1610 and 1614, when James was angered by Parliament's assertion of its rights (Croft, 2003:114-115).²⁶³ Indeed, so important to James was preventing Parliament from asserting its rights to him that he dissolved Parliament before it had completed action on a third subsidy bill (Croft, 2003:115), thus sacrificing immediate revenue for authority. Once again he attempted to deflect anger over the monopolies by revoking thirty and disowning seventeen (allowing actions at common law against them) after the 1621 Parliament ended (Croft, 2003:112). Despite James' counterattack, Parliament emerged from the 1621 session with a strengthened position against the Crown (Roberts, 1966:33), although the issue of a general reform of monopolies remained unresolved.

James summoned his fourth Parliament for early 1624 (after having earlier "denounced the advocates of a new Parliament as traitors" (Croft, 2003:121)). He did so in part due to pressure from Prince Charles and the Duke of

²⁶² Kyle (1998:218) argues that the King's "swiftness" in addressing monopoly complaints in 1621 shows his antipathy toward the grants. James' actions, however, are equally compatible with an effort to head off Parliamentary action by repeating Elizabeth's tactics. See fns 214-226.

²⁶³ The issue was whether the House had the right to debate foreign policy issues. See also Russell (1971:296). Kishlansky (1997:101-102) observes, "The Commons' petition wrecked the parliament of 1621...."

Buckingham, the king's favorite, who wished to push for funds for a war with Spain after Charles' rebuff in the Spanish court in his suit for the hand of the Infanta (Croft, 2003:120-121; also Kishlansky, 1997:105).²⁶⁴ The war faction at court prevailed, gaining not only funding but also the ouster and brief imprisonment of the Lord Treasurer, who had opposed war with Spain as too costly (Croft, 2003:122-125). Indeed, Buckingham's conversion to the anti-Spanish position made him so popular that "the same House of Commons which, in 1621, had attacked Buckingham's clique of monopolists would, in 1624, rally round and hail him as the saviour of the nation" (Ruigh, 1971:265). Factionalism again dominated Parliament, with factional struggles serving as "symbols of the determination of individuals to increase their power in the State at the expense of their rivals while at the same time giving support to policies which they favored" (Smith, 1984:274).²⁶⁵ Kishlansky (1997:106) terms the parliament "a catastrophe" in part for the limits it imposed on the royal prerogative, which he contends, contributed to the later Stuart-Parliamentary conflicts.²⁶⁶ Whether because James had "declined into senility and virtually lost control of the government," or because he looked to Parliament "as the last possible refuge of regal authority" to resist Charles and Buckingham's anti-Spanish policies, "the result was the same: James relinquished, by default, his control over foreign policy" (Ruigh, 1971:383). Perhaps most importantly, he conceded to Parliament the authority to control the purposes for which money was appropriated (Ruigh, 1971:390).

In addition to the question of war with Spain, Parliament also addressed other issues, including monopolies.²⁶⁷ This time Parliament succeeded in passing what became the Statute of Monopolies.²⁶⁸ Parliament's success was partly due to the tactical superiority of the Parliamentary leaders: The Crown's faction was weakened by internal disputes among its members²⁶⁹ and by James and his

²⁶⁴ Smith (1984:271) concludes that "The threat or reality of war was the principal reason for the summoning of the five Parliaments which met between 1621 and 1629."

²⁶⁵ Ruigh (1971:48) notes that James lost control of Parliament in 1624 due to "a lack of organization and discipline and divided loyalties" among his supporters.

²⁶⁶ Scott (2000:97) argues that "there was *no* fundamental discontinuity between the 1620s and 1640-2," linking these earlier conflicts between crown and Parliament to the English Civil War.

²⁶⁷ Parliament waited until after the break with Spain was accomplished to take up incursions into the royal prerogative (Ruigh, 1971:49).

²⁶⁸ Statute of Monopolies (1624), 21 Jac. 1, ch. 3.

²⁶⁹ See Prestwich (1973:159), in 1624 "the Court faction was as much responsible as the ability of the opposition for increasing the strength of the Commons." Smith (1984:274) notes that James was less skilled than Elizabeth at preventing court factional struggles from spilling over into Parliament.

advisors' lack of skill in managing Parliament.²⁷⁰ Most importantly, the dominance of the question of war with Spain meant that the King's party, led by Charles and Buckingham, were willing to make crucial concessions on topics elsewhere,²⁷¹ and Parliament made use of its leverage to gain relief on a number of issues.²⁷²

The result was that, when the subject of monopolies arose, the time was ripe for an innovative approach. As in 1621, the proposed monopolies statute provided that cases were to be heard in the common law courts (naming the three primary courts of this time).²⁷³ It is important to note that Parliament was not completely unsympathetic to the notion of grants of monopolies, as can be seen by the House of Lords' revisions to the Commons' passed bill. The Lords considered "many petitions" for changes, including specific requests for exemptions from patent holders, some of which they granted (Kyle, 1998:212-215). Moreover, Parliament had many patentees among its ranks, and these proved the strongest defenders of the royal prerogative.²⁷⁴ What troubled both Commons and Lords was the lack of an effective check on the monarchy's powers to grant patents of monopoly. Both Houses were determined to reign in the executive's discretion. The passage of the Statute of Monopolies is all the more remarkable given the Jacobian Parliaments' general lack of success in passing legislation.²⁷⁵

The statute provided in Section VI that all royal monopolies were void with an exception for "new manufacture[s] within the Realm to the true and first inventors" and provided "they not be contrary to law."²⁷⁶ Most importantly, Section II "declared and enacted...that all monopolies...shall be forever hereafter examined, heard, tried, and determined by and according to the

²⁷⁰ "In the domestic sphere the councillors' role was limited by the failure on the part of the government to prepare an agenda of new legislation prior to the convention of the Parliament" (Ruigh, 1971:50).

²⁷¹ Ruigh (1971:293) describes the approach taken by Charles and Buckingham.

²⁷² "Until the Easter recesses a 'happy' Parliament was in prospect if the King merely dissolved the treaties [with Spain] and claimed no relief for his necessities. Thereafter the costs mounted rapidly; the subsidy bill proceeded at a snail's pace, while demands for redress of grievances, limitations on patents, interference in church government, a liberal general pardon, and the passage of good laws followed each other with lightening rapidity" (Ruigh, 1971:394-395).

²⁷³ Kyle (1998:212) notes that naming courts was necessary to avoid granting jurisdiction to county courts.

²⁷⁴ Ruigh (1971:55-56) discusses opposition to monopolies reform by patentees.

²⁷⁵ Smith (1984:274-275) notes that three Jacobian Parliaments passed no legislation other than subsidy bills and only the 1624 Parliament's record of thirty-five public and thirty-eight private acts was comparable to Elizabethan Parliaments.

²⁷⁶ Statute of Monopolies, Section VI.

common laws.”²⁷⁷ The statute decisively settled the question of the monarch’s authority to issue patents of monopoly, sharply restricting the permissible grants.²⁷⁸ The common law’s limitation to grants that furthered the national interest would henceforth be enforced by the common law courts, not the Privy Council or the Star Chamber. By relocating the decision-making authority over the validity of particular patents, Parliament created a binding constraint on the issuance of monopoly patents, limiting them to cases of invention. Thus, although revisionists argue the Statute of Monopolies was simply a restatement of existing law as James had articulated it in the *Book of Bounty*,²⁷⁹ such a reading neglects the crucial change introduced by the grant of jurisdiction to the common law courts in place of the monarch’s “act of grace.” Moreover, it also neglects the framing struggle over the common law between James and Sir Edward Coke, Chief Justice of the Common Pleas from 1606 to 1616. Coke successfully restricted royal control over the common law courts throughout his tenure, which ended in 1616 when Coke resisted James’ insistence on a consultation with the judges in cases where the royal prerogative was called into question (Reese, 1940:192-193).²⁸⁰

The explanation of the Statute of Monopolies in interest group terms is relatively straightforward. Parliament and monarch disputed over the subject from the 1590s until the 1620s, with each Parliament raising the issue. Shifting jurisdiction over challenges to monopolies from the prerogative courts to the common law courts provided an institutional mechanism to resolve the problem of confining patents of monopolies to something close to the set of social-welfare-enhancing innovation patents. The real puzzle to be explained is why it took until 1624 for Parliament to prevail.

There are three additional reasons why the Statute of Monopolies appeared in 1624 rather than earlier. First, the costs imposed by the royal monopolies rose

²⁷⁷ Statute of Monopolies, Section II.

²⁷⁸ MacLeod (1988:17) notes that in addition to invention patents, the Statute of Monopolies allowed “grants made or confirmed by Act of Parliament, warrants under the privy seal to justices of the courts of law and of the peace, patents for printing, making ordnance, gunpowder and alum, and the manufacturing patents granted to four named individuals; also exempted were charters to towns, corporations and companies.”

²⁷⁹ See, e.g., Kyle (1998:216-217), “The Act was simply a declaratory statement of the Common Law position and the King’s own views.”

²⁸⁰ Farmer (1967:59) describes James’ confrontation with the judges of the Exchequer Court, including Coke: “Then James summoned the twelve judges before him, and berated them soundly. All of them fell to their knees. Eleven begged for pardon; Coke continued to protest.” Tanner (1971:40) calls Coke’s removal “[t]he first dismissal of a judge for reasons that were in the main political ... a landmark in constitutional history.”

over time, as James expanded the use of the royal prerogative.²⁸¹ Opposition to monopolies expressed itself in Parliament in part in response to economic downturns, with the 1601, 1621, and 1624 attacks in Commons all coming as hard times made the costs imposed by monopolies harder to bear. As the losses imposed on the nation (and the political class in particular) grew, assembling a coalition against monopolies became easier.²⁸² These costs (and others) motivated James' later parliaments to develop organized factions. As Buchanan and Tullock (1962:291) conclude, “[u]ltimately the hope for some ‘improvement’ must lie in the mutual consent of the special interests themselves for constitutional changes which will act so as to reduce the excessive costs that discriminatory legislation imposes on all groups over time.” James' abuses of his prerogative with respect to monopolies, and more generally, ultimately convinced a Parliament of patent-holders and potential patent-holders to restrict patent practice.

Second, James lacked the political skills and capital of his predecessor,²⁸³ making it less costly to reduce royal power. (Scott (2000:52) terms this the “pilot error” explanation of James' reign.) Elizabeth had a powerful reservoir of goodwill, both due to her clever manipulations of Parliament and because of

²⁸¹ See MacLeod (1988:16), “Major items of consumption – salt, soap, starch, coal, for example – rose dramatically in price, as monopolists sought to recoup the rents and premiums demanded by the government and to extract high profits while their political luck held.”

²⁸² Analyzing trade policy, Mueller (1989:245) observes that at times it is easier to eliminate a large group of restrictions on trade than just a few, because large-scale reform makes it easier to use the gains from the reform to buy off those benefitting from the abolished restrictions. A similar logic applies here. Parliament under the Stuarts (and the Tudors) was, of course, not a popularly elected body. Nonetheless, its members represented interests beyond their own—including interests likely to bear a substantial share of the losses imposed by monopolies. For example, “in a substantial majority of Elizabethan boroughs the electorate was the corporation” (Neale, 1949:237). Matters affecting the wealthy, including the business elite, would therefore have predominated. The nobility also had responsibilities for those beneath them on the social scale and so would have been concerned about the cumulative impact of the losses. See, e.g., Russell (1971:257), “Many members of Parliament protested that they were restrained from voting higher taxes by fear of reactions in their constituencies,” and noting the “higher cost of electioneering” in the late 1590s suggested a “growing independence of yeomen voters.” Moreover, the political class was dependent on continued economic success to maintain its position, which “fostered a sense of neurosis which was accentuated by the Crown's clumsy attempts under the Tudors as well as the Stuarts, to obtain a fair share of the economic cake by the use of controls in trade and industry....” See Kenyon (1966:210).

²⁸³ In part, his lack of political capital resulted from, what were for some, admirable traits and deeds. For example, James exercised religious tolerance, particularly of Catholics; made peace with Spain; married his son Charles to a French princess; and abandoned his Protestant son-in-law during the Thirty Years Wars. These actions frequently provoked resentment among his Protestant subjects.

her overall skill at governance. By framing the issue as one of royal prerogative and making shrewd concessions on particular monopoly grants, she had managed to contain discontent over monopolies in Parliament. James did not have a reservoir of goodwill (Morrill, 1984:386), and the tide was turning in Parliament against the monarchy generally.²⁸⁴ With Parliament more willing to raise grievances and initiate policy changes, James was less able to fall back on such maneuvers. Even those skills James did have were in decline after 1618 as his health began to fail.²⁸⁵ Moreover, Charles and Buckingham were willing to trade royal prerogatives for support of their anti-Spanish policy, further lessening the cost of opposing the royal prerogative. And, Parliament's interest in restricting the royal prerogative grew throughout James' reign as his excessive expenditures, policies, maladroit handling of Parliamentary relations, and failure to call frequent Parliaments aggravated the constitutional disagreement.

Third, and even more importantly, framing the issue as one of royal prerogative had a negative effect under James. Though James was a firm believer in absolute monarchy and the "great chain of being," by the 1620s, he was in severe debt and lingering issues of sovereignty (*i.e.*, the crown's power vis-à-vis Parliament and the common law)²⁸⁶ and government finance were at the forefront of crown-Parliament relations²⁸⁷ (Scott, 2000:52) terms this the "mechanical error" explanation.) Parliament, which held the purse strings, was keen to rein James in, not acquiesce in his expansive interpretation of his authority (Morrill, 1984:386).²⁸⁸ And James was under pressure from his advisors and Prince Charles to placate Parliament as part of their plan for war with Spain.²⁸⁹ Further, the new Parliamentary committee structure placed lawyers, "protagonists of the common-law courts [who] resented alike the church and administrative courts," in positions of power within Commons,

²⁸⁴ Fox (1947:72) states "the slavish Parliament of Henry VIII grew into the murmuring Parliament of Queen Elizabeth, the mutinous Parliament of James I, and the rebellious Parliament of Charles I."

²⁸⁵ Croft (2003:101) notes that "after 1618 his energies were declining."

²⁸⁶ Reese (1940:192-196) describes conflicts with James over common law.

²⁸⁷ Ruigh (1971:4) observes, "Perhaps no single issue, with the possible exception of parliamentary privilege, provided a better focal point for resistance to royal authority than did the question of revenue. It transcended the parochial interests of lawyers, merchants, landowners, and religious radicals."

²⁸⁸ Reese (1940:159-160) compares James unfavorably to Elizabeth.

²⁸⁹ Smith (1973:175) argues that, "In this situation, Charles and Buckingham were prepared to accept with equanimity such invasions of the royal prerogative as those enshrined in the Subsidy and Monopolies Acts." Ruigh (1971:35) notes that Charles and Buckingham had begun "a policy of conciliation toward the popular leaders" even before Parliament was called.

because of their skill in drafting bills and petitions (Notestein, 1971:9).²⁹⁰ These factors combined to make the time particularly auspicious for parliamentary action which produced a tremendous outpouring of legislation in addition to the Statute of Monopolies.²⁹¹ The timing of the Statute of Monopolies is thus consistent with the interest group explanation.

4.3. THE IMPACT OF THE STATUTE OF MONOPOLIES

We argue that it was the Statute of Monopolies, not *Darcy v. Allen* or the ineffectual *Book of Bounty*, that represented the crucial institutional innovation in English patent law. This interpretation is supported by the sequence of events: Why the need for Parliamentary action if the Statute of Monopolies is little more than a codification of the common law or if James had already conceded the point in the *Book of Bounty*? Another way of asking the same question is: why did not the common law, as with *Darcy v. Allen*, provide an adequate venue to redress monopolistic abuses? To answer this question, and to support our position, we must appreciate the limited role of the common law courts in passing judgment on commercial matters, especially cases involving monopolies. Commercial concerns were the province, not of the common law courts, but of numerous special courts such as the piepowder courts²⁹² and law merchant courts.²⁹³ Jurisdiction was the subject of constant struggle as “England was a network, a jig-saw puzzle, of courts constructed on different levels” (Jones, 1973:181).

This modest common law presence in the world of patents should come as no surprise as the common law was particularly hostile toward monopolies. It should also come as no surprise that Parliament insisted on enacting Section II of the Statute of Monopolies. The Tudors had swept away both the Church

²⁹⁰ “The legal training received by many M.P.s gave them skill in debate and a meticulous concern for what they regarded as the ‘Fundamental law’ of the constitution” (Farmer, 1967:48).

²⁹¹ See Kenyon (1966:90). The 1624 Parliament passed 35 statutes. By comparison, no other contemporary Parliament was as active: 1604-1610 (73 statutes over six years); 1614 (0 statutes); 1621 (1 statute); 1626 (0 statutes); 1628-1629 (7 statutes).

²⁹² As centers of trade were established, the pie powder courts were created to resolve the disputes of the merchant class, which enjoyed certain royal privileges. Bane (1983:353) notes “The earliest recorded judicial institution that determined issues of commercial law was the piepowder court, which made its appearance in England in the middle of the thirteenth century and existed for more than three centuries thereafter to settle disputes between merchants.” Rubin (1995:783) explains that the “piepowder courts were convened during fairs, and their name derives from the dusty feet (pieds poudres) of the merchants in attendance.”

²⁹³ See fns 223-25 above. Holdsworth (1924:284) contends “The result of the victory of the Chancery over the common law courts in James I’s reign was to take away from the common law its exclusive control over large parts of the private law of the state.”

and the barons, with the result that “[w]hat men needed now was not protection from the great lords, but protection from tyrannical abuse of its authority on the part of the power by which the great lords had been overthrown” (Tanner, 1971:2). Monopolies were just one area in which Parliament sought to restrain royal power and its choice of the common law as the means of doing so is unsurprising. Not only were Parliament and the common law in philosophical agreement with respect to their enmity of abusive monopolies, but, as Holdsworth (1924:284-285) notes, the “majority of the common lawyers naturally gravitated to the side of the Parliament because...the powers of Parliament were the great security for the supremacy of the common law, and it was by the common law that the position of Parliament was most fully recognized.” Moreover, Coke’s involvement helps to explain Parliament’s choice of the monitor for the grant of monopolies: “Coke’s idea was that the Bench should act as arbiter of the Constitution to decide all disputed questions” (Tanner, 1971:41). Using the common law courts to decide when a monopoly was legitimate was a natural application of Coke’s general approach. Finally, the common law courts’ formalism meant that giving them jurisdiction over the restriction made the restriction harder to evade than it would have been in the prerogative courts, which were not only more easily dominated by the monarch, but whose equitable orientation would have made them less constrained by the statute’s text.

Thus, Section II of the Statute of Monopolies, in addition to being the only new principle of law enacted by the statute, was a bold and challenging provision. This is not to suggest that the common law enjoyed prominence immediately after enactment.²⁹⁴ As Mossoff (2001:1277) notes, the “Privy Council’s obstinate refusal to concede jurisdiction” allowed it to continue to quash common law actions against patents in some cases. In fact, it would take some time before patent determinations were firmly within the confines of the common law courts.²⁹⁵ Nor did the Statute of Monopolies end the abuses of

²⁹⁴ Kyle (1998:206) notes that “patent continued to be granted.” See also Kenyon (1966:62). MacLeod (1988:15) states “there were loopholes in the Act which the crown, desperate for new sources of patronage and revenue in the 1630s, was able to exploit.”

²⁹⁵ Price (1906:35) notes that Privy Council continued to squash common law suits aimed at existing monopolies despite explicit language to the contrary in the statute, while Fox (1947:124) notes that Star Chamber continued to hear monopoly cases into the 1640s “under the theory that defiance of a royal proclamation was a contempt of royal prerogative.” Mossoff (2001:1286) concludes that it was not until 1753 that “the Privy Council relinquished to the law courts jurisdiction over determining the validity of patents for inventions.” Mossoff suggests a few reasons for the Privy Council’s reluctance to concede jurisdiction. First, 17th-century England was a place marked by constitutional upheaval with various institutional actors (e.g., Crown, Parliament, and the Church) vying for power. Mossoff argues that the Privy Council’s

the royal prerogative, of course.²⁹⁶ Patent law was only one of the many arenas in which the larger struggle for supremacy between Parliament and the monarchy was fought. Parliament's victory in the Statute of Monopolies, as important as it was, was still only the winning of a single political battle in a multi-century campaign.²⁹⁷ The point is that common law lawyers and members of Parliament shared a mutual interest in challenging the crown's abusive practices regarding monopolistic grants and acted pursuant to that interest to establish the principle of a neutral decision maker to evaluate the legitimacy of monopoly patents. Whether due to 'pilot error' or 'mechanical error,' James' reign produced a fundamental shift in the institution of patent law, introducing an institution capable of an independent evaluation of the legitimacy of particular patents.

5. THE AMERICAN EXPERIENCE

Venice demonstrated the advantages of an administrative system for creating patents for innovation while avoiding the dangers of rent-seeking. The British experience with the Statute of Monopolies offered proof of the advantages of a neutral forum and standard for determining the legitimacy of grants of monopoly. We now turn to the framing of Article I, Section 8, Clause 8 of the U.S. Constitution and the first patent statute implementing this provision to see how the founders adapted these institutions to the American context.

recalcitrance represented a reaffirmation of the Crown's authority, and the Parliament and common law courts had more important battles to fight at the time. Second, Mossoff notes that, after the Glorious Revolution of 1689, Lockean political ideals created a politically stable environment. The emphasis on natural rights gave rise to Parliamentary supremacy and the dominance of the common law courts. Thus, by the mid-18th century, the Privy Council lacked moral and social authority to claim jurisdiction over patents. The formalism that accompanied the common law courts also lent a strong degree of stability over the long-term, whereas the Privy Council had much more discretion. As such, the common law courts were a more optimal forum for establishing neutral, durable rules. See email between Adam Mossoff and authors, February 21, 2005.

²⁹⁶ Price (1906:35) notes that the crown used invention monopolies as a means to reduce existing industries to monopolies "under cover of technical improvements." Fox (1947:7) notes attacks on monopolies in Parliament continued into the "Long Parliament" that began in 1640.

²⁹⁷ Nachbar (2005:1354) states that the Statute of Monopolies represents "a strong and important tradition...of political action."

5.1. THE COLONIAL ERA

While colonial patent practice set the stage for the creation of the Patent and Copyright Clause,²⁹⁸ it was of limited economic importance during the colonial era because of the predominantly export-driven, agrarian nature of the economy.²⁹⁹ The American colonies were rich in natural resources, but, as with most new settlements, had limited capital and labor. Given this combination of abundance of natural resources and scarce labor and capital, colonists “maximize[d] income by producing resource-intensive goods for an external market,” resulting in a “simple exchange system in which colonists ship[ped] staples to a metropolis in exchange for manufactured goods and additional supplies of labor and capital with which to further exploit colonial resources” (McCusker and Menard, 1985:26). This exchange allowed for colonial economic development in the form of specialization, increased productivity, and higher incomes.³⁰⁰ Indeed, the years just prior to the Revolution have been described as the “golden age” for American colonists in terms of material wealth as they reaped the benefits of exporting commodities to Britain and the rest of the Empire.³⁰¹

²⁹⁸ Bugbee (1964:83) states “[t]he colonial and state development of legal protection for intellectual property was of fundamental importance as precedent upon which the founders of 1787 and the lawmakers of 1790 could draw.”

²⁹⁹ See Ben-Atar (2004:26), “The colonies remained primarily agricultural and their people and governments directed most of their energies to the concerns of farmers, husbandmen, and planters.” See also Kornblith (1998:xx), “When George Washington took office as president in 1789, the United States was an overwhelmingly rural and profoundly agrarian society.” Shepherd (1985:7) notes that “in 1768 that part of colonial income that originated in the non-market sector of the economy was still, in all likelihood, a major proportion of total colonial income.” For a discussion of the colonial economy, see Atack and Passell (1994:26-53). The staple (or export-led) theory of economic growth explains that in this context the “expansion of a staple export determines the rate of economic growth in ‘new countries’ or ‘regions of new settlement’” See also McCusker and Menard (1985:20). The staple theory was developed by Canadian economists to explain economic change in newly settled territories with small populations, but rich natural resources (e.g., Innis, 1973, 1967; Watkins, 1963:141-158). We recognize the criticisms of the staple theory. See McCusker and Menard (1985:27-34) discussing criticisms and responses. Altman (2003:230-254) also discusses criticisms, but simply uses the theory as one plausible explanation of colonial economic growth.

³⁰⁰ See Shepherd (1985:4), “very likely incomes [in the colonies] were on the average as high, or perhaps higher, than in most other areas of the world, including England.” Of course, there were regional and individual differences in accumulated wealth. See Jones (1980:307-311, 320-323) discussing regional differences.

³⁰¹ According to McCusker and Menard (1985:51), the prosperity was “widely shared by the colonists,” who “were better off not only than their predecessors in the colonies or than most of their contemporaries elsewhere in the world but also than their descendants were to be again for

To the extent there was a colonial patent custom, it was parochial in its reach, as local legislatures seeking to foster particular industries within a given community made occasional use of patents.³⁰² Thus, while no colony enacted a systematic patent law such as the Statute of Monopolies,³⁰³ there were attempts to spur local economic activity through the issuance of patents based on private legislation.³⁰⁴ These patents were comparatively rare, however, numbering “well under a hundred” and perhaps “as little as fifty or so” (Walterscheid, 1996a:629).³⁰⁵ In short, patents “never took root in the colonies” before the Revolution.³⁰⁶ This is unsurprising given the lack of colonial manufacturing of complex goods.

The mother country tolerated the colonists’ assertion of their ability to issue local patents because British control of colonial manufacturing and diffusion of knowledge limited the impact of any innovations induced by colonial patents (Ben-Atar, 2004:26).³⁰⁷ Indeed, “centrality of manufacturing” was one of the four basic principles underlying the British mercantilist system (Peskin,

some time to come.” See also Jones (1980:294) stating that on the eve of revolution, the colonies had acquired “an impressive amount of privately held wealth.”

³⁰² See Ben-Atar (2004:20) discussing colonial initiatives to encourage local manufacturing.

³⁰³ It should also be noted, however, that colonies such as Massachusetts and Connecticut had enacted anti-monopoly legislation. The Body of Liberties of 1641 in Massachusetts, for example, stated that “No monopolies shall be granted or allowed amongst us, but of such new Inventions that are profitable to the Country, and that for a short time” (*Colonial Laws of Massachusetts*, reprinted from the Edition of 1660, 34-5, quoted in Bugbee (1964:61)). But Bugbee also (1964:83) cautions against describing Colonial patent custom as part of a “patent system.”

³⁰⁴ See Ochea (2001:51), “In accordance with the established practice in England, all colonial and state patents prior to 1789 were granted by means of private laws for the benefit of specific individuals.” See also Forman (1976:25), “Unlike the English patents of invention, which were royal grants and favors, the American versions were enactments by colonial legislatures of specific grants to individual inventors.”

³⁰⁵ Inlow (1950:36-37) notes that during the colonial period “the merest handful of patents were issued for industrial or manufacturing purposes and what few grants were made do not seem to have reflected in any way the systematic effort at integration into the national economy that characterized the work of the Tudor and Stuart regimes in England.”

³⁰⁶ See Inlow (1950:36) quoting from R.B. Morris (1946). Ben-Atar (2004:26) states that patents “remained quite rare throughout the colonial period.” This may also have been partially due to the relative weakness of legislatures. Starr (2004:63) states “only in Massachusetts and Virginia were the legislatures clearly dominant.”

³⁰⁷ But it would be a mistake to suggest that British restrictions were the only cause of weak colonial innovation. As McCusker and Menard (1985:309-310) state, in addition to British mercantilist policies, colonial industrial development was limited by “factor prices, market size, and alternative prospects.”

2003:14).³⁰⁸ What this meant was that “London prescribed specifically what industries could be established and what stages of the industrial production could take place” (Ben-Atar, 2004:25). England served as the administrative and manufacturing center, while the British colonies provided raw materials for English manufacturing and also served as consumers for the resulting goods. The American colonies were no exception to this general strategy.³⁰⁹ In fact, so important was the American market to Britain that the British deemed the American colonies a “revenue mine” (Langford, 1984:461). But at least until the crisis of the 1760s, the American colonists viewed this relationship as one of mutual dependence that allowed both Britain and some colonial economic sectors to flourish.³¹⁰ Peskin (2003:19) writes, “[i]f the colonists were denied the lucrative function of manufacturing, they nevertheless prospered as traders within the British empire, and they believed they gained much economic clout as the most important consumers” of English goods.

Thus, operating within the mercantilist system, colonial legislatures seem to have used patents as an occasional economic development tool for their local

³⁰⁸ The other three principles according to Peskin (2003:14) were systematic planning, complementarity of economic functions among constituent parts, and balance-of-trade theory. For a discussion of maintaining a favorable balance of trade at the expense of rival nations, see Christie (1977:205-226). Mercantilism has been defined as a form of government intervention in economic affairs to strengthen the national interest. McCusker and Menard (1985:494) note that this intervention

not only produced financial but also strategic advantages. By promoting trade a nation could both enrich itself and beggar its neighbor. By diminishing imports from a trading partner, increasing exports to that partner, and seeing to it that the goods were carried on domestic vessels, the balance of trade could be improved and the inflow of gold and silver increased. Strength not only replaced weakness but also did so at the expense of one’s enemies. It was a wise government that followed the dictates of mercantilism — according to conventional wisdom.

See also McCusker (1996:338) emphasizing the importance of strong nation-state mercantilist thinkers. Therefore, British mercantilism sought to import raw materials from their colonies, and limit such from competitors such as Spain, France, and the Dutch. These raw materials frequently needed processing, thus leading to job creation within Britain. Any excess raw material would be re-exported, resulting in the spread of wealth to ship owners and others instrumental to exportation. Perhaps the quintessential mercantilist tools in the 17th century were the Navigation Acts, which limited importing vessels to English ships and named England and its colonies as the exclusive destination of colonial imported goods.

³⁰⁹ Peskin (2003:22) describes Britain’s relationship to the colonies in this regard.

³¹⁰ Attack and Passell (1994:58) assert the benefits to colonists from mercantilism, particularly the shipbuilding industry, and colonial advantages flowing from Britain’s subsidizing colonial production of certain raw materials such as indigo, while McCusker and Menard (1985:26) note that colonial export of staples and importation of manufacturers, labor, and capital “leads to regional specialization within colonies” that “in turn leads to gains in productivity and income.”

economies within the broad limits imposed by the British government.³¹¹ Not surprisingly, as a result there is little evidence that patents played an important role in colonial industrial policy. The reason is not that colonial legislatures failed to perceive the potential value of patents to extract rents, but that the actual value of the rents created by a patent in a single colony was low due to economic conditions.³¹² Aside from the interest of the few American colonial inventors, patents (and technology generally) simply were not major political issues in the largely agrarian society of the late eighteenth century.³¹³

5.2. THE ARTICLES OF CONFEDERATION AND THE RISE OF A DOMESTIC MANUFACTURING ETHOS

The Revolution changed the economic system of the former colonies dramatically.³¹⁴ No longer required (or even able) to buy manufactured goods solely through Britain, the new nation now demanded domestic sources of goods previously imported from the mother country. This need was reinforced by an ideological demand for self-sufficiency, expressed in part through the creation of various societies whose purpose was to encourage industry and manufacture.³¹⁵ Indeed, notions of self-sufficiency and the importance of

³¹¹ The “centrality of the manufacturing” tenet of British mercantilism, which greatly limited colonial manufacturing, seems to have been particularly relevant to how the colonies viewed patents (Walterscheid, 1996a:639; also Ben-Atar, 2004:22).

³¹² For evidence that colonial legislatures were keenly aware of their powers and willing to use them for their own benefit, consider their regulation of the press. Although the landmark case of John Peter Zenger’s prosecution by royal authorities for seditious libel is well-known, “after Zenger it was not royal authorities but colonial assemblies that posed the primary threat to freedom of the press. Charging breach of privilege, they repeatedly threw printers in prison, fined them, and forced them to humble themselves and pledge to be more respectful and compliant” (Starr, 2004:60).

³¹³ See Lubar (1991:937), “Most Americans evinced neither love for technological ingenuity nor a belief that technological advance was essential for American economic growth. Few believed that technology was going to improve their lives.” York (1985:46) notes that in the 18th century, “most Americans had little use of inventors; they were not especially enamored with the ‘newfangled’ and were often reluctant to adopt the latest devices.” Federico (1929:365) asserts that colonial patents seemed not to have a “permanent and general influence upon colonial manufacturers.” This attitude began to shift by the early nineteenth century. Sokoloff (1988:819) asserts that “the early Americans were aware of the economic transformation that had recently begun in England, and of the advances in technology that accompanied that process. The response to these propitious conditions was strong, and...it is clear that sustained economic growth was underway early in the nineteenth century.”

³¹⁴ “In the late 18th century America began not one revolution but two. The War of American Independence coincided with the advent of American industrialization....” (Kasson, 1998:3).

³¹⁵ A primary example is the creation of the Pennsylvania Society for the Encouragement of Manufactures and the Useful Arts in 1787. Other such societies included the Boston Society for

domestic manufacturing began to appear as early as the 1760s after the enactment of the Sugar Act, Stamp Act, and Townshend Duties³¹⁶--legislation that was viewed by the colonists as a fundamental breach of the mercantile relationship and nothing more than imperial taxation (Peskin, 2003:44).³¹⁷ These legislative initiatives, even after their repeal, set in motion an irreversible movement toward domestic manufacture, which carried over to the Revolution and beyond. By 1770, and certainly after the Coercive (or Intolerable) Acts of 1774, the colonists were "questioning the legitimacy of the economic empire itself and not just specific pieces of legislation" (Peskin, 2003:44).³¹⁸ With war on the horizon, domestic manufacture and nonimportation were the focus of interest in several colonies as well as in the Continental Congress. For example, Massachusetts, Pennsylvania, and New York all passed resolutions designed to encourage manufacturing within their respective colonies. And the Association of 1774, a creation of the Continental Congress, led a boycott of English goods (Peskin, 2003:47). The major difference between the Revolutionary period and the preceding era of mercantilist prosperity was a political demand for measures to displace British suppliers of manufactured goods. There was as yet no American interest group ready to take advantage of these conditions for its own benefit.

Upon declaring American independence from Britain, the colonies drafted the Articles of Confederation in an attempt to maintain a sense of unity among the newly independent States.³¹⁹ But the Articles were created by states jealous of their powers and fearful of replacing one tyrannical overlord with another.³²⁰

Encouraging Industry and Employing the Poor and the New York Society for the Promotion of Arts, Agriculture, and Economy.

³¹⁶ For a discussion of these Acts and Duties, see Atack and Passell (1994:68-69). See also McFarlane (1994:255-258). On the Intolerable Acts, see Morriss and Stroup (2000:769).

³¹⁷ Atack and Passell (1994:67) state "[t]he year 1763 marked a turning point in the British-colonial relationship." McFarlane (1994:255-259) discusses opposition to the Stamp Act, Sugar Act, and Townshend Duties. See also Kammen (1970:119) stating "[w]hat became clear between 1764 and 1767 was the incompatibility of British administrative intentions with colonial commercial habits and aims." Indeed, the anger provoked by the Townshend duties quickly manifested itself. James (1994:103) writes, the "Townshend duties on tea and manufactured imports proved uncollectible because of a campaign of mass intimidation."

³¹⁸ Nonetheless, Peskin argues that the mercantilist experience would "inform American economic thinking through the 1830s and beyond."

³¹⁹ Wood (1969:354) notes that the Articles of Confederation were drafted because "[w]ith Independence it became obvious that the Continental Congress, not really a governmental body and created simply out of the exigency of events in 1774, needed some more solid basis."

³²⁰ "The states had become increasingly jealous of their power and in fact through their handling of public lands and public debts were fast moving to absorb the major political and economic groups, creating a vested interest in state sovereignty" (Wood, 1969:361).

Morgan writes, “[e]steem for the state government and a corresponding distrust of the central government was rising all over the country.”³²¹ The Articles reflected the primacy of state sovereignty at the expense of national power;³²² in short, “[a] man’s ‘country’ was still his state” (Wood, 1969:356). Not surprisingly then, given the relative unimportance of patents in the colonial economies, the lack of a domestic constituency of patent holders, and the weakness of the new confederated national government, the Articles of Confederation made no mention of patents.³²³ There would be little reason to expect otherwise, given that the government established by the Articles barely had an executive branch,³²⁴ and the status of patents was only a relatively unimportant local economic development tool. Not giving the national government the patent power both served the interests of the state legislatures (preserving their control of a privilege, albeit one not currently worth a great deal) and fit the states’ larger interest in creating a national government that did not threaten their powers and lacked independent revenue sources.

The failure to provide for a national patent system had few consequences at first. The uncertainties of the war limited the growth of manufacturing and discouraged notions of “inventive property” in the new nation (Peskin, 2003:56-59). Indeed, a patent issued by a rebellious state government could hardly be expected to have much value if Britain won the war, and since the colonists’ chances did not appear bright at first, there was little incentive for anyone to invest in obtaining one. But as victory in the war and independence became more certain, the value of state-issued patents increased, and the new Confederation witnessed a resumption of state-issued patents during the mid-1780s.³²⁵ Even states such as Pennsylvania, Maryland, and North Carolina,

³²¹ “Just as Americans continued to be suspicious of governors even when they were elected, so they continued to be suspicious of central authority even when it was their own” (Morgan, 1992:104-106).

³²² Article 2 of the Articles of Confederation is most representative, stating that “Each State retains its sovereignty, freedom and independence, and every power, jurisdiction, and right, which is not by this confederation expressly delegated to the United States, in Congress assembled.” See Smith (2004:112) noting that “the states under the Articles of Confederation strongly resembled sovereign states in the international system, given the weakness of the central government and the concomitant independence of the state governments.”

³²³ According to Vaughan (1972:18), the Articles of Confederation continued a custom of each colony granting patents independently. Bugbee (1964:103) notes that the Articles of Confederation did not grant Congress the power to issue patents.

³²⁴ Morgan (1992:107) notes that under the Articles of Confederation, Congress “remained the only department in the central government.” Morris (1987:99) also states that the “president” had “far less authority and prestige before 1789 than he did subsequently.”

³²⁵ Meshbesh (1996:609) observes “By the time of the drafting of the Articles of Confederation in 1777, patents on new inventions were being granted by several of the state

which had shown little penchant for patents prior to the Confederation era, began to issue patents.³²⁶

States issued patents as a result of private bills or acts presented to various state legislatures. Inventors who sought broader coverage than that offered by a single state were forced to seek separate patents from each state—a costly and time-consuming process. As the new nation began to develop domestic manufacturing³²⁷ and national markets formed,³²⁸ the number of state-issued patents gradually increased, resulting in conflicting private legislative grants among states. By the “eve of the constitutional convention in 1787, the defects of the state patent custom had become obvious” (Walterscheid, 1997:72).³²⁹ Inventors recognized the problem and saw the solution, as one wrote to another: “a patent can be of no use unless it is from Congress, and not from them till they are vested with much more authority than they possess.”³³⁰

Perhaps the most prominent example of interstate confusion and discordance over patent rights is the lengthy struggle between John Fitch and James Rumsey, each of whom claimed priority of invention in “applying power of steam to the purposes of navigation,” i.e., the steamboat (Prager, 1955:517-518).³³¹ Fitch and Rumsey secured exclusive rights in several states (even sometimes in the same state) and spent years trying to disprove each other’s claims of priority. The steamboat battle was a high profile affair, demanding the attention of several prominent figures, including George Washington. What was at stake was the opening up of trade through inland waterways with the newly settled West, a lucrative prospect that became “Washington’s major interest between his retirement as General and his election as President”

governments with some regularity.” Inlow (1950:43) states “it was not until the Revolution...that patents began to issue in any great quantity for ‘industrial’ or inventive purposes....” Vaughan (1972:16-19) also discusses examples of state patents.

³²⁶ Inlow (1950:43) notes that Pennsylvania, Maryland, and North Carolina had little experience with issuing patents, but Walterscheid (1996b:668-670) notes that by the 1780s Pennsylvania “led the states in the number of patents issued.” See also Forman (1976:25-26).

³²⁷ Bjork (1985:29) notes the “beginnings of a residentiary industry to supply the rudimentary needs of a rural population for clothing, shoes, agricultural implements, and transportation equipment.”

³²⁸ For a discussion of the relationship among inventive activity, patenting, and market demand, see Khan and Sokoloff (1993:289). See also Sokoloff and Khan (1990:363); Schmookler (1954:34); Landes (1969).

³²⁹ Pursell (1995:97) notes that the “confusion and expense attendant upon such a policy was obvious to everyone.

³³⁰ Bugbee (1964:90) quoting a statement by F.W. Geyer to Silas Deane.

³³¹ For a discussion of the battle between Fitch and Rumsey, see Flexner (1944). See also Prager (1958:611).

(Flexner, 1944:65).³³² By 1789, therefore, the disadvantages of the Articles' allocation of the patent power to the states were well known to political leaders through the Fitch-Rumsey battles and other conflicting patents.

Another force that pointed towards the creation of a national patent system was the generous reception, after the hostilities of the Revolution subsided, of British goods by Americans.³³³ In the eyes of many political leaders, the public's post-war embrace of foreign (and especially British) goods threatened American economic independence.³³⁴ Developing domestic technology, therefore, increasingly came to be viewed by the political class as a bulwark of republicanism. This point was repeatedly made by members of pro-manufacturing societies that, during the 1780s and early 1790s, "were arguably more influential than they ever had been or would be" (Peskin, 2003:61). For example, Tench Coxe, an influential merchant, asserted before the Pennsylvania Society for the Encouragement of Manufactures and the Useful Arts that domestic manufacture "will lead us, once more, into the paths of virtue, by restoring frugality and industry, those potent antidotes to the vices of mankind, and will give us real independence by rescuing us from the tyranny of foreign fashions, and the destructive torrent of luxury" (Coxe, 1787).³³⁵ And Alexander Hamilton, in his classic *Report on Manufactures* written at the behest of the House of Representatives, asserted that "[t]he expediency of encouraging manufactures in the United States, which was not long since deemed questionable, appears at this time to be pretty generally admitted" (Hamilton, 1964:115).³³⁶

³³² Washington, the largest landowner on the Potomac, and other Virginians viewed the Potomac River as the natural inland waterway to the West; and the prospect of a steamboat made this possible. Rumsey was certainly aware of the possibilities and saw fit to cultivate a relationship with Washington. Fitch, who had three months before Rumsey successfully constructed and tested a steamboat, also had powerful friends. Indeed, Fitch demonstrated his invention for a group of convention delegates on August 20, 1787, and it is known that Fitch's steamboat was discussed by the delegates during the Convention.

³³³ See Kasson (1998:7), "Once hostilities had ceased, British goods poured afresh into the United States, their way smoothed by generous extensions of credit." Peskin (2003:61) notes that after the Revolution there was an "excess of British goods...glutting the market." Bjork (1985:15) reports, "With the end of the war came a terrific influx of British goods."

³³⁴ Kasson (1998:8-9) states that "an increasing number of Americans in the 1780s demanded that the nation stop the rapid sapping of her economic, political, and moral strength through European trade and restore her vigor by promoting domestic manufactures." Bjork (1985:15) notes that "influx of British goods after the war caused a flow of hard currency to England," causing domestic goods' prices in the U.S. to fall, which led to "widespread distress."

³³⁵ See Kasson (1976:29-31) discussing Coxe's address.

³³⁶ Kasson (1998:12) notes that this Report "was in fact a culmination, gathering together and summarizing arguments that had been developing for a generation."

The rise of merchant-dominated manufacturing societies in Philadelphia, Baltimore, Boston, and New York also signified the growing interest of merchants in manufacturing (Peskin, 2003:114).³³⁷ These merchants began to build factories, form corporations managed by financial experts, hire laborers instead of apprentices, and introduce new technologies. According to Peskin (2003:114), this “new paradigm of manufacturing...had begun to insinuate itself into the national consciousness.” The new manufacturing class saw in patents a happy congruence of personal interests and public benefit.

On the eve of the Constitutional Convention then, circumstances had changed from the time of the drafting of the Articles of Confederation in two important ways. First, a national market economy was emerging in the United States, an economy which performed “rather well” (Bjork, 1985:174). Protection in a single or even a few states was thus less valuable than it had been when each colony had traded primarily with and through Britain, while protection across the American states was becoming more valuable. Second, the break with Britain abolished British-imposed restrictions on American manufacturing. Together with independence, this created an economic demand for domestic technology. At the same time, over-reliance on British imports was perceived as a threat to independence, creating a political demand for measures that would boost domestic manufacturing. The appearance of a nascent manufacturing economy created a domestic class of beneficiaries of patents.

5.3. THE CONSTITUTIONAL CONVENTION

When the delegates convened in Philadelphia for the Constitutional Convention in the spring of 1787, at least some came with an understanding of the flaws associated with individual states granting patents and the desire for national uniformity.³³⁸ Two of the delegates, James Madison and Charles Pinckney, sought to resolve this shortcoming by proposing a patent and copyright provision during the closing days of the convention. Their proposal,

³³⁷ These manufacturing societies arose in a nation still dominated by agriculture, for land remained abundant relative to labor, keeping the competitive advantage of North America in staple production (Bjork, 1985:5-6). Bjork (1985:12) also asserts that war had not changed the basis of the North American economies.

³³⁸ The desire for uniformity for both patent and copyright law is reflected in James Madison’s *Federalist No. 43*, where he writes that the “States cannot separately make effectual provision for either” patents or copyrights; and arguments set forth at the time by James Iredell, a future Supreme Court justice, and Thomas McKean. Iredell (1986:382) emphasized that without a national copyright law, “no author could have enjoyed such an advantage in all the United States, unless a similar law constantly subsisted in each of the States separately.”

which was accepted by the convention, is embodied in Article I, Section 8, Clause 8, authorizing Congress:

[t]o promote the Progress of Science and useful Arts by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.³³⁹

The convention's action poses two questions: Why grant the power to the national government when the drafters of the Articles had not? Why choose this form of doing so?

An interest group-based explanation for the choice of national patents over state-issued patents is rooted in the shifting relative values of the two types of patents. The rise of a national market was both increasing the value of a national patent and decreasing the value of a state-issued patent, as conflicts among state-issued patents multiplied. The interests of the new manufacturing class in gaining national patents were clothed in a public interest rationale—the steamship patent debacle had linked resolving the problem with national security concerns over the western frontier, and the fears of political leaders of over-dependence on British goods tied domestic industry's growth to economic security. A potent “Bootleggers and Baptists” coalition thus arose.³⁴⁰

In explaining the convention's adoption of the particular language of the patent and copyright clause, we can make use of a key insight from the public choice literature on constitutional choices:³⁴¹ When choosing *among* rules, rather than choosing how to act *under* rules, individuals behave differently in three important ways. First, “the shift from the in-period to the constitutional level of analysis increases the extent to which agents may be expected to agree to choose in the general interest, rather than in their particular self-interest,” because “[t]he move to the constitutional level reduces the agent's information about her own particular circumstances, or about the impact of the proposed constitutional rule on her own life, and thereby induces her to opt for the set

³³⁹ See Olin (2006:1771) for a discussion of the relative contributions of James Madison and Charles Pinckney relating to the Patent and Copyright Clause.

³⁴⁰ The bootleggers and Baptists theory of regulation suggests that two different groups often work together to achieve political goals (Yandle, 1983:12). Bootleggers in the early 20th century south benefited from laws that banned the sale of liquor on Sundays. Baptists supported the Sunday ban on moral grounds. While the Baptists vocally endorsed the ban on Sunday sales, the bootleggers worked behind the scenes, and quietly rewarded the politicians with a portion of their Sunday liquor sale profits. The interests of both groups thus lay in promoting bans on Sunday sales for opposite reasons. Each served the interests of the other in obtaining the ban.

³⁴¹ Mueller (1989:433) notes the importance in public choice of “the conceptual usefulness of the distinction between the constitutional and parliamentary stages of democratic decision making.”

of rules that offers the best outcome *whatever* the particular circumstances she may find herself in at the level of in-period choice.”³⁴² Second, the suppression of knowledge of one’s own future position can also bring a convergence of individual judgments of the most appropriate rule choice.³⁴³ Thus “[w]e ought to expect that debate over constitutional matters will be less divergent than debates at the substantive or ‘in-period’ level of choice.” Third, “informational demands of choice are reduced” at the constitutional level—it “requires less specific and detailed information” than in-period choice (Brennan and Hamilton, 2001:120-122).³⁴⁴

All of these apply to the passage of the patent and copyright clause.³⁴⁵ The delegates (or at least enough of the delegates to inform the others) knew of the deficiencies of the Articles of Confederation’s approach. Washington, as noted earlier, had been directly involved in the steamship dispute.³⁴⁶ Choosing to sacrifice the states’ interest in retaining the patent power was a comparatively easy choice because, as in Venice just over three hundred years earlier, the value to the nation as a whole of encouraging invention was increasing,³⁴⁷ while

³⁴² See also Buchanan and Tullock (1962:78), in the constitutional setting, “the individual will not find it advantageous to vote for rules that may promote sectional, class, or group interests because, by presupposition, he is unable to predict the role he will be playing in the actual collective decision-making process at any particular time in the future.”

³⁴³ As Buchanan and Tullock (1962:25) note, a careful reading of Federalist No. 10 “suggests that Madison clearly recognized that individuals and groups would try to use the processes of government to further their own differential or partisan interests.”

³⁴⁴ This is particularly likely to be true when, as Buchanan and Tullock (1962:21) argued was true in the eighteenth century, “The democratic State was conceived as that set of constraints appropriate to a society which managed its economic affairs largely through a competitive economic order, in which the economic interests of individuals were acknowledged to be paramount in driving men to action. The collective action required was conceived in terms of laying down *general* rules, applicable to all individuals and groups in the social order” (emphasis in original).

³⁴⁵ The patent and copyright clause passed unanimously without recorded debate. Many factors were at play that influenced the creation and adoption of the clause, including inventors and others who stood to benefit from such a provision. There is very little direct evidence of inventor influence during the Constitutional Convention. One patent historian has asserted that because the need for a national patent system was understood by the delegates to the Constitutional Convention, a “provision for patents and copyrights was urged by a number of interested persons” (Prager, 1961:317). A specific example is John Fitch’s demonstration of his steamboat to several delegates in late August of 1787. Inlow (1950:47) asserts that “obvious pressure came for inventors” such as Fitch and Rumsey. Walterscheid (1997:40) argues that “no contemporaneous documentation has been found which provides any specific evidence that...[an IP] provision was in fact directly pressed on the delegates by anyone.”

³⁴⁶ See fns 322-23 above.

³⁴⁷ Mokyr (2002:296) notes that by the 1770s the function of patents in reducing access costs to the knowledge embedded in the patents was “apparently...fully realized.” Amar (2005:108) writes

the value of state-issued patents was declining as they proliferated. In addition, not only were patents tied, in at least Washington's mind, to the opening of the west, but the general political demand for decreasing dependence on British goods created a natural constituency for a national patent power. Even if some of the Founders had particular interests in specific inventions to protect (something for which there is no evidence), choosing to nationalize patents was an easy and obvious choice in the constitutional context. The convention's willingness to grant the national government some form of patent power is, we contend, explained by the combination of the rising absolute and relative values of a national patent, for the reasons discussed above. The remaining question to be answered, therefore, is "Why did the convention adopt the particular limiting structure of the patent and copyright clause?"

The structure of the clause specifically sets forth the means of exercising the enumerated power by permitting Congress to promote the progress of the useful arts (i.e., the enumerated power) only by granting *exclusive rights* for *limited times* to *inventors* for their *discoveries*. The specificity of the clause is particularly noteworthy given that the framers were "committed to drafting the constitution with 'general propositions' and 'essential principles' to avoid 'clog[ging]' government with 'provisions permanent and unalterable, which ought to be accommodated by time and events.'"³⁴⁸ The clause itself thus limited the power granted to Congress. Why did the convention accept these limitations?

First, the delegates most likely had knowledge of the Statute of Monopolies and, therefore, these limitations were arguably influenced by the anti-monopoly tradition in England.³⁴⁹ Second, by putting the purpose in the Constitution's

that the delegates drafted some section 8 clauses with the goal "to further harmonize relations between the states." For example, "Uniform bankruptcy rules would stabilize interstate practices and spur a national market in negotiable instruments, just as continental standards for copyrights and patents would create a broad New World market for authors and inventors."

³⁴⁸ Duffy (2000:1134) quotes *Records of the Federal Convention of 1787*. Walterscheid (1999) argues that the IP clause grants Congress authority beyond the issuance of patents and copyrights.

³⁴⁹ We are not suggesting that the Founders were aware of the common law cases interpreting the Statute of Monopolies, as those cases were largely decided in the second half of the 18th century. Nor is there direct evidence of the influence of the English experience on the structure of Art. I, Sec. 8, Cl. 8 (Nachbar, 2004:330-331). Nonetheless, a plausible inference can be made that the Founders were aware of the Statute of Monopolies and were at least sensitive to the English anti-monopoly tradition. For instance, Blackstone's *Commentaries*, "...the most widely read English law treatise in late-eighteenth-century America" (Manning, 2001:35), specifically mentioned the Statute of Monopolies, stating that royal abuse in granting monopolies was "in a great measure remedied by" the Statute of Monopolies, "which declares such monopolies to be contrary to law and void (except as to patents, not exceeding the grant of fourteen years, to the authors of new inventions)" (Blackstone, 1769:Book IV, §9).

text, the Framers gave both a limit on the granted power and a basis for the public to judge the government's performance in the exercise of the patent power.³⁵⁰ Third, the delegates were largely influenced by the English Whigs, and thus sought to promote the idea of a "commonwealth" (Benedict, 1985:314-317, also Conant, 1982:797-801). The decentralized nature of the patent and copyright clause reflects an aversion to special legislation and a desire to check Congressional overreaching.³⁵¹ As Hamilton recalled, a principal argument against allowing government to intervene and direct the path of industry (as Hamilton himself urged) is that state intervention would "sacrifice the interest of the community to those of particular classes" (*Annals of Congress*, 2d Cong., 1st Sess, 972-973).³⁵² Holding to such principles in the Constitution-writing process was, as noted earlier, easier than doing so in the face of specific interest group demands accompanying the legislative process. Finally, those interest groups that might have sought special favors had not yet formed, since, as Kornblith (1998:*xv*) phrases it, "[t]he Industrial Revolution in America was unexpected."

It seems clear that the Founders accurately perceived the problems caused by state-issuance of patents, both from their actual experience with controversies

³⁵⁰ Amar (2005:112) cites the patent and copyright clause as evidence that one method the delegates employed to deter "pretextual use of congressional power...was to specify the purpose of a particular power." See Starr (2004:71) on the point that widely available printed constitutions gave Americans a "foundation...for judging what government did."

³⁵¹ The decentralized nature of the clause and the intent to limit Congressional power are also manifested by the proposals rejected by the delegates during the convention. As Olliar (2006) notes, in addition to the language that eventually found its way into Article I, Section 8, Madison and Pinckney also proposed that Congress have the power to encourage the arts, sciences, and useful knowledge by offering rewards, chartering corporations, and establishing seminaries, public institutions, and universities. These rejected proposals would have allowed for a great deal more Congressional intervention into market dynamics, rendering legislators more susceptible to interest-group pressures and the like. The First Congress also felt constrained by the Patent and Copyright Clause. While Congress was debating patent legislation, Tench Coxe wrote to James Madison urging that the federal government grant land to induce the importation of technology from abroad. But Madison, while sympathetic to Coxe's suggestion, replied that "Congress seems to be tied down to a single mode of encouraging inventions by granting the exclusive benefit of them for a limited time, and therefore to have no more power to give a further encouragement out of a fund of land than a fund of money. The Latitude of authority wished for was strongly urged and expressly rejected" (Madison, 1981). Starr (2004:121) makes a similar argument with respect to copyright.

³⁵² Hamilton characterized these arguments as "unfriendly to the encouragement of manufactures." But the issue was one of degree of state intervention. His antagonists viewed government direction of manufactures as meddling with the "natural current of industry" because "[t]o leave industry to itself...is, in almost every case, the soundest as well as the simplest policy."

such as the steamboat case and in state legislatures,³⁵³ and from a theoretical point of view based on their desire to see the creation of a national market economy that would allow economic independence from Britain.³⁵⁴ The creation of the national patent power is thus readily explained as the natural outcome of the experience under the Articles of Confederation, the desire for economic independence from Britain, the growth of the national market, and the history of patents under British law. Moreover, although individual inventors were beginning to enter the public eye (as in the steamboat controversy), there was as yet no interest group likely to disproportionately suffer from the allocation of the patent power to the national government. The only clear losers were the state legislatures, which lost something of value they had been able to allocate under the Articles of Confederation. Yet, as with the Venetian patriciate in 1474, what the legislatures gave up (the right to issue patents within the states) was worth little compared to the value of what was gained (incentives for innovation), which overwhelmed the losses.³⁵⁵

In short, the Founders brought together, consciously or not, the institutional innovations of the previous three hundred years and created an institution recognizable as the direct ancestor of modern patent law institutions. The institution they designed eliminated significant opportunities for rent-seeking by politicians through its limitation of patent rights to innovations.

5.4. THE PATENT ACT OF 1790

Allocating the patent power to the national government and imposing constitutional limits on that power were only the first steps, and the question

³⁵³ Starr (2004:120) notes that “many” of the Framers had served in state legislatures.

³⁵⁴ As Mokyr (2002:261) asserts, the politics of free trade and technological progress overlapped considerably. According to Starr (2004:82), after the revolution, “the men who had led it were also concerned about the threats to the survival of the republic.... They worried about consolidating their revolution and keeping the republic together, and this concern influenced their thinking about communication, knowledge, education, and even language.”

³⁵⁵ But there were those who questioned the wisdom of having a patent and copyright power in the Constitution, most notably Thomas Jefferson. But shortly after the 1790 Act was passed, Jefferson, the first superintendent of patents, came to appreciate the importance of patents. In a letter to Benjamin Vaughn, Jefferson wrote:

An act of Congress authorizing the issue of patents for new discoveries has given a spring to invention beyond my conception. Being an instrument in granting the patents, I am acquainted with the discoveries. Many of them indeed are trifling, but there are some of great consequence, which have been proved of practice, and others which, if they stand the same proof, will produce greater effect (Arnold, 1990:317).

remained how to implement the new power. The First Congress under the new Constitution, whose work “amounted to a continuation of the labors of the Constitutional Convention” (MacDonald, 1988:344) took up the issue in its second session, passing the Patent Act of 1790 (Act of April 10, 1790, 1 Stat. 109).

There was initial uncertainty about whether Congress would act pursuant to the patent and copyright clause or follow the federal equivalent of the state practice of enacting private laws for individual patents. This uncertainty prompted several inventors to petition the Congress seeking private legislation recognizing exclusive rights in their inventions (Prager, 1961:320).³⁵⁶ Retaining the ability to grant patents legislatively would have maximized the rents available to Congress, hence the decision to decline the opportunity requires some elaboration. We think the primary reason lies with the Founders’ fear of faction and the primacy of the British experience leading up to the Statute of Monopolies. Viewing the First Congress as an extension of the constitutional process (e.g., MacDonald, 1988) also helps explain the choice.

The 1790 Act required a three-member panel, known as the Patent Board and comprised of the Attorney General and the Secretaries of State and War, to examine patent applications and determine whether the invention was “sufficiently useful and important to cause” a patent to issue (Act of April 10, 1790, §1). There was conflict over several provisions, however. Three issues occupied most of the debate over the 1790 Act: (1) whether to include patents of importation (i.e. those rewarding importers of technology unknown in the United States but already invented or in use outside of the U.S.) in addition to patents of invention; (2) the terms of the disclosure required to receive a patent; and (3) whether to have an examination or registration system.

The Founders divided on the question of rewarding those who imported new technologies. American government officials and others in the United States knew that several European countries, most notably Great Britain, were successful in attracting foreign-developed technology through patents of importation (e.g., Hamilton, 1964). The most prominent government official favorably disposed to the introduction of technology from abroad was George Washington, who could not “forbear intimating to” Congress, in his State of the Union Address of January 8, 1790, of “the expediency of giving effectual encouragement...to the introduction of new and useful inventions from abroad.”³⁵⁷ Another significant proponent was Alexander Hamilton who, in his

³⁵⁶ Walterscheid (1997:112-116) discusses petitions.

³⁵⁷ III Documentary History of the First Federal Congress of the United States of America, *House of Representatives Journal* (1977:253).

1791 *Report on Manufactures*, strongly urged a government initiative aimed at encouraging the importation of technology and skilled artisans from abroad (Hamilton, 1964:308).³⁵⁸ Tench Coxe, who, as noted earlier, was a leading advocate of American technological development and a man of some influence in political circles, was also a strong advocate of patents of importation. On January 17, 1790, Coxe wrote a letter to George Clymer, a representative from Pennsylvania, urging him “to use his influence” to amend H.R. 10, a patent bill pending before Congress, to permit patents of importation (Walterscheid, 1998:872).³⁵⁹ Coxe (1981) also approached Madison with the idea of granting land to those who imported inventions from abroad,³⁶⁰ but Madison, while intrigued, suggested the Patent and Copyright Clause would not support inducements beyond what was expressly set forth in Article I, Section 8, Clause 8. According to Madison (1981), “Congress seems to be tied down to a single mode of encouraging inventions by granting the exclusive benefit of them for a limited time, and therefore to have no more power to give a further encouragement out of a fund of land than a fund of money.”³⁶¹

The House replaced H.R. 10 with H.R. 41, which was first read on the house floor on February 16, 1790 (De Pauw, 1977:299),³⁶² and was similar to H.R. 10 save two provisions. The statutory language in H.R. 10 that allowed for a patent on inventions “not before known or used” was modified with the addition of “within the United States.” The second significant change was the addition of a separate Section 6, which explicitly allowed for patents of importation.³⁶³ These changes to H.R. 10 are consistent with Coxe’s

³⁵⁸ The 1791 *Report* stressed the desirability of encouraging “Introducers” of technology into the United States, and argued that the introduction of foreign technology could be accomplished by establishing a Board of Commissioners that would “induce the prosecution and introduction of useful discoveries, inventions and improvements, by proportionate rewards, judiciously held out and applied.” See also Ben-Atar (2004:159-164).

³⁵⁹ While Coxe saw a deep connection between domestic technological development and healthy republicanism, his interest in writing to Clymer was not solely driven by nationalistic concerns. Coxe conveyed to Clymer that Coxe and his associate, while not the original inventors, were prepared to obtain patents of importation on Englishman Richard Arkwright’s “fabulously successful cotton processing machine;” in other words, Coxe and his associated were prepared to profit from practicing Arkwright’s invention in the United States. See Walterscheid (1997:111).

³⁶⁰ Coxe (1981) wrote that “I saw with regret the truth of your apprehension that the benefit of a patent could not be constitutionally extended to imported objects.”

³⁶¹ Perhaps patents of importation were seen as inconsistent with the terms “inventors” and “discoveries.” See also Walterscheid (1997:127).

³⁶² A review of the House and Senate Journals and of the *Annals of the Congress* for the legislative history of the 1790 Patent Act reveals no recorded roll call votes.

³⁶³ Section 6 read, in relevant part:

suggestions to Clymer, and also in accord with Washington's remarks made during his January State of the Union Address. Thus, inventions known or used outside of the United States were to be patentable under the House approach.

There were voices who were adamantly opposed to patents of importation. The nascent American manufacturing class would be harmed if patents of importation were allowed, since they would have to license foreign innovations, now available for free, from the first person to patent them domestically.

Coxe and Washington ultimately fell short, and the opponents of importation prevailed—section 6 of H.R. 41 was deleted and the bill was sent to the Senate on March 11th without protection for patents of importation. (The Senate did not alter the House's preclusion of patents of importation.)³⁶⁴ Although we have diligently searched, we have not been able to locate evidence that would conclusively explain why powerful national political leaders such as Washington, Hamilton, and Coxe were unable to secure the patents of invention language in the Senate. We view its failure as partial confirmation of the primacy of the interest group explanation, for this was a topic on which the “bootleggers and Baptists” coalition divided. When forced to choose, the Senate, made up of representatives of the states, chose to limit the national government's power. We think this reflected the interests of the merchant class in avoiding rent-seeking over existing technology, together with the states' suspicion of granting powers to the national government.

The second issue in Congress was the type and degree of disclosure required to obtain a patent. The disclosure requirements of H.R. 41 required the

[A]ny person...first to import into the United States from any foreign country, any art, machine, engine, device or invention, or any improvement thereon, not before used or known in the said States,...shall have the full benefit of this act, as if he were the original inventor or improver within the said States (De Pauw, 1977:570).

³⁶⁴ Walterscheid (1997:128) inquires why the House, and by implication, the Senate, opted to preclude patents of importation. He notes that for a hundred years British common law had interpreted the Statute of Monopolies' “true and first inventor” language to mean the “first introducer as well as the original inventor.” Walterscheid states that many believed this common law interpretation “had been beneficial to Great Britain, which had the most rapidly advancing technology base” in Europe. With that in mind, Walterscheid asks: “Why then should the House not only ignore this aspect of the common law of patents, but assume a constitutional interpretation directly contrary to it?” According to Walterscheid, no one was offered a satisfactory answer. Ben-Atar (2004:168) also finds the rejection of patents of importation “puzzling,” given that the “young nation needed to import technology to develop its industrial base.” He speculates that the 1790 Act and its official rejection of “technology piracy” was a façade for an unofficial policy designed to facilitate technology piracy.

specification to be “so particular” as to distinguish the invention from the prior art and “enable a workman or other person skilled in the art...to make, construct or use the same” so that the public can “have the full benefit” of the patent after expiration (H.R. 41 at § 2). The Senate retained the rigor of this language, and added a painstaking model deposit requirement.³⁶⁵ Again, as with the restriction of patents to inventions, the Senate went further than the House in limiting what was eligible for patent protection under the new statute.

The third issue, whether to have an examination or registration system, surfaced in a dispute between the House and the Senate. The House passed a registration-only system, which was consistent with the English practice.³⁶⁶ The Senate rejected this approach, insisting on an examination to determine if the invention was “sufficiently useful and important” before allowing a patent to issue. The Senate prevailed. As with the other two amendments, the Senate changes reduced the set of possible patents by raising the requirements to obtain one.

The creation of the 1790 Act is thus a story of initially successful attempts to take an expansive view of the patent power in the House followed by the Senate’s imposition of a narrower reading of the national government’s powers. The Senate’s role in restricting the national government’s patent power is consistent with our analysis. The indirectly-elected Senate represented the interests of the states, who would have favored restricting the national government to the areas most likely to offer net gains. Why opt for limiting rents? Without a strong interest group present that would gain from an expansive approach to the patent power (such as today’s pharmaceutical industry), the primary interests represented in the First Congress were the states, jealous of the national government, and the interests favoring developing a national manufacturing base. The choices made by the First Congress favored these interests, by restricting the national government to the set of patents most likely to produce a net increase in welfare and by permitting piracy of foreign inventions. Moreover, we view the Patent Act of 1790 as an extension of the Constitutional Convention’s allocation of the patent power to

³⁶⁵ The House bill, as stated above, required the specification to be “so particular” and required inventors to deliver a “model” of the invention to the Secretary of State. After the words “so particular,” the Senate inserted the words “and said Models so exact.” Thus, after the Senate amendment, the bill changed the model deposit from discretionary, which the House envisioned, to mandatory, and required the specification to be “so particular” and the models “so exact” as to distinguish the invention from prior art and to enable persons skilled in the art to make the invention (De Pauw, 1977:1634).

³⁶⁶ Interestingly, the House also allowed for what we today would call an opposition proceeding (De Pauw, 1977:1633).

the national government. In choosing the institutions to govern patent law, the First Congress was relatively free of interest group lobbying. No “inventors’ lobby” yet existed, although individuals were seeking special recognition for their contributions. The three institutional choices made by the First Congress served utilitarian goals by limiting the scope of the patent power to avoid the problems that had led to the Statute of Monopolies in Britain.³⁶⁷ Patents were restricted to instances of invention, not the importation of known devices and processes; procedures were put in place to limit issuance to actual invention through the examination system; and the disseminative function of patent law was served through the establishment of disclosure requirements. In making the choice of the rules of the game, both the Convention delegates and the First Congress opted for rent-limiting choices over rent-seeking ones, increasing the chances that patents would be wealth-increasing.³⁶⁸ That the available rents initially appeared small, and the gains potentially large, makes such a choice no less worthy of praise.

6. CONCLUSION

We have surveyed over three hundred years of patent law institutions across three quite different states and periods: Renaissance Venice, Tudor and Stuart Britain from 1600 to 1624, and the American experience from the colonial period through 1790. In each case, we believe the shape of patent institutions is best explained by attention to the incentives faced by politicians, bureaucrats, and interest groups operating within the three very different political systems. Despite these differences, we also found strong similarities in the choice of patent law institutions, which suggests lessons for countries considering new patent law institutions as they strive to solve the fundamental problem of creating durable bargains to limit patents to circumstances where they will be wealth-creating rather than merely wealth-transfers.

³⁶⁷ Limits to government scope are critical to restraining rent-seeking. “[W]e are left with possible limits on the domain of permissible outcomes as the only means of constraining political discrimination” (Buchanan, 2001:119).

³⁶⁸ This is consistent with the overall public choice analysis of constitutional choices by the Founders (Boudreaux and Pritchard, 1993:162). “Although the Framers put the Constitution largely out of the reach of ‘factions,’ other than the faction of government itself, they did so at the cost of depriving the majority of meaningful control over the content of the Constitution, and destroying the usefulness of Article V in serving the efficiency goals of constitutionalism. Despite our view that the Article V amendment process is dramatically flawed, we remain pessimistic that anything can or will be done to improve the process.”

First, because patents offer valuable monopoly rights to their holders, the incentive to rent-seek is a powerful one.³⁶⁹ The first task of patent law is to limit the opportunities for such behavior, for if rent-seeking cannot be limited, the losses it imposes threaten to swallow any gains from encouraging invention. Economic historian Joel Mokyr (2002:287) notes, “[e]ntrepreneurs, innovators, and ambitious men will try to make their fortune and fame wherever they perceive the rewards to be most promising. . . . The institutions of society determine where these efforts will be most rewarding and remunerative.” Each of the three states confronted this problem and each created institutions that limited the potential for rent-seeking. In Venice, the power to grant patent monopolies was taken from the political class—a class defined by its propensity to seek rents—and delegated to a bureaucracy. In Britain, Parliament fought long and hard to restrict the terms of monopolies granted by the monarch through judicial review under the common law. In the United States, the Patent and Copyright Clause imposed constraints on Congress to ensure invention was rewarded, and the First Congress refused to read the Patent and Copyright Clause expansively to allow import patents and to rent-seek through private legislative grants, insisting rather on an examination system and disclosure requirements to restrict rent-seeking behavior. Importantly, these restrictions were enshrined in “constitutions”—that is, in the basic institutional structure of the government. Modern patent law institutions that limit arbitrary behavior are ultimately drawn from the republican tradition of limiting arbitrary state power.

Second, the coalition that can resist rent-seeking cannot expect to indefinitely prevail. When rent-seeking commences, “individuals or groups discover that at the margin it is more profitable to spend the next dollar on political action than on productive activity in the market” (Mitchell, 2001:10). As the British learned to their sorrow, failure to impose binding constraints on Elizabeth I led to the abuses of James I. Once a constitutional structure is in place, interest groups will inevitably form and attempt to evade the safeguards against rent-seeking. As Boudreaux and Pritchard (1993:122) note, this is one of the circumstances in which we should expect the cost of a written constitutional provision to be worthwhile. The American inclusion of explicit limits on the patent power fits this theory.

Third, transforming patents from an individual legislative bargain into an administratively-issued property right has the advantage of decentralizing more of the decisions about technology. Overall welfare is enhanced in decentralized systems because they tend “to be more efficient than centralized ones [e.g.

³⁶⁹ See Mueller (1989:245), “Where rents exist, rent seeking can be expected to exist.”

Napoleonic France, Tsarist Russia] in engendering technological progress because they did not depend on the personal judgment and survival of single-minded and strong-willed individuals” (Mokyr, 2002:239).³⁷⁰ Letting a patent depend on whether the inventor has adequately disclosed her invention is far superior in this respect to making it dependent on Elizabeth I’s calculations of the impact of issuing the patent on royal revenue. In addition, institutionalizing patents helps prevent the development of political interest groups seeking to use the political system to block technological change³⁷¹ or private groups seeking to use patents to block rivals (Arewa, 2006). Further, decentralizing decisions about technology allows the use of less costly decision-making institutions. As Buchanan and Tullock (1962:74) note, where an individual foresees costly state actions (and the record under James I certainly suggests unrestrained executive granting of patents was costly to everyone but the patent holders), “he will tend to place a high value on the attainment of his consent, and he may be quite willing to undergo substantial decision-making costs in order to insure that he will, in fact, be reasonably protected” against such decisions. By creating an independent mechanism (the bureaucracy in Venice, the common law in England, the Patent Board and the federal courts in the United States) and standards (the Venetian patent statute’s restriction to innovation; the similar provision in the British Statute of Monopolies; and the U.S. Patent and Copyright Clause’s similar provision along with the Patent Act of 1790), constitutionalizing patents allowed individuals to rely on cheaper mechanisms than unanimous consent to check patent abuses.³⁷²

Fourth, maximizing the benefit of patents requires making them durable bargains. A patent that can be arbitrarily revoked tomorrow is clearly worth less than one that cannot be revoked. Venice, Britain, and the United States all chose means to ensure that the patents they offered to induce invention and investment would be sufficiently durable to accomplish their purpose. “Constitutionalizing” patent institutions is one means of doing so.³⁷³

A key question from a “constitutional perspective is, what set of rules would rational individuals collectively agree to in order to ensure that they will all be better off after the government is formed than they are in some pre-

³⁷⁰ Hayek (1945:519) argues that decentralized systems are superior to centralized ones.

³⁷¹ As Mokyr (2002:263) notes, “the resistance to technological change has to rely on non-market forces, above all control of political power,” because technological innovations are promoted by market pressures and the profit motive.

³⁷² Buchanan and Tullock (1962:77) note that as legislation is made more general, individuals will be more willing “to support less inclusive rules for decision-making.”

³⁷³ Brennan and Hamilton (2001:124) note that the social capital aspect of constitutional rules is their stability.

constitutional ‘state of nature?’” (Shugart and Razzolini (2001:xxx)). In the case of patent law we believe the historical account provided here suggests the following features are desirable for patent law institutions:

- strong constraints on the type of patents that can be issued, limiting them to areas in which there is evidence that the costs of the limits to competition imposed are justified by the benefits produced by the incentives created;
- an independent institution capable of reviewing the grant of a patent in a timely and final manner, to ensure the constitutional bargain is kept; and
- patents that provide their owners with a strong sense of security in the validity and scope of their property right, to maximize the value of the bargaining chip offered to inventors.

Unfortunately, constitutional choices are themselves public goods. There is a free-rider problem in getting voters to inform themselves about their choices (Brennan and Hamilton, 2001:126). Cutting against this tendency to let someone else take responsibility for ensuring that the institution that results is not dedicated to rent-seeking is the greater ease of agreeing on institutions than on specific policy decisions.

Mokyr (2002:31) argues that one of the crucial social changes that made the Industrial Revolution possible was the avoidance of the negative feedback that had caused prior waves of technological innovation to peter out “before their effects could launch the economies into sustainable growth.” Before 1750, “[w]hen economic progress took place, it usually generated social and political forces that, in almost dialectical fashion, terminated it. Prosperity and success led to the emergence of predators and parasites in various forms and guises who eventually slaughtered the geese that laid the golden eggs” (Mokyr, 2002:31).³⁷⁴ The lesson of our analysis is that constitutionalizing a patent law institution that resisted such predators and parasites is an important step in avoiding such negative feedback.

Our analysis demonstrates the power of public choice theory’s focus on interest group analysis. We have explained the evolution of a key feature of modern patent law, the constitutionalizing of patent systems, across three hundred years by looking to the institutions and interest groups that produced patent law. Previous explanations for this development have not offered a

³⁷⁴ See also Mueller (1989:245), “The task of reform is to design institutions that allow and encourage those forms of competition that create rents by creating additional consumer and citizen surpluses and discourage competition designed to gain and retain existing rents.”

unified explanation. Confirming the importance of interest groups and institutions points toward explaining subsequent developments in patent law.

Moreover, our analysis provides important insights into the types of institutional features that are desirable for modern patent systems, including strong constraints on the type of patents that can be issued, an independent institution capable of reviewing patent grants, and the need for a strong sense of security in the validity and scope of the property right, to maximize the value of the bargaining chip offered to inventors. These lessons are particularly relevant in light of recent patent law reform initiatives within the United States (see fn 7) and, more importantly, developing countries' efforts to comply with TRIPS (see fn 9).

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