

Chapter I: Patents English and Colonial Origins

Black's Law Dictionary defines a patent as: "The exclusive right to make, use or sell an invention for a specified period... granted by the federal government to the inventor."¹ As this chapter will demonstrate, this modern concept of a patent as a right in an invention is fundamentally different from the conceptual scheme of patents that was implicit in the early English and American origins of this social and legal institution. The concept of "patent rights" as well as the modern meaning of "invention" was foreign to the administrative practices, political ideology and legal doctrines that eventually gave birth to what we call today patents. Our current concept emerged gradually through a complex series of conceptual transformations which were entangled with economic, technological, ideological and political changes. This chapter elaborates the internal structure and intricacies of the early Anglo-American conceptual scheme that governed the bureaucratic, social and legal phenomenon referred to as patents. It also surveys the partial and gradual transformation of this framework between its appearance in the sixteenth century and the eve of the nineteenth century.

Since the argument here is, at least in part, one about differences-differences between the old origins and the modern framework- it seems appropriate to start by briefly elaborating what I take to be the two most fundamental ingredients of the modern Anglo-American concept of patents. Simply put, the modern concept of patents has two main components: it is a general right; and it is a right in an intangible "object" we call an "invention." In reverse order these are the two components that make patents "intellectual-property" in our modern consciousness.

Let us start with the second component which relates to the object of the patent entitlement, but also, at least implicitly, to the subject who is entitled to the right. We think and speak of the object of patent protection as the "invention." Different legal doctrines define what an invention is, the sorts of inventions that can be protected by a patent, and the exact "borders" of an invention protected by law. The specifics of these doctrines may be contested, but the general unifying framework is the postulation of an intangible object, an abstraction that forms the point of reference for legal protection or for ownership. The invention is usually envisioned as valuable information- new and innovative technological knowledge or discovery.

¹ BLACK'S LAW DICTIONARY (7th ed. 1999).

While the concept of the invention constitutes the object of patent protection, it entails also a subject on which this entitlement is bestowed. If the invention is newly discovered technological information, the inventor is an individual (in the complex sense that the law can give to this term) who through the use of his intellect makes the discovery- the originator of the new information. The inventor and the invention are correlatives. They define each other and are implicit in each other.

The second component of our modern concept of a patent is that of general rights. What I mean by general rights is a standard set of legal entitlements to which any subject recognized by the legal regime is entitled upon fulfillment of a set of general conditions predefined by law. Modern patent law defines substantive and formal criteria for patentability. Different institutions have powers to interpret those criteria, to apply them and to decide disputes relating to their application. However, once it is determined that the criteria were met, a patent must be issued and enforced. Once patentability is conceded, the issuing agency- in the United States this would be the Patent and Trademark Office- has no discretion on whether to issue a patent and a court has almost no discretion on whether to recognize and enforce it. Nor do any of those institutions have discretion to fashion the exact entitlements protected by a patent on a case-specific basis. Once the general requirements are met, a uniform general standard set of entitlements is recognized and enforced.

As demonstrated by fig.1 this framework of patent rights arranges the sovereign, the law, and the legal subjects in a particular set of relations. In this structure the law balances competing social interests and claims, presumably according to some concept of the public good. It does so by defining general standard requirements or criteria for a valid patent right. These requirements apply in a uniform fashion to all cases and persons. Once a person meets these requirements she becomes entitled to a standard set of entitlements as a matter of right. The sovereign (or the state) appears as the subordinate of this general law. Its role is not to make particularistic case-specific discretionary decisions, but rather to implement in each case the predefined uniform legal requirements and the predefined consequences flowing from their application. In other words, the sovereign has no discretion regarding whether or not to grant a patent in a specific case or in setting the scope of the particular entitlements it encompasses. Instead, it must certify whether the standard requirements apply (through a procedure we call "examination"). Whenever they do apply it must recognize and protect a uniform set of entitlements. Of course, the sovereign plays also another part vis-à-vis the general law of patents. Through the political process the sovereign is the maker of this general law, rather than its

subordinate. But this alter-ego tends to remain outside our legal concept of a patent. We tend to separate the concept of a patent from the political process and hence the role of the sovereign in creating the standard contours of patent rights remains mostly invisible within legal discourse and practice. To sum up this second component, patent rights are standard entitlements recognized and protected by the sovereign as a matter of right whenever a set of general and uniform requirements defined by law is met by a particular person.

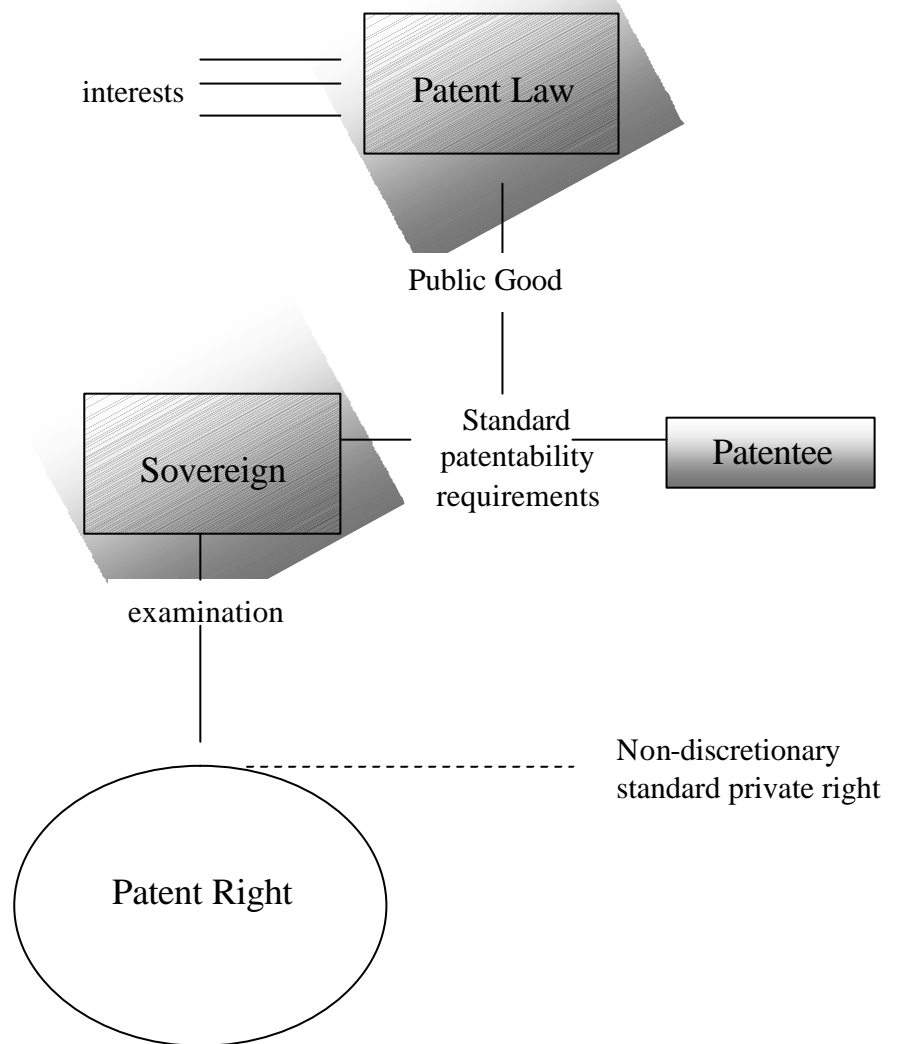


Fig. 1 Modern Patent Rights

The argument of this chapter is twofold. First, it argues that neither of these two components of the modern concept of patents existed in the early English patent practice or in that of the American colonies. Patents, or the practices from which modern patents emerged, were not general rights in the sense just explained. Nor were they understood to apply to a postulated intangible object called the invention. Instead, patents were specific privileges for the exclusive exercise of a trade bestowed by discretionary and case-specific policy decisions of the sovereign. Second, the chapter demonstrates that the transformation from the early origins into the modern framework was gradual and that it was far from over by the end of the eighteenth century. Late eighteenth century patents both in England and the American states prior to the Constitution were quite different from their early seventeenth century ancestors, especially regarding the concept of invention. Yet, even at that stage the modern framework was not yet tightly in place.

The first part of this chapter describes in detail the concept of a patent for invention that was implicit in the ancestors of Anglo-American patents: the early administrative practices and the royal-prerogative-based privileges of sixteenth century England. By explaining the basic understanding of the patent-granting power, the character of the patent grant in the period's political thinking, the typical content of patent grants and the procedures for receiving, revoking and enforcing a patent; it seeks to reconstruct the conceptual framework that constituted and was constituted by those institutional practices. What emerges is a picture radically different from the modern understanding of a patent along the two dimensions explained above. Instead of general rights, patents were conceived and practiced as discretionary privileges. They were a flexible ad-hoc set of exclusive economic entitlements granted on the basis of specific discretion exercised under royal prerogative power. The dominant conceptualization of those exclusive entitlements was not as control of a postulated intellectual entity in the form of the modern "invention," but rather as the exclusive right to engage in a certain economic activity.

The second part of this chapter explores the persistence as well as the development of the early conceptual scheme of patents during the early seventeenth century. This period saw the first gradual and partial appearance of what could be recognized as formal law governing the practices of patent grants. In popular patent lore a few common law patent cases of the time, the 1624 Statute of Monopolies² and the ideology developed in the political struggle leading to it are considered the direct origin of the modern Anglo-

² 21 James I cap. 3.

American patent regime. I argue, however, that while those developments constituted important landmarks, to a large extent, they incorporated and solidified in formal legal thought and political discourse the traditional concept of patents. Far from being the dividing line between the early patent practices and the modern framework, both early common law and the Statute of Monopolies entrenched the conceptual scheme of patents as discretionary trade privileges.

The third part discusses the slow and gradual transformation of the practice and concept of patents in England through the late eighteenth century. In the first part of this period- during the later part of the seventeenth century- almost nothing changed in patent's "law in the books." Slow and subtle changes, however, were brewing in patent's "law in action." The ways patents were used in practice and the actual administrative practices of grants changed gradually. These changes, I argue, gradually and unnoticeably eroded the traditional conceptual framework of patents that was embedded in and reproduced by these practices. By the middle of the eighteenth century the fundamental traits of the traditional concept became ambiguous and fluid.

At last, during the last part of the century English judges started to refashion formal patent law in a new image. In a series of landmark cases the foundations of the modern notion of the "invention" were laid and the prerogative-based discretionary character of patents was further eroded. At the turn of the century, however, the transformation was far from complete. Patent law, practice and the conceptual framework of patents were in a state of flux, transition and ambiguity. New concepts of the invention and of the "patent deal" with a focus on technological information had appeared, but judges and practitioners were gapping to come to terms with them and to establish their exact meaning. By that time a long process of standardization of the administrative procedure eroded much of the power of the discretionary privilege framework. Nevertheless, that framework was not yet replaced, either in formal legal thinking or in the structure of the bureaucratic apparatus.

In the last part of this chapter I offer a bird's eye survey of the patent practice in the American colonies and later the states, from their inception in the mid-sixteenth century through the creation of the federal patent regime in 1790. Those practices, I argue, were local, somewhat rudimentary, versions of the English framework. Patents in America during this period were specific legislative acts of colonial and later state legislatures that bestowed case-specific exclusive economic privileges on particular persons in the name of promoting the public good. The discretionary policy decision character of patent grants was deeply embedded in this practice. This character survived

undisturbed even at the later period when developments in England created a much more ambiguous situation

As for the concept of invention, the institutional details of American patent grants as well as the language used by the grants, by legislators and by petitioners reveals a clear shift during the late eighteenth century toward the modern understanding of patent rights as control of technological information. Like in England, by the last decade of the century, the colonial and state practices left an ambiguous and open-textured legacy from which the federal regime was constructed. While in some respects those English and American legacies were still deeply rooted in the old traditional framework of patents, in others they already started to move toward the modern structure. Hence the inheritance and the immediate sources of inspiration available to the creators and the shapers of the early federal regime were of a mixed nature. Many of the ingredients of the modern concept of patents were still to be created, shaped or refined.

I. English Patents for Invention

A. Early Origins

England³ was neither unique nor original in its use of patents for invention. Patents were granted in some Italian republics and in other continental countries both earlier and in a more systematic manner than in England.⁴ Though there were prior antecedents in England,⁵ the rise of

³ For the history of English Patents see: BRUCE W. BUGBEE, GENESIS OF AMERICAN PATENT AND COPYRIGHT LAW 27-43 (1967); MOUREEN COULTER, PROPERTY IN IDEAS: THE PATENT QUESTION IN MID-VICTORIAN BRITAIN (1990); D. Seaborne Davies, *Early History of the Patent Specification*, (pts. 1-2), 50 L.Q.R. 88-109, 260-274 (1934); H.I. DUTTON, THE PATENT SYSTEM AND INVENTIVE ACTIVITY DURING THE INDUSTRIAL REVOLUTION, 1750-1852 (1984); HAROLD G. FOX, MONOPOLIES AND PATENTS: A STUDY OF THE HISTORY AND FUTURE OF THE PATENT MONOPOLY 26-27 (1947); Arthur A. Gomme, *Patent Practice in the 18th Century*, 15 T.N.S. 209 (1934-35); ARTHUR A. GOMME, PATENTS OF INVENTION: ORIGIN AND GROWTH OF THE PATENT SYSTEM IN BRITAIN (1946); E. Wyndham Hulme, *The History of the Patent System under the Prerogative and at Common Law*, 12 L.Q.R. 141 (1896) (hereinafter "The History of the Patent System"); E. Wyndham Hulme, *On the Consideration of the Patent Grant Past and Present*, 13 L.Q.R. 313 (1897) (hereinafter "On the Consideration of the Patent Grant"); E. Wyndham Hulme, *The History of the Patent System under the Prerogative and in Common Law: A Sequel*, 16 L.Q.R. 44 (1900) (hereinafter "The History of the Patent System: A Sequel"); E. Wyndham Hulme, *On the History of Patent Law in the Seventeenth and Eighteenth Centuries*, 18 L.Q.R. 280 (1902); E. Wyndham Hulme, *Privy Council Law and Practice of Letters Patent for Invention from the Restoration to 1794*, 33 L.Q.R. 63, 181 (1917) (2 Pts.) (hereinafter "Privy Council Law"); Ramon A. Klitzke, *Historical Background of the English Patent Law*, 41. J. Pat. Off. Soc. 615 (1959). E. B. Inlow, *The Patent Grant*, LXVII(2) The John Hopkins University Studies in Political Science (1949); CHRISTINE MACLEOD, INVENTING THE INDUSTRIAL REVOLUTION: THE ENGLISH PATENT SYSTEM 1660-1800 (1988). Edward C. Walterscheid, *The Early Evolution of the United States Patent Law: Antecedents*, (4 pts.), 76 J. Pat. Off. Soc. 697, 849 (1994) (pts. 1-2), 77 J. Pat. Off. Soc. 771, (1995) (pt. 3), 78 J. Pat. Off. Soc. 77 (1996) (pt. 4).

⁴ For early origins of patents in Europe see: Bugbee, *supra* note 3, at 12-27; Coulter, *supra* note 3, at 8-9; G. Doorman, PATENTS FOR INVENTION IN THE NETHERLANDS DURING THE 16TH, 17TH AND 18TH CENTURIES (1942); Fox,

extensive and systematic use of patents for invention occurred in the late sixteenth century⁶ during the reign of Elizabeth and under a focused policy

supra note 3, at 26-27; Max Frumkin, *The Origin of Patents*, 27 J. Pat. Off. Soc. 143 (1945); Klitzke, *supra* note 3, at 616-621; L. Hilarie-Perez, *Invention and the State in 18th Century France*, 32 Technology and Culture 911 (1991); Giulio Mandich, *Venetian Patents (1450-1550)*, 30 J. Pat. Off. Soc. 166 (1948); Giulio Mandich, *Venetian Origins of Inventors' Rights*, 42 J. Pat. Off. Soc. 378 (1960); H. Pohlman, *The Inventor's Right in Early German Law*, 43 J. Pat. Off. Soc. 121 (1961); Frank D. Prager, *A History of Intellectual Property from 1545 to 1787*, 26 J. Pat. Off. Soc. 711 (1944); Frank D. Prager, *The Early Growth and influence of intellectual property*, 34 J. Pat. Off. Soc. 750 (1952); Edward C. Walterscheid (pt.1), *supra* note 3, at 699-715 .

⁵ There were a few incidents of grants of patents for invention prior to Elizabeth's reign. The earliest one known to us is probably the 1331 grant by Edward III to John Kempe for cloth making (Pat. 5 Edw. III p. I, m. 25). For a survey of early grants see: E.W. Hulme "The History of the Patent System," *supra* note 3, at 141-144. See also: Fox, *supra* note 3, at 43-54. The early grants, however, were "Letters of protection." This means that they lacked any element of privilege of exclusivity or a monopoly bestowed on the grantee. These letters of protection provided the "King's protection" to foreigners and a license to practice their trade in spite of guild and other similar limitations and restrictions. Klitzke compared them to passports. Klitzke, *supra* note 3, at 624. The systematic practice of patent grants incorporating monopoly privileges consolidated only under the reign of Elizabeth.

⁶ Historians disagree regarding which was the first "genuine" patent for invention in England. See: Coulter, *supra* note 3, at 9. Two patent grants that preceded Elizabeth but already took the standard form of the monopoly patent grant for invention were Smyth's 1552 patent for Normandy glass making under Edward VI and Burchart Crancick 1554 mining patent under Queen Marry. See: Fox, *supra* note 3, at 60-61. Gomme points to a 1449 patent granted by to John of Utynam which included twenty year protection for the making of colored glass. Gomme, *supra* note 3 at 6. Others point to Jacopo Aconio's 1565 patent for various machines as the first true patent. See: Lyn White Jr., *Jacopo Aconcio as an Engineer*, 72 Am. Hist. Rev. 2 (1967); Hulme "History of the Patent System," *supra* note 3, at 148,151. See in general: Klitzke, *supra* note 3, at 626-631. The debate about which was the first "genuine" patent for invention is somewhat anachronistic and to my mind counterproductive. The arguments revolve around the question of

introduced by her first Secretary of State- William Cecil (Lord Burleigh).⁷ This is where my survey begins.

A preliminary word of caveat is in order first. A contemporary observer must constantly bear in mind that the use of the term “patents for invention” for describing Elizabethan patents, inasmuch as it implies anything similar to what we mean by this term today, is completely anachronistic. Patents were at that time a thoroughly different creature than the one known to us not only as a matter of doctrinal and technical details but also as a matter of general concept and practice. Understanding the now completely lost sixteenth and seventeenth centuries conceptual scheme of patents is crucial for understanding their later development.

1. Privilege Patents as Instruments of Royal Prerogative

The essence of sixteenth and seventeenth century English patents was being an instrument for the exercise of royal prerogative power. As a matter of technical classification, patents were one category among others of the devices at the disposal of the king for ruling his realm. The term “Letters Patent” (“*litterae patentes*”⁸) referred to grants of different kinds that were made by the king through an open official document, which was addressed to the public (as opposed to sealed closed documents- “*litterae clausae*”). “Letters patent” was the name of this kind of official documents and as a derivable usage also the general name of the administrative channel for conferring privileges and exercising royal power. As late as 1769 Blackstone adhered to this concept of letters patent:

“The king’s grants are also a matter of public record...
These grants, whether of lands, honours, liberties,

which patent was granted for a “genuine” invention in the modern sense. This focus tends to obscure the most significant fact which is exactly that the term “invention” did not yet acquire its modern meaning and was applied indiscriminately to different instances of introduction of new trades and industries. See: discussion of “invention,” *infra*, section I(A)(2).

⁷ During the reign of Elizabeth there were fifty five patents for inventions issued. Twenty one of them were issued to non-English subjects. See: Hulme “The History of the Patent System: A Sequel,” *supra* note 3, at 52.

⁸ The word is derived from the Latin verb “*patere*”- to be open. See: Coulter, *supra* note 3, at 7. Gomme, *supra* note 3, at 1.

franchises or ought besides are contained in charters, or letters patent that is, open letters, litterae patentae, so called because they are not sealed up, but exposed to open view, with the great seal pending at the bottom: and are usually directed by the king to all his subjects at large.’⁹

This basic classification of patents had two main implications. First, patents for invention- or the public grant of a privilege for an exclusive use of an invention- did not constitute a distinct and unique category. Instead, exclusive privileges in inventions were just another form of public royal grants not sharply distinguished from other grants of the sort mentioned by Blackstone (e.g. land, offices or honors). This was reflected in the bureaucratic procedure of recording indiscriminately all such grants. Thus patents for invention were an undistinguished, relatively late-coming form of bestowing privileges for various royal purposes. Even in the field of economic policy patents for invention were neither singular nor original, but rather part of an arsenal of grants of privileges and monopolies of different sorts used to pursue economic policy ends.¹⁰

Second, the grant of a letter patent- for invention or otherwise- was by no means a “right” in the modern sense of the term. The idea of anyone having a right for a patent upon fulfillment of a few standard requirements was completely unfamiliar in the early English patent practice. In fact, it stood in sharp contrast to the patent grants’ *raison d’être*. The patent grant was a tool for dispensing royal policy and it was based on royal discretion. That implied that, though some general policy may have applied in a specific context or in regard to a certain class of cases, each grant was an independent decision dependent on the exercise of specific discretion.

The same structure applied, of course, to patents for invention. No matter how novel or ingenious a specific invention was nobody could claim that he had a right to be granted royal privileges in the form of a patent. Instead, it was always a matter of royal prerogative and discretion to bestow such a privilege as a response to a specific plea. It was for the king to perform a policy calculus in each particular case, taking into account the interests, policies, benefits and costs involved and to decide accordingly whether to grant a patent and what exactly the particular terms of such a grant should be.

⁹ 2 WILLIAM BLACKSTONE, COMMENTARIES ON THE LAWS OF ENGLAND 346 (1765-9).

¹⁰ See: Fox, *supra* note 3, at 30-42; Coulter, *supra* note 3, at 7-8.

As we shall see, the issue of exercising royal discretion in the grant of patents rapidly became a major battleground for the fight over the scope of royal prerogative. This early controversy, however, was structured in the terms of a dichotomy between the “public good” and “royal abuse” in the decision to grant a patent. There was never any doubt cast by this controversy on the assumption that a patent was a discretionary grant based on a specific policy decision. The only question was as to the permissible scope within which the discretionary royal prerogative could be exercised. When the limits of this discretion were redefined throughout the seventeenth century they left a smaller zone within which patents could be granted. According to the opponents of the prerogative this circumscription of its legitimate zone insured that patents would be granted only for the purpose of serving the public good. Yet, within this zone the royal prerogative remained as discretionary as ever. Outside it, no concept of patent as a right emerged yet. In short, the early patent was a discretionary policy tool used and tailored in specific cases by the sovereign, rather than a legal right allowing standard entitlements and enjoyed by anyone fulfilling standard criteria.

2. Trade: The Concept of Invention

The reference to “patents for invention”, even as undistinguishable category of ad hoc discretionary royal grants, conceals another danger of anachronism. Though the term “invention” was used at the time, its meaning was entirely different from the one associated with it today.¹¹ Early English patents for invention were, in fact, patents for the introduction of a new “trade” rather than for “invention” in the modern sense. This brand of patents, inasmuch as it was distinguished from other patents, was thought and spoken of in terms of a policy strategy used to nourish and support the development of the English economy by encouraging the introduction of a non-existent industry or trade into it.

Such new trades were conceived of in much broader terms than merely technological discoveries or improvements. Thus, many invention patents established monopolies in activities like the manufacture of a particular kind of glass, the production of salt or soap or the weaving of a certain kind of cloth. It was a common case that patents for invention did not

¹¹ As Hulme explains the word “invenio” denoted mainly the physical act of introducing, rather than the mental process of “discovering.” See: Hulme “The History of the Patent System,” *supra* note 3, at 151.

involve any new technological invention (in the modern sense) or discovery of any kind. Patents were granted for "inventions" such as: the privilege to "to take large fish... called Bottled-nosed Whales... in the North and South Seas adjacent to our said countries of Devon and Cornwall,"¹² or for a business scheme for the insurance of horses.¹³ A modern lawyer might say that this confused patents with franchise, but the point is exactly that the two were not sharply distinguished.

Of course, many patents did involve some kind of a new technological innovation. The point is not that inventions in the sense of discovering and developing a new method or technology were not relevant or that their use was never protected by the patent grants. It is rather that this narrower concept of invention was only an undistinguishable component of the overarching concept of "trade" that dominated patent grants. Thus, even when a technological development was present, patent grants were not usually designed to protect only the new technological innovation itself, but rather their purpose was to encourage the introduction of a whole industry or

¹² Davies, *supra* note 3, at 97. Davies referred to a 1707 patent mentioned in instructions to the Law Officers. MacLeod called such grants "heterodox uses" of patents, but the important point is exactly that at the time they were not conceived of as "heterodox." MacLeod, *supra* note 3, at 81. See also: Walterscheid (pt.4), *supra* note 3, at 79.

¹³ Davies, *supra* note 3, at 97. Ironically the recent rise of willingness of patent offices and of courts to uphold patents for "business methods" seems to revive a practice similar to the ancient English one of patents that protect the practice of a particular trade rather than a technological innovation of any kind. The modern business method patent, though not identical in scope to English patents for the exercise of certain trades seems to sometimes cover very similar activities. Conceptually, however, the two are mirror images of each other. Under the early English patent the concept of a "new trade" swallowed and engulfed the indistinguishable component of an "invention." In the context of the modern business method patent it is the ever-expanding concept of invention that swallows and incorporates that of a new trade. In other words while in the seventeenth century technological developments were thought of mainly in terms of a new trade, nowadays new trade practices are thought of in terms of being themselves technological developments. On the recent rise of business method patents see: Andre J. Porter, *Should Business Method Patents Continue to Be Patentable?*, 29 S. U. L. Rev. 225 (2002); Greg S. Fine, *To Issue or not to Issue: Analysis of the Business Method Patent Controversy on the Internet*, 42 B.C. L. Rev. 1195 (2001).

trade associated with the innovation. This was done through the grant of privileges and the imposition of stipulations related to the relevant trade. A patent for the making of Castile soap, for example, was not thought of as a protection for a certain discovery, but as a protection for a certain kind of trade designed to facilitate the introduction of a new industry into the English economy. The term “invention” referred to this broader concept of introducing a new industry. Hence, the term encompassed indiscriminately discovery or development of new technology, and introduction by way of importation of existing known technology, knowledge or skilled workers.¹⁴

Here is, then, a final methodological warning before we go on. I am using the term “patent for invention” to refer to patents which granted exclusive privileges for the exercise of a new trade introduced into the realm. I am focusing on this type of patents for analytical purposes, despite a double danger of anachronism that should be constantly kept in mind. First, this category of patent grants was not at first distinguished from other patents in administrative practice and legal or political thought. This differentiation emerged only slowly and gradually as will be described below. Second, the meaning of “invention” was initially quite different from the modern one and referred mainly to the introduction in practice of a new trade rather than to discovering new technological information. Here too the shift in meaning was gradual and will be discussed below.

3. Characteristics of the Early Patent Grant Practice

The character of the patent grant as a policy tool grounded in royal prerogative and designed to encourage the introduction of a new trade was manifested in the administrative practice and the technical details of the grant. These two characteristics were evident not only in the kind of patents granted but also in many of the mundane details, terms and procedures of the actual grants. Such technical details were the terrain in which the conceptual scheme of patents was both reflected and constituted, not through reflective theorizing, but through everyday practices.

¹⁴ In Hulme’s words, under such a concept “the rights of the inventor are derived from those of the importer and not vice-versa.” Hulme “The History of the Patent System,” *supra* note 3, at 152. See also: Hulme “The History of the Patent System: A Sequel,” *supra* note 3, at 53; Fox, *supra* note 3, at 62, Coulter *supra* note 3 at 10.

Early English patents may seem to a modern observer like strange, maybe even confused documents. Such patents combined indiscriminately what we would call today a business deal and the exercise of public governmental power. They consisted of a mélange of terms. Some were of a business initiative nature or created a sort of a “contract” between the grantee and the crown. Others can be classified (anachronistically) as dealing with “regulation” and “licensing.” The arrangements created by such patents look like a joint economic enterprise of the patentee and the crown in which the latter nevertheless kept its character as the sovereign rather than becoming a mere private party to a contract.

a. The Patent Deal: Recitals of Utility, Rents and Terms

The discretionary nature of patent grants meant that the crown had to weigh the benefits offered and the interests involved in each specific petition and make a particular decision. This was reflected, inter-alia, in the way that patent applications were phrased. Such applications and the patent grants themselves opened with recitals of the specific benefits that the invention offered to the realm and the crown. In later times these recitals gradually fossilized into a mere formality, but in the early patent practice they were quite viable and served a genuine function. The description in the recitals was not a general assertion of utility but rather an account of the specific and tangible social benefits offered by the relevant invention. These offered benefits included such things as: decreasing unemployment, supplying relief for a “decayed town,” supplying a needed commodity in price or quality superior to imported ones, strengthening the defense of the realm, increasing the numbers of certain essential workers (like mariners or miners) or establishing of an export trade.¹⁵

¹⁵ See: Davies, *supra* note 3, at 99; Hulme “On the Consideration of the Patent Grant,” *supra* note 3, at 315. Christine MacLeod surveyed the changing character of the social benefits promised by patentees in the period between the middle of the seventeenth century and the end of the eighteenth century. The data reveal a constant decline of promises to create employment and a rise of the supposed benefit of saving labor. There is also a gradual rise in the saving capital, saving time and improve quality of product rationales and a decline in the declared benefits of replacing an imported product and increasing revenue or other direct governmental benefits. These trends reflect important changes in the concept of invention and in their social, ideological and economic context, but the very fact that in the late eighteenth

Some patent grants involved, as part of the consideration promised by the grantee, rents paid to the crown. There are somewhat different accounts of the extent to which rents derived from patentees were ever a revenue source of any real significance to the crown. It appears, however, judging by the sums and the infrequency of use, that such rents were never significant enough to constitute a substantial independent factor in granting patents.¹⁶

The recitals of utility and the consideration promised by patentees were by no means ceremonial only. Early patents were not granted on demand. Rather they involved real discretion and consideration on the part of the crown as to the benefits involved and the possible effects on various interests.¹⁷ One needs not idealize the picture. We do not need to assume that the king or those acting on his behalf always took into account only what we would describe as considerations of the public good, rather than narrow monarchical, political and personal interests and goals. Nor is there reason to assume that these different kinds of considerations could be sharply distinguished in all cases. Finally we do not even have to assume that the king and his patent grant decisions were always immune from criticism or were always regarded as justifiable by contemporaries. They were not. The point is rather that the grants were specific discretionary “deals” in which the patentees offered particularly specified consideration.

Sometimes the recitals did not tell the entire story behind a patent grant. The crown and other interests involved may have had other considerations than the official ones recited in the grant. In some cases there were “complementary indentures” between the crown and the patentee in which a more detailed account of the “consideration” and of the terms of the deal were given.¹⁸ These, however, only strengthened the nature of the patent

century focused and detailed recitals of specific benefits still exist is very telling regarding the lingering of, at least some, of the traditional concept of patents (despite the fact that, as we shall see, by this time there was little *ex ante* inspection or consideration of these promised benefits on the part of government). See: MacLeod, *supra* note 3, at 158-181.

¹⁶ See: Walterscheid (pt. 2), *supra* note 3, at 858; Hulme “The History of the Patent System,” *supra* note 3, at 87-88; Klitzke, *supra* note 3, at 640-641; Fox, *supra* note 3, at 79.

¹⁷ MacLeod, *supra* note 3, at 12; Fox, *supra* note 3, at 67-8; Walterscheid (pt. 2), *supra* note 3, at 862; Davies, *supra* note 3, at 106.

¹⁸ Davies, *supra* note 9, at 101-102. Unlike the early grants themselves only a few of these complimentary indentures were preserved.

as a particularistic policy act. As we shall see, in many cases patent grants were criticized as being the vehicle of “corruption” and royal “favours” because the privileges they bestowed were presented as tools of political and personal favoritism rather than instruments for promoting the public good. In such cases too, however, the criticism was steeped in the understanding of patents as discretionary grants. The attacks were not on the discretionary case-specific character of patents, but rather on the use of the discretion in the service of personal interests rather than in the name of the public good.

On the other side of the equation were the specific privileges granted by the king as consideration to be given to the patentee. These too were crafted in a particularistic case specific manner. On some general level all invention patent privileges were the same, since they all granted exclusivity in the exercise of some trade or economic activity for a limited period. Yet on the level of specifics the privileges varied greatly. The exact activity in which the patentee had exclusivity was defined specifically in each grant. Sometimes there were geographical limitations to the privileges which covered only certain parts of England.¹⁹ At other times the privileges included specific exemptions from guild and other restrictions or unique powers such as the right to take professional workers of a certain kind for reasonable wages²⁰ or the right to enter some private properties.²¹ The most conspicuous respect, however, in which the privileges granted were particularistic, was their duration. The duration of the privileges varied widely. A 1571 grant for making “Turkye haftes,” for example, had a term of

¹⁹ See for example: A 1571 grant to Rd. Dyer for the making of “earthen pots to hold fire for seething meet” that covered London and a three mile radius. Hulme “The History of the Patent System: A Sequel,” *supra* note 3, at 45; An 1585 grant for the making of white salt, confined to Lyn, Regis and Boston. *Id.*

²⁰ The 1564 patent of Cornelius de Vos for the making of alum and copper, for example, conferred the right “to take up workmen at reasonable wages, together with all materials requisite for the manufacture.” Hulme “The History of the Patent System,” *supra* note 3, at 147. An 1565 patent for the making of Spanish leather exempted the patentees from an existing law forbidding the export of leather. *Id.*, at 147.

²¹ A 1562 patent for mine drainage included clauses regulating “the compensation to be paid for entering upon abandoned properties.” *Id.*, at 146.

six years,²² while the 1577 grant for the “making of sulphur, brimstone and oils” lasted for thirty years.²³

The varying terms of the patent privileges were the flipside of the discretionary case-specific framework of patents. Just as the patentee was expected to offer a specific consideration as the basis of the policy decision to grant a patent, the privilege granted when such a decision was made was based on a particularistic policy calculus and was tailored to the specific case. The net outcome was particularistic “deals” between patentees and the crown. Not only were there no standard criteria that created a “right” for patent protection, even when a patent was granted it contained particularistic privileges rather than a standard uniform set of entitlements. Each grant formed a unique arrangement in which the grantee offered particular public benefits and was compensated by a matching tailored set of exclusive privileges.

b. Working Clauses

The concept of the patent deal as based on an actual specific benefit introduced by the patentee went well beyond mere recitals. It was grounded in the operational terms of the grants. Many sixteenth and seventeenth century English patents (though not all of them) had “working clauses.” A working clause laid an obligation on the patentee to put the invention into practice, usually within a prescribed period. The sanction for non-compliance within the prescribed period was “avoidance,” namely nullification of the patent. Moreover, patents with working clauses often required the patentee to produce goods of a certain quality and sell them within certain price limits. A typical example is the 1563 ten years patent of George Gyplin and Peter Stoughberken to make ovens and furnaces which stipulated that “the grant is void in case the patentees fail to *come over* and put the grant into practice within two months, or prove extortionate in their charges.”²⁴ Burchard Cranick was given three years “to perfect and demonstrate the utility of his engines.”²⁵ A later common version of these clauses stipulated that the patent

²² Hulme “The History of the Patent System: A Sequel” *supra* note 3, at 45.

²³ *Id.*, at 47.

²⁴ Hulme “The History of the Patent System,” *supra* note 3, at 146.

²⁵ *Id.*

would become void in case the patentee failed to use his privilege for a certain period without reasonable excuse.²⁶

Early patents sometimes made the grant dependent on actual quality inspection by official representatives, either ex-ante as a demonstration that the alleged invention actually delivered the promised results or ex-post as an ongoing regulation. Stephen Groyett and Anthony Le Leuryer's patent for the making of soap mandated that: "the soap, which is to be of white hard variety shall be as good and fine as is made in the *Sope house of Triana or Syvile*. The patentees are bound to submit their wares for inspection of the municipal authorities, and on proof of defective manufacture the privilege is void."²⁷ Similarly, the grant to Roger Heuxtenbury and Bartholomew Verberick for manufacturing Spanish leather subjected the industry to "the inspection of the Wardens of the Company of the Leather Sellers, who are responsible for 'the skins being well and sufficientlie wrought'."²⁸

The quality inspections should not be confused with the modern examination process. Unlike the examination process, inspection mandated by early English patents was not meant to establish whether an invention fulfilled some general preset criteria for patentability. Instead the inspection was designed to ascertain whether the patentee was capable of supplying the actual specific "consideration" he offered in the patent petition and whether he did so in fact.

Some early patents, almost exclusively patents to foreigners, had apprenticeship clauses.²⁹ These clauses obliged the patentee to employ in his service a certain number of native apprentices and in some cases even created an express obligation to teach his new trade to English apprentices. One of the first patents for invention granted to Henry Smyth in 1552 declared that one of its purposes was that English subjects "maye be sett to worke and gett theyr lyving and in tyme learne and be able to make the said glasse them selfe and so from tyme to tyme thene to instructe others thothers in that science and feate".³⁰ A later example is the Groyett and Le Leuryer soap patent,

²⁶ Davies, *supra* note 3, at 101.

²⁷ Hulme "The History of the Patent System," *supra* note 3, at 145.

²⁸ *Id.*, at 147.

²⁹ See: Klitzke, *supra* note 3, at 639-640.

³⁰ Davies, *supra* note 3, at 104.

mentioned before, which required that two of their servants shall be of native birth.³¹

Clauses that specified timeframe for implementation, clauses that specified quality and price or provided for inspection and apprenticeship clauses; all fit into one conceptual structure. These clauses constituted a patent practice that was premised on the assumption of discretionary prerogative power. The king had to make a specific decision in the case of each patent grant, weighing the specific consideration offered by a particular potential patentee and taking into account other interests involved. In case that this discretion yielded a decision to grant a patent the terms were tailored according to the unique circumstances and consideration offered. The different working clauses were an important mechanism for shaping the desired boundaries of the patent deal in each case and for insuring that the king and the realm would not be “deceived” as to the consideration promised in this deal.

Moreover, working clauses were a clear expression of the fact that the consideration demanded from patentees was the actual putting into practice of the benefits they offered. The patentee was not merely expected to disclose his invention, but rather to actually introduce a practice: to manufacture something, to supply a certain quantity and quality of a commodity, to perform a certain task etc. Working clauses revolved around this concept of the consideration as an actual and tangible one, consisting of putting into practice a certain activity or product.

This does not mean that the issue of disclosure of information was never relevant or important. Yet, just as technological innovation was an undistinguishable part of the broader concept of introduction of trade, disclosing information was an undistinguishable component of the concept of putting into practice. Under this framework, the crucial element was that the patentee actually introduced a certain practice in a way that made it possible for the practice to outlive the patent grant (and the patentee). In some circumstances this involved the instruction of local apprentices. In others it was enough that the patentee would actually produce goods of certain quality.

This was part of the understanding of the subject matter of patents as being new trades. The modern idea of the patent consideration as disclosure of the invention did not fit a world in which the paradigmatic invention was or at least was thought of as- a whole trade or industry. To “disclose” a whole

³¹ *Id.*, at 145.

new industry, when at all possible, meant to write a treatise rather than to provide specification of an invention.³² But the issue was not just practicability. Inventions were simply not yet thought of in the modern sense which is focused on abstract information.³³ Under the concept of invention implicit in the patent practice and the typical clauses of grants, to invent meant to introduce in practice. The element of disclosing information was just an ingredient operating in the background of that concept. In such a conceptual environment the concern for assuring the survival of the new invention was framed mainly in terms of putting into practice. This overarching concern took various forms according to the specific context: requirements of timeframes, specifications of quantity or quality and obligations to employ local workers.

Thus working clauses of various kinds were a clear manifestation of the two main characteristics of English patents. They expressed the understanding of patents as royal discretionary policy tools, by creating mechanisms for insuring the “execution” of the specific consideration promised by the patentee as the basis of the patent deal. They reflected the dominant notion of the subject matter of patents as new industries or trades, by focusing on actual putting into practice rather than on mere disclosure of information.

³² For this explanation for the lack of specification or disclosure in the early English grants see: MacLeod, *supra* note 3, at 49; Hulme “On the Consideration of the Patent Grant,” *supra* note 3, at 317; Davies, *supra* note 3, at 263.

³³ Walterscheid points out that many early grants covered “inventions” that could be quite adequately disclosed through standard description of reasonable length. His explanation is that the lack of a disclosure requirement stemmed “more out of concern of both the crown and the patentees to avoid being embroiled in legal arguments concerning the propriety of the grant than anything else.” See: Walterscheid (pt. 2), *supra* note 3, at 862. While this explanation seems reasonable it still does not explain why the practice was acceptable and did not raise concerns regarding the loss of the benefit of disclosure. Here again the conceptual or ideological explanation comes into play: the patent deal was simply not thought of in terms that focused on the disclosure and protection of information.

c. *Revocation Clauses and Privy Council Jurisdiction*

Another brand of patent clauses gradually became widespread and in time supplanted the working clauses. These were general “revocation clauses.” The first clause of this kind was introduced in the 1575 patent to Holmes and Frampton.³⁴ By the second half of the seventeenth century revocation clauses “became a fixed feature of all patents for invention and remained as such down to modern times.”³⁵ A revocation clause was a general escape clause. It usually stated that the crown or its arm, the Privy Council, had power to revoke a patent upon proof of “inconveniency.” Davies described the standard revocation clause as providing that “if on examination of the patent before the Privy Council, or a specified number of its members, before whom the patentee had been called, the grant was certified to be inconvenient or prejudicial to the realm, then on the signification of the pleasure of the Crown in that respect... or upon a certificate to that effect made by the Privy Council... the patent immediately, or at the end of a specified period of notice, was to be void and frustrate.”³⁶ The term “inconveniency” covered issues like novelty and priority of invention (in the sense given to these terms in the period’s common law as discussed below). Yet it also included “any failure to introduce an invention within a reasonable time”³⁷ and many other specific “abuses.”

³⁴ Davies, *supra* note 3, at 102.

³⁵ *Id.*, at 103. According to one author revocation clauses authorizing the Privy Council to revoke patents were continued to be inserted in the patent grants up to 1902. See: WILLIAM MARTIN, *THE ENGLISH PATENT SYSTEM* 16 (1904).

³⁶ Davies, *supra* note 3, at 102-103. For the phrasing of the clause see also: 11 WILLIAM HOLDSWORTH, *A HISTORY OF ENGLISH LAW* 426 (1924), note 6.

³⁷ Davies, *supra* note 3, at 102. Similarly when patents were reviewed in Parliament in 1621 a blurry distinction between “contrary to law” and “inconvenient” was employed. An illegal patent was one that was contrary to a strict legal requirement for a valid patent and hence infringed the rights of the subjects. An inconvenient patent was one that was clearly obnoxious and injurious to the best interest of the commonwealth. Both were grounds for attacking patents and the theoretical analytical distinction was rarely strictly maintained in actual debates. See: Elizabeth Read Foster, *The Procedure of the House of Commons against Patents and Monopolies 1621-1624*, in *CONFLICT IN STUART ENGLAND: ESSAYS IN HONOUR OF WALLACE NOTESTEIN* 74-75 (William Appleton Aiken & Basil Duke Henning eds. 1960)

The records of the Privy Council provide many examples of discussions of patents' "inconveniency" either prior to the grant or at a later time as part of a revocation process. These incidents and the arguments offered by parties and the council for revocation are very telling. The proceedings before the council seem to have been much closer in nature to executive examinations of utility and policy rather than strictly legal proceedings in the modern sense. Interested parties presented to the council their claims about why a particular patent was unlawful, relying on the forming political and legal discourse.³⁸ They also argued, without any clear distinction, about why the patent was prejudicial to the realm and had to be revoked. Patentees tried to uphold the validity of the patent by demonstrating both its lawfulness and usefulness. In the discussion, arguments about novelty were deployed indiscriminately alongside issues of failure to put into practice, pernicious effects on existing trades and other alleged specific harmful consequences to various interests.³⁹

Traswell's patent for a mill to grind corn and to drain mines, for example, was challenged in 1660 because he was allegedly not the real inventor⁴⁰ but also because he was granted a patent that "he did not thoroughly understand or could put into practice."⁴¹ Garill's patent application for his method of casting gold and silver ingots was attacked by arguing that the patent "will be hurtful to trade, and deprive many hundreds of their Labour and lyvelyhood;" and "will minister great occasion of counterfeyting of moneys and so become a publique Mischief."⁴² Against Rersby and Strickland's patent for steel making it was argued in 1665 that

³⁸ See *infra*, section I(B)(1).

³⁹ Holdsworth explains that the Council in such proceedings "decided such questions as, who of the claimants was the first inventor, whether a patentee was working his patent, whether the invention was really new, whether it was in the public interest to grant a patent." 6 Holdsworth, *supra* note 36, at 331.

⁴⁰ One must remember that the requirement of the grantee being the inventor as a condition for the lawfulness of the patent referred to an "inventor" in the sense explained above, namely the first to introduce a new trade in practice. As will be explained below, by the middle of the of the seventeenth century it was a well established (though sometimes ignored in practice) rule of statutory and common law that invention in this sense is a prerequisite for a valid patent. See *infra*, sec. I(B)(1)(b), I(B)(2)(b).

⁴¹ E.W. Hulme "Privy Council Law," *supra* note 3, at 64.

⁴² *Id.*, at 66-67.

“neither of the patentees had any experience in the art or had ever publicly exercised the same.”⁴³

In short, revocation proceedings in the Privy Council served as a forum in which interested parties tried to convince the king’s agents that it would be a sound policy decision to revoke the patent or not to grant it to begin with. These parties used, among other things, arguments about the specific benefits offered by the patentee, his ability to supply such benefits in practice and the potential and actual effects of the patents on relevant interests. These proceedings and the revocation clauses on which they were premised were deeply rooted in the concept of the patent as a specific policy decision based on royal prerogative. In fact the general “inconvenience” ground for revocation incorporated the logic of working clauses and went beyond them. It enabled the council to revoke patents on grounds of lack of putting into practice, but also on the basis of other ex-post particular considerations of policy. Revocation based on the catch-all justification of “inconveniency” was the ultimate manifestation of the concept of patents as a particularistic and discretionary-based policy instruments.

⁴³ *Id.*, at 68.

B. The Struggle against Monopolies: Common Law and the Statute of Monopolies

The early grant practices of the sixteenth century constituted a conceptual scheme of patents that was radically different from the modern one. Patents were discretionary case-specific policy tools that granted exclusive privileges to exercise a trade. Was this framework significantly changed during the early sixteenth century when what we consider today the origins of “patent law” began to appear? The concise textbook version usually traces the beginning of modern Anglo-American patent law to a handful of famous common law cases decided around the turn of the sixteenth century and to the 1624 Statute of Monopolies. This picture converges with a broader narrative about the political struggles in seventeenth century England. A once popular version of this broader narrative is the whiggish story of progress. According to this story a struggle against royal abuses in the name of “English liberties” resulted in the gradual curbing of the royal prerogative. “Abusive” patent monopoly grants figure in this story as one of the salient forms of unbridled royal power, corruption and favoritism.⁴⁴ Accordingly, the emergence of common law and statutory limitations on the prerogative power to grant patents is described as a centerpiece of the inevitable march of progress. It appears as an essential part of England’s shift from an abusive monarchical regime to one based on English liberties and the public good.⁴⁵ The stronger versions of this narrative are now, for the most part, defunct. Yet at least in the common popular lore of patent history this general framework can still be discerned. The emergence of the first traces of patent law in early seventeenth century England is often treated as both a landmark on a progress trajectory and as the genesis of the modern Anglo-American patent regime.

Thus, it becomes crucial to ask to what extent the emerging common law framework and the Statute of Monopolies were a break with the traditional scheme and practice of the patent grant. The answer is that, while those were important landmarks, neither common law nor the statute created any significant break with the main characteristics of the early patent

⁴⁴ See: Fox, *supra* note 3, at 92-112.

⁴⁵ Klitzke presents a particularly extreme version of this narrative in which even the celebrated common law cases and the Statute of Monopolies are merely preordained stops along an inevitable road on which Queen Elizabeth set England at the end of the sixteenth century. Klitzke explains that the common law developments and the statute were “effects not causes” and “only inevitable results following the movement Elizabeth had begun.” Klitzke, *supra* note 3, at 644, 650.

practice. Rather than a dividing line between the traditional administrative practices and a beginning of a modern patent system, those legal developments were mainly formalizations and incorporations of the basic existing framework of patent grants.

Two important facts, regarding which there is hardly any dispute in the historical research, cast shadow over any assumption that the emergence of patent law signified a break with the past. First, the Statute of Monopolies of 1624, though an important landmark, was hardly a dramatic turning point in the law, practice and politics of patents. The statute was certainly a significant declaratory measure, one of the peaks of an ongoing struggle that was understood and described by its agents as a fight against abuse of royal prerogative. It also became an important point of reference in future legal and political discussions of patents. Yet, the Statute of Monopolies constituted neither a sharp break with what preceded it, nor a standard that was immediately and strictly adhered to in what followed. In its essence the statute was declaratory of the limitations on the royal prerogative that developed in the common law during the preceding decades. As for actual implementation, it took a century-long process for both the statute and the common law to prevail and to consistently subject the royal prerogative to the limitations envisioned in them.

Second and even more important, the fundamental understanding of the function and nature of patent grants engrained in both the Statute of Monopolies and the common law cases was exactly the familiar traditional scheme, described above. The characteristics of this scheme were deeply embedded in the very standards and limitations on the royal prerogative that the common law and the statute set out to impose.

In what follows I describe the anti-monopoly discourse that developed in English political culture of the period, and was imported into the common law. I explain how this discourse, while it was wielded as a tool of reform, was deeply rooted in the traditional understanding of patents. So were also the two main legal products of this political discourse: the early common law of patents and the Statute of Monopolies.

1. The Common Law Struggle against Monopolies

a. Bad Monopolies and Good Monopolies

The attack on monopolies was one of the most important issues during parts of the continuous political upheavals in seventeenth century England and the struggles over royal powers.⁴⁶ The essence of this struggle, as it was understood and described by Englishmen of the time, was binding the royal prerogative to its proper scope and securing “English liberties.” As one contemporary put it, it was a struggle to establish a commonwealth based on the principle that “common-weals are not made for King’s [sic], but Kings for common-weals.”⁴⁷ The royal power to grant monopoly privileges became a focal point of this struggle, at least during its earlier part, because it occupied a major junction of material interests and symbolic-ideological significance. As for interests, various monopoly privileges granted by the crown had a direct and substantial influence on many of those who fought to restrain royal power and on their supporters. Many monopolies had an adverse effect on too many interests that in the last analysis were proven too powerful to upset. On the ideological and political symbolism front, broad monopoly grants were seen as one of the most glaring examples of abuse of the royal prerogative, of royal power that seemed to be exercised on the premise that commonweals were made for kings rather than vice-versa.

The basic pattern that the attack on abusive royal monopolies assumed overlapped with the ideological structure of the general political struggle of which it was a part. This struggle revolved around the question of circumscribing royal power. The basic ideological division of the time was between an absolutist view of monarchical power and a rival position of limited royal powers. The absolutists conceded that a king had to rule as to promote the public good, but they envisioned him as the sole arbiter of the public good and denied that there was an external legitimate power that could impose limitations on his judgments or powers. In the words of a contemporary “to prescribe a limitation of power would argue a kind of

⁴⁶ See: Fox, *supra* note 3, at 92-112; MARK KISHLANSKY, *A MONARCHY TRANSFORMED: BRITAIN 1603-1714* 98-100 (1996); MacLeod, *supra* note 3, at 14-17.

⁴⁷ The citation is taken from Fuller’s argument for the defendant in *Darcy v. Allen*, Noy 173, 178, 74 Eng. Rep. 1131, 1135 (1603).

subjection in a free Monarch.”⁴⁸ “A Prerogative in Point of Government,” said Sir John Davies Attorney General of Ireland, could not “be restrained or bound even by Act of Parliament.”⁴⁹ By contrast, an emerging opposing position described the king’s powers as limited by boundaries imposed by the common good and English liberties and enforced by law. The law was envisioned as setting actual limitation on the prerogative and restricting it to its proper zone. “That which the King would doe,” said Sir George Croke, “if it be against the common lawe or stattuts, the lawe doth not judge to be a prerogative in the Kinge.”⁵⁰

Monopoly patents were debated in the exact same terms. While absolutists saw the use of the prerogative in granting patent as “plenarie fullnes of power,”⁵¹ their foes argued that it was limited by law. “Kings cannot command ill, or unlawful things,” said in 1626 Sir Dudley Digges, and hence “whenever they speak, though by Letters Patents, if the thing be evil, those Letters Patent are void.”⁵² In the political thought and rhetoric of the time there emerged a distinction between “bad” monopolies and “good monopolies.” Bad monopolies were prejudicial to the “public good” and to English liberties and hence their grant was void and outside the proper powers of the crown. Good monopolies were beneficial to the public and accordingly were within the grant powers of the king. As one member of the Long Parliament summed it up: “patents are lawfull which are nott *ad Damnum Populi*.”⁵³ This basic rule and exception, public-detriment/public-good, structure dominated the political discourse on monopolies for more than a century.

⁴⁸ The speaker was Godfrey Goodman Chaplin to James I’s wife and later Bishop of Gloucester. Cited in J.P. SOMMERVILLE, *ROYALISTS AND PATRIOTS: POLITICS AND IDEOLOGY IN ENGLAND, 1603–1640* 40 (2d ed. 1999).

⁴⁹ J.P. Sommerville, *The Ancient Constitution Reassessed: the Common Law, The Court and the Languages of Politics in Early Modern England*, in *THE STUART COURT AND EUROPE: ESSAYS IN POLITICS AND POLITICAL CULTURE* 39, 63 (R. Malcolm Smuts ed., 1996).

⁵⁰ Sommerville, *supra* note 48, at 97.

⁵¹ Sommerville, *supra* note 49, at 61 (citing Solicitor General Thomas Fleming in *Darcy v. Allen*).

⁵² Sommerville, *supra* note 48, at 97.

⁵³ Cited in Fox, *supra* note 3, at 165.

Discussions of patents for invention were part of this general discourse of monopoly patents. Like other royal grants of privilege they were analyzed and argued over in the terms of abuse vs. lawful use of royal prerogative, and public detriment vs. public good. This discourse focused on the need to put checks on the royal prerogative, to carve out its permissible scope as to insure that it is exercised in the service of the public good. Yet within this allowed scope the royal prerogative was to remain as discretionary and particularistic as ever. Thus the patent aspect of the seventeenth century political struggle was not about patent rights, but rather about the rights of Englishman to be free from abusive patent grants. It was not about insuring that anyone who fulfilled certain criteria would have a right for standard patent entitlements, but rather about insuring that the discretionary royal prerogative to grant patents would be limited only to a certain range of circumstances.

The common law was one of the main arenas where the struggle against abusive monopolies took place. The common law front had institutional, rhetorical and substantive aspects. Institutionally, common law courts were important alternative centers of institutional power. For reformers they offered a much more lucrative option than the royal organs, such as the Privy Council, that handled issues of royal monopoly privileges. Although judges were often reluctant to rule against royal power,⁵⁴ by the late sixteenth century common law courts were already independent enough in order to offer a promising forum, along side parliament,⁵⁵ for those trying to attack and impose limitations on royal powers.

The very argument that common law courts had jurisdiction to review the “lawfulness” of royally issued patents was an antithesis to the rival view according to which the crown’s prerogative was plenary and could not be restrained by “external” law. Sir George Moore, one of the defenders of the queen’s prerogative in an early parliamentary debate on the matter of patents

⁵⁴ Sommerville, *supra* note 48, at 97.

⁵⁵ At certain times Parliament was the main forum for attacking monopoly patents. Such attacks were held not only through parliamentary debates and general bills but also through investigations of specific patent grants and a procedure of “grievances.” The procedure of examining patent grievances did not have a clear distinction between a legislative and an adjudicative function. Rather Parliament and its committees reviewed the lawfulness and the “convenience” of specific patents; summoned and questioned witnesses; heard arguments from parties; determined facts; and issued judgments. See: Read Foster, *supra* note 37, at 75-76.

in 1601, expressed this position when he warned his colleagues: “we know that the power of her majesty cannot be restrained by any Act, why, therefore should we thus talk?”⁵⁶ The plenary prerogative view conceded, of course, that the royal power had to be wielded in the name of the public good. It claimed, however, that the crown itself was the sole judge of what the public good was and of the best ways to serve it. Those who turned to the common law presented a diametrically opposed view. As Christopher Sherland put it in 1628: the prerogative “growth wholly from the reason of the Common law, and is as it were a finger of that hand.”⁵⁷ Thus the turn to common law courts and the willingness of these courts to review royal patent grants were in and of themselves a challenge to royal power.

Moreover, the substantive standard for review of patent grants and the limitations laid on the scope of the royal prerogative in issuing patents were likely to be stricter when shaped by common law courts. At least when compared to the available alternative of self-imposed limitations crafted by the king himself or by the Privy Council,⁵⁸ which usually aligned more closely with royal interests and views and whose members were sometimes the movers of particular grants.⁵⁹

⁵⁶ Cited in Fox, *supra* note 3, at 76. Secretary of State Cecil reminded them that “if you stand upon the law and dispute the prerogative, hark what Bracton saith, *Prerogativam nostram nemo audeat disputare*”. *Id.* See also Queen Elizabeth’s response in 1571 to protests from the Parliament regarding certain patent grants, according to which “her Prerogative Royall may not be called in question for the valliditie of the letters patent .” Cited in Inlow, *supra* note 3, at 21.

⁵⁷ Sommerville, *supra* note 48, at 96.

⁵⁸ Despite this early institutional configuration one should not assume, as there is sometimes a tendency to do in current research, that the entire history of the interaction between the Privy Council and the common law courts in the context of patents jurisdiction was one of consistent contention and rivalry. As I explain below, a coherent account of this institutional interaction forms a black-hole in the history of patents that still awaits to be filled. However, even the bits and pieces available hint at a complex picture, one of various degrees of cooperation and symbiosis as well as some rivalry between the courts and the Privy Council and of fluctuation over time. See: *infra*, text accompanying notes 126-135.

⁵⁹ See Foster Read, *supra* note 37, at 77.

The turn to common law had also an important rhetorical and symbolic dimension that was partly independent of the institutional one. Although historians disagree about the degree of consensus regarding this mindset,⁶⁰ it is common to refer to the “common law mind” as a dominant ideological outlook in early seventeenth century England. The “common law” was acquiring a dominant ideological status in this way of thinking as the heralded repository of English freedoms, as revered immemorial custom and as the essence of “Englishness” itself. Accordingly the “common law” was often used as a powerful device to pound monopolies in the political arena. The common tactic was to attack any monopoly patent that seemed to impinge on the public good or on the subjects’ liberties as being contrary to the “common law.” Thus for example in an early unsuccessful attempt in 1601 to safeguard parliamentary limitations on patent grants Laurence Hill called his bill “An Act for the explanation of common law in certain cases of Letters Patent.”⁶¹ Given the ideological status of the common law such rhetorical tactics were both simple and effective. Locating the object of attack on the wrong side of a dichotomy whose right side was the common law was a powerful move. Being “contrary to common law” was a grave accusation. The appearance of a few actual famous common law cases that described some patent grants as illegal encouraged and gave force to such rhetorical maneuvers.

What about the actual substantive content of the common law relating to patent grants as it developed in the early seventeenth century? The substantive structure that crystallized in the emerging legal doctrine during this period was identical to the structure of the general monopolies discourse of the political arena. In fact, there seems to have been a free flow of arguments and ideas between the political debate and the argumentation of

⁶⁰ See Sommerville, *supra* note 49. Sommerville disputes both the degree of internal consensus in England regarding the common law mindset and the assumption that its components were unique to England and separated it sharply from continental political thinking of the time.

⁶¹Fox, *supra* note 3, at 75. In another occasion, when in parliamentary debate some questioned the authority of parliament to limit the king’s grants Francis Moore turned to common law cases and reminded the others that monopolies were against the law. *Id.*, at 98. When two decades later the Statute of Monopolies was debated at the House of Lords two supporters defended it against claims that it restricted the king’s prerogative by explaining that “yt toucheth none but what shall be against the lawe.” Cited in: Chris R. Kyle, *But a new button to an old coat’: the enactment of the Statute of Monopolies*, 21 *James I cap. 3.*, 19 *J. L. Hist.* 203, 210 (1998).

legal cases. The main axis of the developing legal doctrine was a distinction between abusive monopolies contrary to law and those monopolies, which served the public good and hence were lawful. The former were void and the latter were a legitimate exercise of the royal prerogative to be issued on the basis of royal discretion as to the best exact way of serving the public good.

An early opening shot was the 1599 ruling of the King's Bench in *Devanant v. Hudris*⁶² (known also as the *Merchant Tailor's Case*) that dealt with a bylaw of the Company of Merchant Tailors that applied to its members and was made in accordance with its charter given by the king.⁶³ The court ruled that the bylaw created a monopoly contrary to law that unduly limited the liberties of the subjects and hence was void.

Soon after, the royal grant itself came under a direct attack. In *Darcy v. Allen*⁶⁴ (or the *Case of Monopolies*) the patentee Edward Darcy was granted the privilege of the exclusive right for the manufacture, importation and sale of playing-cards for twenty-one years. He sued Thomas Allen a haberdasher from London for infringement in an action on the case in the court of King's Bench. *Darcy v. Allen* became an almost mythological milestone in the narrative of the fight of the common law to curb royal prerogative, uphold English liberties and prevent restraints on trade.⁶⁵ According to the classic narrative the case gave rise to two major checks on royal powers. First, the crown's power to grant monopolies that limited an

⁶² Moore 567, 72 Eng. Rep. 769; See also reference in: *Darcy v. Allen*, 11 Co. Rep. 86a, 77 Eng. Rep. 1260, 1263 (K.B. 1599). For an argument about the ideological significance of the case see: D.O. Wagner, *The Common Law and Free Enterprise: An Early Case of Monopoly*, 7 Econ. Hist. Rev. 219 (1936-37).

⁶³ The bylaw provided that "every brother of the same society who should put any cloth to be dressed by a cloth-worker, not being a brother of the same society, should put one-half of his cloth to some brother of the same society, who exercised the art of a cloth-maker, upon the pain of forfeiting ten shillings for every cloth put forth for dressing contrary to the ordinance." Cited in Fox, *supra* note 3, at 311.

⁶⁴ 11 Co Rep. 84 b, 77 Eng. Rep 1260; Moore 671, 72 Eng.. Rep. 830 (in law French); Noy 173, 74 Eng. Rep.1131 (K.B. 1602). (The defendant's name is sometimes spelled also as "Allin" or "Allein.")

⁶⁵ It also became one of those rare cases that are cited in judicial opinions up to this day. See: Jacob I. Corre, *The Argument, Decision and Reports of Darcy v. Allen*, 45 Emory L. J. 161 (1996).

existing freely exercised trade was restrained. Second, the crown's power of dispensation- that is the power to exempt certain people from the operation of a valid statute (this was called a non-obstante clause, the Latin for "notwithstanding")- came under attack.

Jacob Corre has shown recently that this narrative, which relies heavily on the report published by Coke in 1615,⁶⁶ probably exaggerated the extent to which the case, as it was ruled and accepted by the legal community at the time, was either a sharp manifestation of these two developments or a major change in the limitations laid on the royal prerogative. The judgment against Darcy was delivered with no judicial opinion to explain its reasons. What Coke published in his report fifteen years later as the reasons of the court was probably based on his version of an informal private communication to him by one of the Justices and was heavily filtered through the lenses of his own ideological project of the time.⁶⁷ The arguments of counsels were complex and involved many procedural and substantive issues. Some of these issues offered alternative grounds for a judgment for Allen that required no ruling regarding the validity of the patent grant.⁶⁸ In the absence

⁶⁶ 11 Co. Rep. 84b, 77 Eng. Rep. 1260. Ironically Coke, who later became known as one of the champions of the fight against monopolies and whose famous confrontation with King James over the common law had much to do with his reports about the alleged restrains of common law on royal prerogative, was the Attorney General at the time of *Darcy v. Allen*. As such he represented the patentee and argued for the validity of the grant and the royal prerogative.

⁶⁷ See: Corre, *supra* note 65, at 1269-1271. In the report Coke created identity between the arguments of the defendant's counsel and the court's opinion on the issue of the validity of the patent grant. He did it by saying that the report conveyed what was argued by "the defendant's counsel and resolved by Popham Chief Justice, et *per totam Curiam*." 11 Co. Rep. 84a, 86a. In his unpublished notes Coke wrote next to his summary of the decision: "as Popham related to me, because since upon conference they agreed as one, it was not openly argued." He also added a remark that he afterwards struck out: "even though the judges did not openly declare their reasons, I know nevertheless that these were the reasons and judgment was given accordingly." See: Corre, *supra* note 65, at 1271.

⁶⁸ See: Corre, *supra* note 65, at 186-1296. Allen also had a motion in which he claimed prescriptive rights to sell the cards based on a custom regarding the Haberdashers society of London of which he was a member. It remains doubtful, however, whether this claim had any relevance in the final judgment. See: *id.*, at 1273-1285.

of a judicial opinion it is impossible to know what the exact basis of the court's ruling was and the extent to which the judgment was actually a serious restraint laid by common law on royal prerogative remains shrouded in mystery.

Still, even when the *Case of Monopolies* is deprived of its mythological status as a decisive blow against royal prerogative the arguments of counsel do reveal the developing conceptual structure of legal thought regarding the grant of monopolies. At the very least they reveal the way this structure was synthesized and understood by a host of important and influential reporters who published their reports years later.⁶⁹ What is remarkable about the case is the extent to which the two parties, when they came to argue about the validity of the patent, shared the same basic framework for analyzing the royal prerogative to grant monopoly patents. Though each side constructed its own arguments and allocated different scope to the exercise of royal discretion, both seemed to have relied on the model of “good monopolies” designed to serve the public good and “bad monopolies” that were contrary to law.

To begin with, it is remarkable that, as far as the reports and the available sources reveal, none of the parties disputed that the common law court had jurisdiction to decide the validity of the patent. In other words, both parties accepted that it was the court that had final authority to differentiate bad and good monopolies and draw the boundaries of royal discretion. That is not to say that at that time this was a position unanimously accepted in political discourse or in practice. During the early seventeenth century supporters of monarchical power were at best ambivalent regarding common law jurisdiction to review the exercise of the prerogative and usually did not concede such a general authority.⁷⁰ It was not unusual for the Privy Council, for example, to interfere with proceedings in the court and sometimes to order their stay.⁷¹ The common law did not instantly trump or change all of

⁶⁹ Edward Coke the author of the most influential report of *Darcy v. Allen* is known as the main figure behind the parliamentary struggle to restrict the royal prerogative in the grant of monopolies and to enact the Statute of Monopolies. William Noy, who wrote another influential report, also joined the campaign for the act, albeit with some reservations and in a relatively late stage. See: Kyle, *supra* note 61, at 213.

⁷⁰ On the royal position vis-à-vis common law jurisdiction see: *infra*, text accompanying notes 99-103.

⁷¹ On the relationship between the common law courts and the Privy Council see: *infra*, sec. I(C)(2). The Privy Council demonstrated the viability of a

this, but *Darcy* it is an indication that at least when arguing before the courts, plaintiff's counsel did not dispute the court's jurisdiction to determine the validity of a patent.

When it came to substance, nobody disputed the basic framework for analyzing the validity of a patent presented by Fuller who represented the defendant. Fuller's analysis closely followed the bad monopoly/good monopoly distinction and recast it in the form of a syllogism:

“Major	All patents made for the general good of the realm may restrain some subjects in their particular trades lawfully.
Minor	But this patent is made for the general good of the realm
Conclusion	Therefore this patent may restrain some in their particular trades lawfully” ⁷²

Both Attorney General Coke and the Solicitor General Fleming arguing for the plaintiff⁷³ and the defendant's counsel⁷⁴ argued within this framework.

different position regarding the supremacy of common law jurisdiction in the very context of *Darcy's* patent. Trying to uphold the plenary royal discretion approach to patents the Privy Council issued in 1601 a letter to the Chief Justice of the Common Pleas ordering the stay of another suit filed against *Darcy* which challenged the validity of his patent. See: ACTS OF THE PRIVY COUNCIL 1601-1604 237 (October 7, 1601).

⁷² Noy 178, 74 Eng. Rep. 1135. The problem with the patent at issue, Fuller explained, was that the minor proposition was false.

⁷³ Coke and Fleming did not deny the principle that a patent grant cannot wrong the inheritance, liberty or freely exercised trade of the subjects. Their strategy was to show that the cards monopoly grant, fell within an exception to the rule through an argument whose essence is as follows. The argument involved portraying card playing as a thing of “vanity.” This meant that cards were not necessary products, but also that card playing could be considered a harmful practice that caused “loss of time and decrease in the substance of many, the loss of the service and work of servants, causes of want which is the mother of woe and destruction.” 11 Co. Rep. 85b. Though the practice was not expressly prohibited and punished by law, the argument went, its reprehensive nature and the abuse involved with it made it “unlawful.”

Darcy v. Allen is a clear indication that early in the seventeenth century the structure of unlawful monopolies vs. lawful monopolies beneficial to the public was coming to dominance within the common law conceptualization of the question of monopolies. Furthermore, patents for

Conduct of this sort- not expressly prohibited but of “unlawful” nature- the Queen acting as a “*parens patrie et paterfamilias totius regni.*” *id.* had power to regulate and forbid. The practice of card making was tainted by implication, according to the logic that the power to utterly forbid entailed the power to regulate and the power to regulate card playing involved also the power to regulate and limit card making. Though the category of conduct which is not prohibited by law but is nevertheless “unlawful” may seem awkward to us, the thrust of the argument is clear. What Darcy’s counsels were arguing, in effect, was that card making by implication of card playing was a dangerous and harmful activity. Due to this nature of the activity, the Queen had authority to regulate and restrict it through a monopoly grant that served the public interest. The bad-monopoly/good-monopoly structure of the argument is obvious. It was based on the assumption that the limitations on the free exercise of the trade of card making by way of a patent monopoly would serve the “public good” and hence the grant of such a monopoly was within the limits of royal prerogative.

⁷⁴ The counter arguments of the defense ranged considerably between different degrees of attack on the royal prerogative. The most extreme version of the argument was that the queen could never prohibit by a monopoly grant the exercise of a trade without a statute of parliament. Other arguments were that card playing was not an “unlawful” activity; that the power to limit card playing did not entail a power to limit card making which in itself was not “unlawful;” and that even if the queen had power to limit card making for the sake of regulating card playing, Darcy’s patent was void because it failed to lay any limitations on him regarding the amount of cards made and sold and hence in effect did nothing to limit card playing. 11 Co. Rep. 86a-87b; Noy 177-179. All these arguments assumed the bad-monopoly/good-monopoly distinction. The most extreme argument deployed this structure on a very general level arguing that any monopolization of an existing trade was against the public good and outside the scope of royal prerogative. The argument on the other extreme was that the specific terms of the grant failed to take any notice of the public benefit that could justify such a monopoly, and hence the grant was void. However, like the plaintiff’s all of the defendant’s arguments were based on the assumption that the queen’s prerogative to grant monopolies encompassed only areas where the monopolies granted could be justified as serving the public good.

invention set within certain limitations, while not the only instance of “good monopolies,” were looming high as one of the main categories of patents that were assumed to be beneficial for the public.⁷⁵

b. Invention and Novelty

As demonstrated by *Darcy v. Allen*, early common law doctrine of patents for invention developed mainly as a counter model to non-invention patents. The doctrinal requirements for a valid patent for invention were developed in cases that did not involve such patents. Instead, common law courts and lawyers used invention patents as a paradigmatic case of “good” lawful monopolies. By elaborating the requirements for a valid patent for invention they exemplified how the patents under scrutiny failed to meet these requirements or satisfy their rationale, and hence were “bad” monopolies contrary to law.

After *Darcy v. Allen* this dynamic occurred most significantly in the 1615 *Cloth Workers of Ipswich* case.⁷⁶ The case involved a group of tailors who were incorporated by a charter of the king. The charter bestowed upon the incorporated body the exclusive right of exercising the trade within the town of Ipswich. According to the report the court issued a judgment for the defendant who worked as a tailor in violation of the charter on the ground that “the King might make corporations... but thereby they cannot make a monopoly for that is to take away free trade which is the birthright of every subject.”⁷⁷ The court went on to point at patents for invention and to elaborate their characteristics as a counter example:

⁷⁵ This was apparent in a paragraph of the argument of Fuller in *Darcy v. Allen* that later became the guiding light of patent law:

“Now therefore I will shew you how the judges have heretofore allowed of monopoly patents which is that there any man by his own charge and industry or by his own wit or invention doth bring any new trade into the Realm or any Engine tending to the furtherance of a trade that never was used before and that for the good of the Realm; that in such cases the King may grant to him monopoly patent for some reasonable time, until the subjects may learn the same, in consideration of the good that he doth bring by his Invention to the Commonwealth; otherwise not.” Noy 182.

⁷⁶ Godb. Rep. 252, 78 Eng. Rep. 147 (K.B. 1615).

⁷⁷ *Id.*, at 253.

“But if a man hath brought in a new invention and a new trade within the kingdom, in peril of his life, and consumption of his estate and stock, etc.’ or if a man hath made a new discovery of anything, in such cases the King, of his grace and favour, in recompense of his costs and travail, may grant by charter unto him, that he only shall use such a trade or traffic for a certain time, because at first the people of the kingdom are ignorant, and have not the knowledge or skill to use it; but when the patent is expired, the King cannot make a new grant thereof, for when the trade has become common, and others have been bound apprentices in the same trade, there is no reason why such should be forbidden to use it ”⁷⁸

This summary of the requirements for a valid patent for invention echoed a claim that already appeared in Fuller’s arguments in *Darcy v. Allen*.⁷⁹ It became the backbone of patent common law doctrine up to the late eighteenth century. Common law cases that dealt directly with patents for invention were very rare in the seventeenth and early eighteenth century,⁸⁰

⁷⁸ *Id.*, at 254.

⁷⁹ See *supra* note 75.

⁸⁰ According to Fox, there is only one reported case between the enactment of the Statute of Monopolies and the end of the seventeenth century, and only one more case reported until 1765. Fox, *supra* note 3, at 119. MacLeod makes a similar point. MacLeod, *supra* note 3, at 61-62. See also: Hulme “On the Consideration of the Patent Grant Past and Present,” *supra* note 3, at 318; Walterscheid (pt. 3), *supra* note 3, at 773. As MacLeod and Walterscheid explain there were a few unreported common law cases during this period, but it is extremely doubtful whether these were numerous or of substantial influence. See: Walterscheid (pt. 4), *supra* note 3, at 107. During the second half of the eighteenth century there were 22 reported patent cases tried before the superior courts of London. See: Dutton, *supra* note 3, at 71. As late as 1795 Chief Justice Eyre complained that “patent rights, are no where, that I can find, accurately discussed in our books.” *Boulton & Watt*, 2 H. BL. 463, 491, 126 Eng. Rep. 651, 665 (C.P. 1795). Even when patent case law started growing at the end of the eighteenth century it lacked a systemized scheme for organization and dissemination that could insure its effective penetration. The important compilation started appearing only toward the middle of the nineteenth century. See e.g. J. DAVIES, A COLLECTION OF THE MOST IMPORTANT CASES RESPECTING PATENTS OF INVENTION (1816); J. FAREY, PAPERS DELIVERED INTO THE 1829 COMMITTEE ON THE LAWS RELATIVE TO

but wherever they occurred they alluded to the doctrinal scheme elaborated in the *Cloth Workers of Ipswich* case. These requirements for a valid patent for invention, laid down in the case, reflected the two main characteristics of the Elizabethan concept of patents: invention as the introduction of a new trade; and patent as a discretionary policy instrument.

The first aspect- the broad concept of invention- was embedded in the doctrinal understanding of the act of inventing and of the requirement of novelty. The notion of invention which appears in the *Cloth Workers of Ipswich* case is clearly the traditional concept of invention as the introduction of a new trade into the realm, rather than the narrower concept of technological discovery. The inventor is described as a man who has brought “a new trade within the kingdom.” The case of a man who has “made a new discovery of anything” is relegated to a secondary category. Thus the case of the discoverer is included in invention patents only because it bears resemblance to that of the importer of a new trade. The crucial feature, common to both instances, is the introduction of a new trade to the English economy.

The same understanding of invention can be located in the early doctrine of novelty. The requirement that the invention be new that developed in the early common law was different from the modern one. In one respect it was a more lenient requirement. Novelty merely meant that the trade introduced by the patentee was not exercised in England at the time of the grant. A use of the invention in foreign countries, earlier use in England that had been terminated or even sale within England of a product of the

PATENTS FOR INVENTION (1829); W. CARPMAEL, LAW REPORTS ON PATENT CASES 1602-1842, 3 VOLS. (1843-1851); T. WEBSTER, REPORTS AND NOTES OF CASES ON LETTERS PATENT FOR INVENTION 2 VOLS. (1844). THE SAME WAS TRUE WITH PATENT LAW TREATISES, WITH THE EXCEPTION OF: J.D. COLIER, ESSAY ON THE LAW OF PATENTS FOR NEW INVENTIONS (1802); WILLIAM HANDS, THE LAW AND PRACTICE OF PATENTS FOR INVENTION (1806). Colier’s treatise is an important landmark in the attempts to try to systemize patent case law in England, but it is rather rudimentary and unsophisticated. Later early treatises were: RICHARD GODSON, LAW OF PATENTS FOR INVENTIONS AND COPYRIGHT (1823); W. CARPMAEL, THE LAW OF PATENTS FOR INVENTIONS FAMILIARLY EXPLAINED FOR THE USE OF INVENTORS AND PATENTEEES (1832); T. WEBSTER, LAW AND PRACTICE OF LETTERS PATENT FOR INVENTION (1841); W.A. HINDMARCH, TREATISE RELATING TO THE LAW OF PATENT PRIVILEGES FOR THE SOLE USE OF INVENTIONS (1847).

relevant trade were not considered a bar for a patent.⁸¹ On the contrary, in a system whose roots were planted in a policy designed to encourage the introduction from abroad of useful trades and manufactures, inventions that were previously manufactured in foreign countries and imported to England were one of the most important targets of legitimate and legal patents.

Similarly, prior publication of an invention was irrelevant from the perspective of the legal requirements of novelty. An invention was considered new even if written information regarding it was already available in England.⁸² This was commonsensical in a system in which the “consideration” of the patent grant was thought of in terms of the actual introduction of a trade, rather than the mere disclosure of information. As long as a new trade was introduced in practice the novelty requirement was met. On the other hand, a patent that was granted for an existing trade was categorically assumed to be a bad monopoly contrary to the public good, since it “taketh away a man’s trade.”⁸³

Those technical details of the novelty requirement exemplify the extent to which early common law doctrine of patents was steeped in the traditional concept of invention as the introduction in practice of a new trade. Patents were deemed to be granted to he who “by his own charge and industry or by his own wit or invention doth bring any new trade into the Realm or any Engine tending to the furtherance of a trade that never was used before.”⁸⁴ The exact shape of the emerging common law limitations on the royal grant power reflected this understanding.

c. The Rule against Improvements and the Public Good

The other aspect of the period’s patent grants was also reflected in the common law doctrine. This aspect was the character of patents as policy tools, based on a discretionary royal power on the one hand, and external limitations imposed on this discretion in the name of the “public good” on the other. The fact that the discretionary particularistic nature of patent grants

⁸¹ Hulme “On the History of Patent Law,” *supra* note 3, at 282; Hulme “On the Consideration of the Patent Grant,” *supra* note 3, at 318.

⁸² *Id.*

⁸³ 3 EDWARD COKE, INSTITUTES OF THE LAWS OF ENGLAND 181 (1644).

⁸⁴ The quote is taken from Fuller’s argument in *Darcy v. Allen*, Noy 182.

was taken for granted is apparent in the *Cloth Workers of Ipswich* case. The report, in a clear allusion to the concept of patents as discretionary privileges describes them as privileges that the king *may* grant as a matter of “grace and favour.”⁸⁵ Thus in the framework created by the early common law cases the new requirements of invention and novelty, constructed external formal boundaries to the scope of royal discretion. These boundaries were designed to insure that the prerogative would not be misused to grant patents that were contrary to the public good. Yet within this prescribed scope the decision to grant a patent remained as discretionary and particularistic as in the original sixteenth century practice.

The persistence of this aspect of the traditional concept of patents was even clearer in another basic building block of the novelty requirement: the rule against improvements. The rule against improvements mandated that lawful patents could be granted only to new manufactures and not to improvements of existing ones. The controlling precedents for this rule, that were regularly cited till the late eighteenth century, were the *Mathey* and the *Bricot* cases, probably decided late in the sixteenth century.⁸⁶ When the rule against improvements was finally laid to rest toward the end of the eighteenth century Mansfield could already characterize it as an unintelligible scholastic distinction, which if followed in practice would render any invention an “improvement” and hence unworthy of a patent.⁸⁷ Yet, this conclusion was so commonsensical for Mansfield only because he lived in an age when the practice and concept of invention already moved toward the modern idea of new technological discoveries. In a conceptual environment in which inventions were thought of in terms of the introduction of new manufactures or trades, the rule against improvements was perfectly intelligible.

⁸⁵ 78 Eng. Rep. 147.

⁸⁶ None of these cases was reported. *Bricot's* case was decided in Exchequer Chamber and involved a patent for a new method of “preparing and melting, &c. of lead ore.” It is known mainly from Coke’s reference in his institutes. See: Coke, *supra* note 83, at 183. *Mathey's* case was decided in the Privy Council and involved a patent for manufacture of knives with a new kind of hafts. The new hafts were ruled to be “mere improvements” that did not justify the patent. It is known from Fuller’s reference in his argument in *Darcy v. Allen*. See: Noy 183, 74 Eng. Rep. 1131. See also abridgment of the case in: CHARLES VINER, A GENERAL ABRIDGMENT OF LAW AND EQUITY 201-211 (2nd ed., 1793).

⁸⁷ See: *infra*, text accompanying note 142-145.

One aspect of the conceptual context within which the rule was grounded was pre-industrial-revolution notions of technological change and economic utility. New technology had an equivocal status within this way of thinking. On the one hand, it was often recognized that new technology may be beneficial and may contribute to the prosperity of the realm. Indeed, this was the rationale behind monopoly patents for inventions. On the other hand, technological development did not yet acquire an unquestioned ideological status as the ultimate engine of social progress and economic growth. The general attitude toward new technology was a mixture of various degrees of careful appreciation and hostile suspicion.⁸⁸ The rule against mere improvements expressed this general attitude. It was premised on the assumption that technological change may sometimes be desirable and beneficial but at other times it may very well be destructive and harmful.

As its later critics were quick to argue, the rule against improvements relied on a dubious ontological bright-line dichotomy between new manufactures and “mere improvements” of existing manufactures. The rule, however, was also grounded in connotations and contextual assumptions broader than these mere ontological distinctions. Saying that some manufacture was just an improvement often implicitly invoked a complex set of assumptions and arguments. It usually coded for the argument that the specific benefit involved with the introduction of a specific trade through the use of a monopoly patent was likely to be much smaller than the harm that would be caused by such a monopoly to vital social interests, such as the employment and livelihoods of Englishmen.⁸⁹

Thus, for example, when Coke explained why the patent in the *Bricot's* case was contrary to law he said that the invention in question was not a new manufacture, but rather to introduce it was “but to put a new button on an old coat.”⁹⁰ This was the metaphysical distinction. Yet Coke went on to explain that “it is much easier to add than to invent” and that even “if the new manufacture be substantially invented according to law, yet no old manufacture in use before can be prohibited.”⁹¹ Thus, an argument that from a modern perspective seems like a hollow ontological claim was, in fact, bundled with a richer set of arguments and assumptions. By calling the

⁸⁸ See: MacLeod, *supra* note 3, at 210-216.

⁸⁹ For the prevalent concern of damaging employment and livelihoods in the context of patent grants see: Waterscheid (part 2), *supra* note 3, at 859.

⁹⁰ Coke, *supra* note 83, at 183.

⁹¹ *Id.*

invention an “improvement” Coke was saying that slight innovations of little social benefit should not justify a monopoly that is likely to do much harm to existing interests. Understood in this light, the rule against patents for mere improvements was well integrated with the concept of patents as a particularistic case-specific policy decisions. Alongside the metaphysical claim that classified an invention as “improvement” there usually was also an assertion that the calculus of public benefits and costs in the specific case could not justify a monopoly grant.⁹²

To sum up, the rather sporadic common law doctrine regarding patent grants for invention that appeared at the dawn of the seventeenth century was deeply grounded in the conceptual scheme of the early patent practices. The relevant rules of common law, especially as they were presented by later seventeenth century commentators like Coke, strove to lay some limitations on the royal prerogative to grant monopoly patents. Those restraints were crafted, however, within the general framework of existing grant practices. They also correlated with the developing political discourse and its distinction between good lawful monopolies and bad monopolies prejudicial to the public good. This basic framework of the common law, which survived undisturbed till the late eighteenth century, relied on the traditional model of patents. It was premised on and reproduced the dual axiom of patent grants: that the fundamental units for discussion to which the grants applied were new trades or industries introduced into England; and that patents were particularistic discretionary policy measures exercised by royal power on the basis of a case-specific calculus of the “public good.”

⁹² Nevertheless, the rule against improvements involved some departure from the early framework of the patent grant on the institutional level. When, as in *Mathey's* case, it was the Privy Council that determined that a certain manufacture was mere improvement it was just the regular practice of the king and his long-arm practicing their ex-ante or ex-post discretion to decide whether the policy calculus in the specific case justified the grant of a patent. However, inasmuch as common law courts became the institution that determined the question, there was some change involved. Part of the locus of discretion was moved from one institutional power to another. Still, even this change was not a change in the direction of making patents general standard rights. Instead it was a claim of an institution different from the king- namely common law courts- of having the last word on what the correct particular calculus of the public interest was in specific cases. This was part of the continuous struggle to put limits on royal power to grant monopolies in the name of the “public good,” but it had little direct bearing on the concept of patents as a case-specific policy decisions.

2. *The Statute of Monopolies*

The Statute of Monopolies of 1624 is the cornerstone of two intertwined common historical narratives. The first is the whiggish story of the struggle to curb royal prerogative. From this perspective the statute was a major blow against royal power- “the first statutory invasion of the prerogative.”⁹³ The second is a common version of the history of Anglo-American patent law according to which the statute was the foundation of the modern Anglo-American patent system, a dividing line between a system based on favoritism and the modern regime familiar to us.⁹⁴ These narratives, however, are eclipsed by the fact that the statute was far from being a radical break with preceding political and legal discourse and with existing practices of monopoly patents. On the contrary, it was well grounded in these practices and to a large extent it was declaratory of them.⁹⁵

The statute’s substance was directly derived from the rhetoric of the political attack against monopolies and from the discourse of common law decisions. As we saw both the political attack and the emerging common law doctrine, their reformist underpinning notwithstanding, were deeply rooted in the traditional framework of patent grants. Thus, the degree to which the Statute of Monopolies was a severe blow against royal prerogative and its supposed break with the past are very questionable. This is clearly demonstrated by the statute’s general structure and in the specific details it carved out for the category of patents for inventions.

⁹³ CHARLES HOWARD MCILWAIN, *CONSTITUTIONALISM ANCIENT AND MODERN* 138 (1940); See also: D.O. Wagner, *Coke and the Rise of Economic Liberalism*, 6 *Eco. Hist. Rev.* 30 (1944).

⁹⁴ Klitzke, for example, explains that by the time the U.S. patent system originated “the English lawyer had been victorious over the old monopoly abuses.” Klitzke, *supra* note 3, at 615.

⁹⁵ This does not mean that in practice the grant of monopoly patents followed the outline prescribed by the common law and by the political discourse and that there were no “abusive monopolies” granted. Yet, this was equally true before and after the statute of monopolies. The statute did have a symbolic and declaratory role in the continuous seventeenth century struggle against monopolies, but it was neither revolutionary nor immediately effective.

a. *The Rule and Exception Structure of the Statute*

It is seldom noticed today that in Coke's *Institutes*,⁹⁶ the most authoritative commentary of the time, the Statute of Monopolies is discussed in the third part of the work, which is devoted to "high treason and other pleas of the crown and criminal causes." The relevant section is entitled "monopolists projectors propounders &c" and the header-title of the relevant pages is "against monopolists." In other words, the main purpose of the statute, as understood by contemporaries, was dealing with the problem of "abusive" monopoly grants and defining the boundaries of the royal prerogative in granting monopolies. The Statute of Monopolies by no means attempted to set the foundations for a "patent system." It was not even primarily concerned with patents for invention. The statute's later role as the statutory basis for the English system of patents for invention was, in MacLeod's words, "a curious side effect a quirk of history."⁹⁷ Patents for invention which were dealt with in section VI were merely one exception among others to the statute's ban on monopolies. Although it was an important category of exceptions and with time became the central one, it was not even included in the first 1621 and 1624 drafts of the statute.⁹⁸

The Statute of Monopolies followed closely the rule/exception bad-monopolies/good-monopolies distinctions of the political discourse. Section I of the statute declared that "all monopolies and all commissions graunts licences charters and letters patent" are "contrary to the lawes of the Realme, and so are and shalbe utterlie void and of none effecte." Section III declared that no person shall be able to use or exercise such monopolies. Section II and IV dealt with common law jurisdiction to examine and determine the validity of monopolies. All other ten sections enumerated various exceptions and exemption from the general ban on monopolies. Thus the main premise of the statute was that monopolies were prejudicial to the public good and accordingly they were contrary to law and void. In some exceptional cases,

⁹⁶ Coke, *supra* note 83.

⁹⁷ MacLeod *supra* note 3, at 15. Coulter is making the same point. Coulter *supra* note 3, at 13. The first legislative attempt that tried to supplement the Statute of Monopolies and create directly a normative framework for patents of invention was enacted only on 1835. It was the Patents Act 1835, 5 & 6 Wm. IV c. 83 that dealt mainly with minor procedural reforms. Numerous successful and unsuccessful attempts of legislative reforms occurred during the second half of the century. See: Coulter, *supra* note 3.

⁹⁸ See: Kyle, *supra* note 61, at 208, 214.

however, monopolies were assumed to be in line with the public good and accordingly they could lawfully be granted. This was a direct continuation of the structure of common law and political thought about monopolies, described above.

To some extent the statute's structure was also commensurate with the official royal position. In 1601, in an earlier round of the struggle against monopolies, Queen Elizabeth, under political pressure, issued a declaration in which she revoked several "abusive" patents, promised that none would be "put into execution, but such as should first have a trial according to the law for the good of the people"⁹⁹ and promised recourse to the common law to any of her subjects who was injured by an unlawful monopoly. James I issued in 1610 the *Book of Bounty* in which he declared monopolies to be unlawful, ordered that no "suitor" should apply for such a monopoly and provided a detailed list of lawful and unlawful patent grants.¹⁰⁰ The preamble of the Statute of Monopolies cited the *Book of Bounty* as a direct precedent and support.

These royal public declarations, even if taken at face value, had a complex relation to the common law position. On the one hand, the declared royal position accepted the basic tenet according to which only monopoly grants which served the public good were lawful and valid. On the other hand, in practice it tended to keep the last word regarding what exactly the public good and lawful monopolies were in specific cases in the hands of the monarch or its organs. The political opposition and the developing common law doctrine strove to limit royal power by transferring the site of such determinations to other institutional centers.¹⁰¹

This dynamic was replicated in the arrangement created by the Statute of Monopolies. The statute followed the traditional distinctions regarding

⁹⁹ Fox *supra* note 3, at 77; Coutler *supra* note 3, at 11. The text of the speech that became to be known as the "Golden Speech" can be found in: 1 PARL. HIST. 993.

¹⁰⁰ Patents for invention were item number nine on the list. See: Fox *supra* note 3, at 96-98. The text of the Book of Bounty can be found in: *id.*, at 330-335.

¹⁰¹ As mentioned, Elizabeth's declaration did include a commitment to allow recourse to common law. This, however, appears to have been mainly a lip service and probably applied only to existing patents rather than to all future grants.

monopolies- those same distinctions that appeared in royal declarations. But it did so in a way that attempted to lay some restrictions on the royal prerogative and on the king's ability to have the last word.¹⁰² This became

¹⁰² On this point the most "revisionist" versions of the narrative of the struggle against monopolies seem to have taken a too extreme and erroneous position, probably due to an eagerness to refute the Whiggish story. Kyle, for example, is most convincing when he argues that the statute was, to a large extent, a declaration of existing common law position, but least convincing when he goes on to argue that the statute did not invade attack or limit the royal prerogative at all. See: Kyle, *supra* note 61, at 216-218. Kyle bases the latter conclusion on the fact that the law was declaratory of common law; on its reference to James's Book of Bounty and on James's personal position regarding monopolies. Unfortunately none of these arguments supports the conclusion. The statute was indeed declaratory of the common law position. Yet, as explained this position itself stood in a complex relation to the issue of royal discretion and prerogative. It conceded royal discretion in granting patents within its proper scope but, contrary to the plenary royal discretion position, it laid external limits on this scope and claimed to be the last authority on the content and application of these limits. Similarly, the Book of Bounty shared with the common law and the statute the basic conviction that monopolies that are against the public good are void, but contrary to them it tried to keep in royal hands the last word regarding what the public good and the limits of monopoly grants were in a specific case. From this perspective the reference to the Book of Bounty in the preamble and in parliamentary debates can be interpreted as a shrewd political tactic. It consisted of trying to bind the King in his own precedent while forcing on him limitations that the precedent never did. Finally, regarding James's personal position there are conflicting accounts that range from his characterization as the villain by the Whiggish story to Kyle's description of him as an enthusiastic supporter of the statute. Fox supplies a middle version according to which James shared much of the objection to abusive monopolies but tried to keep their regulation as part of the royal prerogative. Thus James's objection to the statute stemmed not from his support of the monopolies outlawed but rather from the fact that their supervision was transferred from royal hands to parliament initiative and common law actions. See: Fox *supra* note 3, at 113-116. A similar position is taken by Walterscheid. Walterscheid (pt. 3), *supra* note 3, at 871-874. Whichever version is closer to the truth the question of James's personal position has no bearing on the issue of the statute's limitations on royal prerogative. Whether James supported it or not the statute's content involved some measure of limitation on royal prerogative in the form of safeguarding common law's

apparent in the sections that dealt with the jurisdiction of common law courts. Section II categorically mandated that all issues of monopoly grants “ought to be, and shalbe for ever hereafter eaxamyned heard tryed and determined by and according to the common lawes of this Realme & not otherwise.” Section IV provided for a specific action to people injured by unlawful monopolies and named the three main common law courts as the sole forum for such actions. It also went so far as providing penalties to people who “cause or procure any action at the common lawe grounded upon this statute to be stayed or delayed before judgment.” This seems to have been a measure aimed against the common practice of the Privy Council to order the staying of common law actions that dealt with patent grants.¹⁰³

Thus, the Statute of Monopolies was crafted as a clear attempt to insure that external limitations, administered by separate institutional centers in the name of “public good,” would be imposed on the royal discretionary power. The framework of the statute embodied an effort to shrink the scope of the royal prerogative to grant monopolies. It mandated not only that monopoly patents that did not serve the public good were contrary to law and void, but also that the courts rather than the king had the final say on what the public good was in specific cases. This entailed, at least in theory, imposing some restrictions on the scope of royal prerogative to grant monopolies.

It is important to notice, however, that this attempt to strengthen common law jurisdiction did not constitute any move in the direction of patent rights. Though the turn to common law did carry with it the traditional ideological baggage of protecting “English rights and liberties,” in this context these rights and liberties were understood as the rights to be free from

jurisdiction as the supreme examiner of the legality and validity of monopolies. These limitations on the scope of royal prerogative were commensurate with earlier common law decisions, but were not unequivocally followed either as a matter of official royal position or as matter of practice.

¹⁰³ Coke explained in his *Institutes* that the penalties were aimed at “Privy Council Star Chamber, Chancery Exchequer Camber and the like” and regarding delays after judgment not through regular common law appeal procedures (Writ of Error) even against common law judges. Coke, *supra* note 83, at 183. Members of the House of Lords expressed several times concern regarding the possibility of penalties incurred by members of the Privy Council in case of an order to stay common law procedures. See also: Kyle, *supra* note 61, at 215. Nevertheless the statute was enacted with the version of section IV that provided for such penalties.

the injurious effects of abusive monopolies. The other half of the equation—lawful patent grants that were within the scope of the exception—remained entirely a matter of royal prerogative and ad-hoc discretion.¹⁰⁴

b. The Statute's Limitations on Patents for Invention

The extent to which the Statute of Monopolies was merely a reiteration of existing common law and political discourse about patents for invention is most evident in section VI that dealt specifically with this subset of grants. The section created an exemption for invention patents subject to the following conditions:

“...that any declaration before mentioned shall not extend to any letters patents and graunts of privilege for the tearme of fowerteen yeares or under, hereafter to be made of the sole working or making of any manner of new

¹⁰⁴ Even some of the more sophisticated versions of the history of English patents sometimes impute some significance to the Statute of Monopolies as the beginning of a move toward the modern concept of patents rights. Mossoff, for example, seems quite aware of the fact that the statute was not “a radical break with past policies.” Nonetheless he says that “the Statute of Monopolies represents the first definitive step toward the shift away from royal prerogative and privileges to common law and legal rights,” and even that the statute “transformed that natural right into a legal right i.e. a civil right adjudicated in civil society.” Adam Mossoff, *Rethinking the Development of Patents: An Intellectual History 1550-1800*, 52 *Hastings L. J.* 1255, 1272-1273, 1300 (2001). This argument even in its moderate form seems erroneous, inasmuch as it refers to legal rights in the modern sense. The only relative general innovation of the statute was its attempt to safeguard common law jurisdiction. As to the understanding of patents for invention and the requirements for a valid exercise of the prerogative in their grant, the statute involved no innovation except for the strict fourteen years cap on patents length. None of these innovations implied in any way a move toward a concept of patent rights. Common law jurisdiction, at this point, was conceived by its proponents as the shield of the people against abusive grants rather than a guarantee of patent rights to anyone. The statute, while attempting to shrink the scope of royal prerogative to grant patents, remained completely rooted in the concept of patents as particularistic discretionary grants designed to promote the introduction of a trade to England.

manufactures within this Realme, to the true and first inventor and inventors of such manufactures, which others at the tyme of makinge such letters patents and graunts shall not use, soe as alsoe they be not contrary to the lawe nor mischievous to the State, by raising prices of commodities at home, or hurt of trade, or generallie inconvenient.’¹⁰⁵

The fact that the statute’s exemption of patents for invention closely followed the traditional concept of such patents is apparent. Coke’s famous enumeration of the conditions of the statute for a valid patent for invention made it even more apparent.¹⁰⁶ According to Coke there were seven such conditions:

1. The patent must be for the term of fourteen years or under. Fourteen years was the maximum term and the exact length was discretionary in each grant. Coke thought that the fourteen years cap was too long and argued that a more appropriate time would have been seven years, the term for the completion of one apprenticeship period with the patentee.¹⁰⁷
2. The grantee must be “the first and true inventor.” Coke did not elaborate this term, but there is no reason to assume that either the statute or Coke’s interpretation deviated from the common meaning of the term “invention” in the administrative, political and common law discourse of the time. As explained, the term invention referred mainly to the introduction of a new trade, while technological discovery was only a background ingredient. In other words, the “first and true inventor” meant here the first person to introduce in practice a certain economic trade.
3. The patent must be for “such manufacture which any other at the making of such letters patents did not use”.

¹⁰⁵ 21 James I cap. 3, Sec. VI.

¹⁰⁶ Coke, *supra* note 83, at 184. For a more detailed elaboration of Coke’s commentary on the statute see: Walterscheid (pt. 2), *supra* note 3, at 876-880.

¹⁰⁷ Coke, *supra* note 83, at 184. Notice that the fourteen years period is a cap rather than a standard term. In other words the King remained free to set the specific term of the patent as long as it did not exceed fourteen years. As explained below it was only with the inertia of practice and administrative disinterest that standardized patent entitlements started to appear.

4. The privilege “must not be contrary to law”. Here Coke cited *Bircot’s* case and the rule against patents for mere improvements as an example of a privilege which is contrary to law.
5. The patent must not be “mischievous to the State” by raising the prices of commodities. Here Coke explained that regarding “every such new manufacture that deserves a privilege, there must be *urgens necessitas et evidens utilitas*”.
6. The patent must not be “to the hurt of trade”.
7. The patent must not be “generally inconvenient”. Coke’s example of inconveniency was the case of a fulling mill that could replace “labors of fourscore men, who got their living by it.” Despite the innovation, it was ordered in that case the work would be done manually, “for it was holden inconvenient to turn so many labouring man to idleness.”¹⁰⁸

All of these conditions, with the exception of the fourteen years cap, were reiteration of existing precedents from the courts, the Privy Council and the political debate. None of them deviated from the two fundamental characteristics of the early patent grants.

The Statute of Monopolies did not immediately become a general binding norm strictly followed in practice. During the tumultuous seventeenth century many practices that did not conform to the statute lingered or reappeared. Still with time the statute did become the norm. It also gradually came to be regarded as setting the basic legal framework of invention patent grants. This framework, as we saw, was deeply rooted in the early English concept of patents. The main innovation of the Statute of Monopolies was in joining the general trend of the common law of creating formal restrictions, enforceable by a separate institution, on the scope of royal prerogative in the field of patent grants.

This development is illustrated in fig.2 and fig.3. As shown in fig. 2 the early grant practice was based on a plenary discretion model. Under this framework the would-be patentee would petition the king (or his agents) for specific privileges. Other interests involved could try to convince the king to

¹⁰⁸ Coke was referring to a statute that ordered manual milling. 7 Edw. VI, c.8. MacLeod concludes that “where no statute stood in the way, it was left to the discretion of the Privy Council to determine ‘inconveniency’.” MacLeod, *supra* note 3, at 19.

refrain from granting or to revoke a grant. The king had a plenary broad discretion to weigh the interests and policies involved and to decide whether the public good justified a patent grant and what were the adequate the specific terms of the grant.

The new framework created by the early common law of patents and the Statute of Monopolies introduced one significant change. As seen in fig. 3, these developments transformed the previously plenary royal discretion into a discretion that had to be exercised within formally defined boundaries. This development expropriated the exclusive power to determine what would serve the public good from royal hands and created an additional “external” route for reviewing patent grants. The common law and the statute defined a set of criteria for a valid exercise of the grant power. The most significant of these criteria were: a grant to the first inventor; novelty; and a maximum duration of fourteen years. They created an absolute presumption that any grant that did not meet these criteria was by definition a “bad monopoly” contrary to the public good. They also created an institutional power (common law courts) for enforcing this presumption.

However, within the “internal” zone of potentially “good monopolies,” namely those cases that satisfied the formal criteria, the old model still applied. In this zone it was still a matter of royal discretion to consider specific petitions and opposing interests, to weigh the public good, and to decide whether to grant and under what terms. Even the new fourteen years duration requirement was a maximum cap rather than a uniform term for all grants.

This was an important transformation of the framework of the early patent grants. Instead of a plenary discretion concentrated in the hands of one institutional power there appeared a two-tier system which defined general uniform criteria for a valid patent and a discretionary grant power that could be exercised only within these boundaries. It is just as significant, however, that neither the Statute of Monopolies nor the early common law changed other aspects of the traditional framework of patents for invention. On the contrary, they incorporated and restated the traditional understanding of invention patents as discretionary case-specific exclusive privileges for exercising a new trade. The first cracks in this conceptual scheme would start to appear gradually only during the eighteenth century.

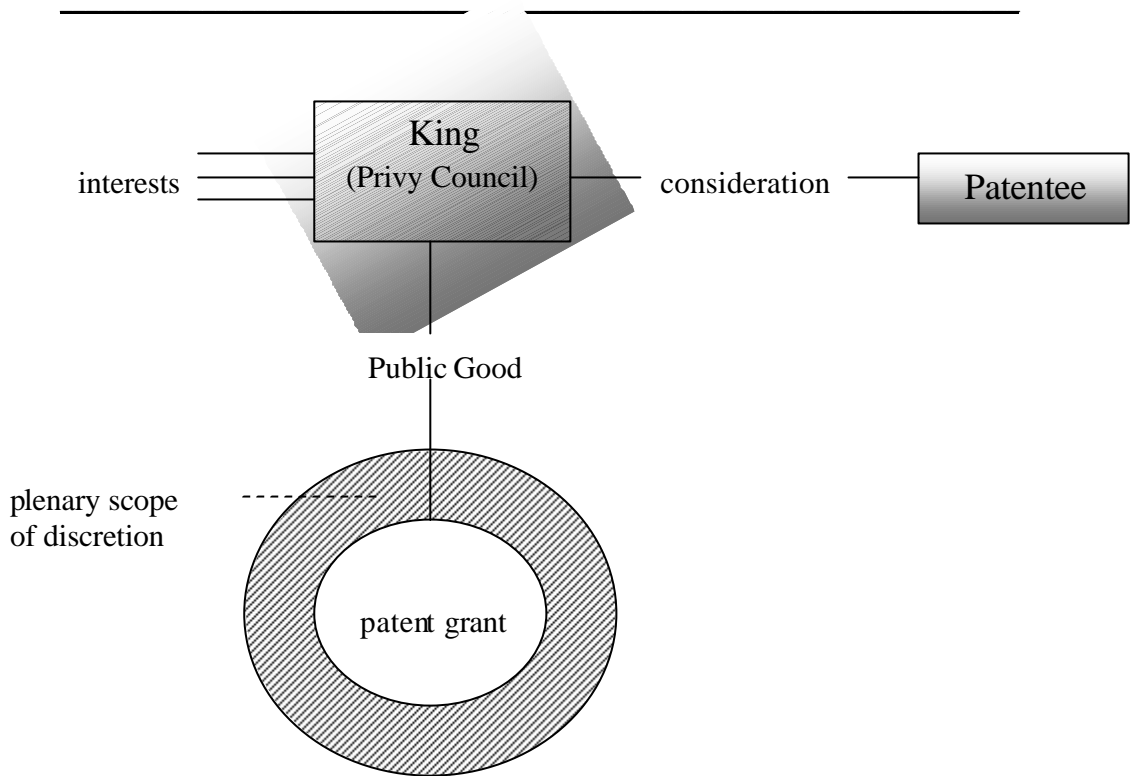


Fig. 2 Early English Patent Grants

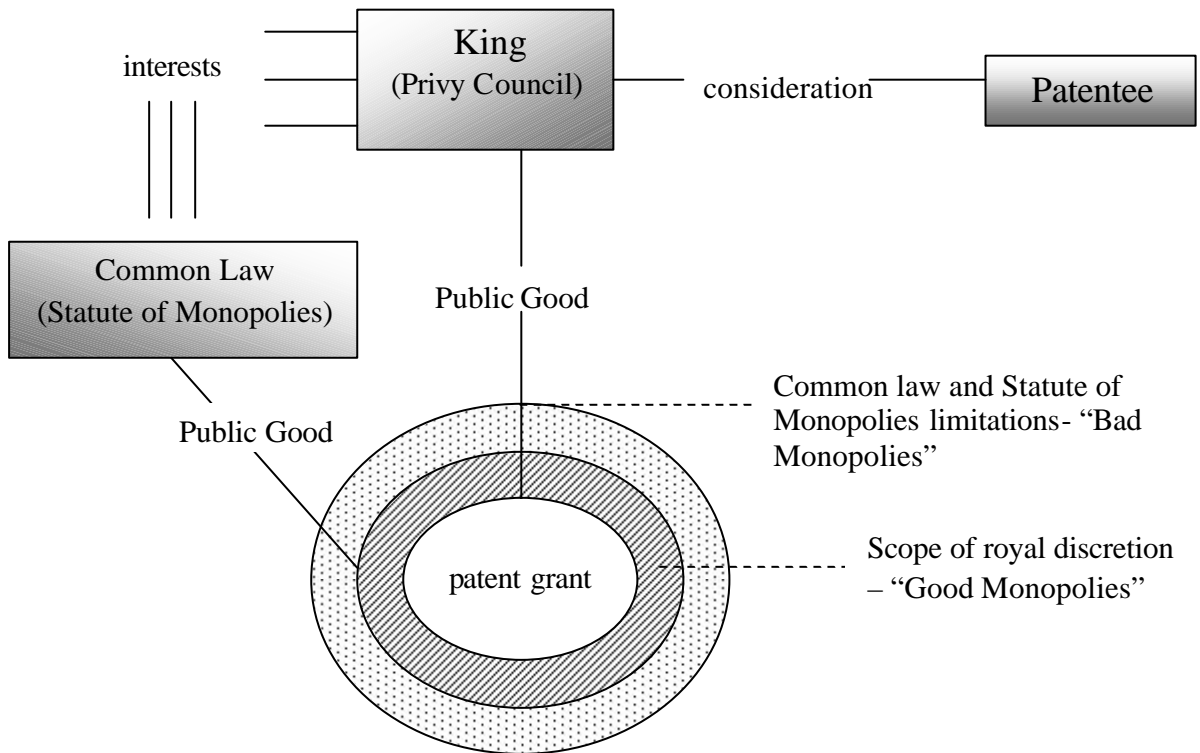


Fig. 3 Patents under the Common Law and the Statute of Monopolies

C. Patents for Invention in the late Seventeenth and the Eighteenth Century

After the enactment of the Statute of Monopolies the final major appearance of the monopoly question as a significant political issue was during the reign of Charles I. A resurgence of “abusive” monopolies, some overtly at odds with the statute and others taking advantage of its exceptions and loopholes, led to a furious parliamentary attack. Monopolies became one of the contested issues in the conflict that eventually led to a constitutional crisis and to the Civil War.¹⁰⁹ Patents survived the Commonwealth and the Protectorate¹¹⁰ but since the Restoration onward they were marked by a gradually declining importance. An extensive use of monopoly patents became politically dangerous and with time also fell out of fashion as a major governmental policy tool. This entailed a growing disinterest of government in the remaining patent grants, among which patents for invention were the most dominant group.

The declining importance of monopoly patent grants involved, however, no immediate change in either the conceptual framework of invention patents or relevant legal doctrines. Patents remained discretionary measures of royal prerogative even when in practice they were often granted upon little investigation or involvement of the royal officials in charge. The second characteristic of early patents- their focus on the introduction of a trade or industry- began to be transformed in the early eighteenth century. By that time patents became mainly the domain of inventors in the modern sense and native entrepreneurs seeking protection for technological innovations.

For a long period invention patents were characterized by a widening gap between the changing actual social practices and concepts implicit in them and the formal law and bureaucratic procedures that remained unchanged. Only in the second half of the eighteenth century did the social changes finally begin to invade legal doctrine. The most dramatic change occurred in the legal doctrines that reflected and created the traditional concept of the subject matter of patent grants as new trades. In a series of court decisions legal doctrine was reshaped and a new conceptual model of the “patent deal” was wrought. The “consideration” given by the patentee and the object of legal protection gradually came to be understood as inventions

¹⁰⁹ Fox, *supra* note 3, at 127-145.

¹¹⁰ They were also continued to be granted during this period. See: Rhys Jenkins, *The Protection of Inventions during the Commonwealth and Protectorate*, in *LINKS IN THE HISTORY OF ENGINEERING AND TECHNOLOGY FROM TUDOR TIMES: THE COLLECTED PAPERS OF RHYES JENKINS* 233 (1936).

in the modern sense, namely information about technological innovation. By the end of the century this major transformation already occurred, although it left in its wake ambiguities and open conceptual textures with which jurists had yet to grapple.

The character of patents as case-specific discretionary policy tools was slower to change. Here ambiguity entailed by the gap between actual practices and formal law as well as administrative procedures endured longer. Late eighteenth century formal legal doctrine had undergone no change at all in this respect. The fundamental framework was still that of the early common law and of the Statute of Monopolies. The actual social practices of patent grants and public attitudes remained obscure. For the most part patents that included standard entitlements were granted on demand to any applicant who met a uniform set of procedural requirements. The seeds of the modern concept of “patent rights” were, to some degree, implicit in these administrative practices. Moreover, echoes of this concept started to appear in the rhetoric of some. Nevertheless much of the traditional prerogative concept of patents lingered on well into the nineteenth century, both in formal legal thought and in some aspects of the bureaucratic practices.

1. The Declining Importance of Patent for Monopolies

The story of patent grants after the restoration is one of gradual decline in their significance as major tools for dispensing royal policies and of a resultant growing disinterest in them on the part of government.¹¹¹ The demise in the importance of patents was mainly due to a political climate that made an extensive use of them to achieve traditional royal goals dangerous. A related factor was a changing understanding and practice of the legitimate channels for governmental action. In several important fields patents were no longer a central policy instrument.

As mentioned before rents paid by patentees were probably not a major revenue raising source to begin with.¹¹² In the late seventeenth century it became even clearer that patents’ role as direct revenue producing mechanisms was negligible. The crown was careful not to issue monopolies designed mainly for the purposes of increasing its income and the profits

¹¹¹ MacLeod, *supra* note 3, at 20-39.

¹¹² See: *supra*, text accompanying note 16.

derived from rents paid by patentees were not significant.¹¹³ If anything, considerations of royal revenue played an opposite part in the grant of patents. While direct revenue production was not an important consideration for granting a patent, the potential of the patent to decrease royal revenue by influencing the excise and customs paid in the course of practicing existing trades was often treated seriously and sometimes led to a determination not to grant.¹¹⁴

Monopoly Patents were also in sharp decline as means of royal patronage and reward to favorites. The use of patents for such purposes and the influence of courtiers and political connections on the grant process did not instantly disappear, but, given the political climate the crown was much more careful in such uses of patents. Consequently patents of this kind were on a constant downward trend.¹¹⁵

Finally, the use of monopoly patents as an instrument for implementing government's industrial policy and for regulation of trade was gradually disappearing. Monopolies went out of fashion as means of regulating industry and were replaced by alternative methods such as Parliamentary legislation and tariffs.¹¹⁶ As for the encouragement of new industries, while the original Elizabethan rationale lingered throughout the seventeenth century and the crown was ready to consider patents for such purposes, there was no systematic and intensive policy of actively seeking the introduction of new industries through the granting of patents.¹¹⁷

There were two main implications to these developments. First, the myriad of forms of industrial and trade monopolies that proliferated during the early seventeenth century were gradually shrinking and fading away, while patents for invention under the framework of the Statute of Monopolies rose to the status of the most common and significant category of patent grants. Second, the demise in the importance of the monopoly patent entailed a growing disinterest on the part of government. This amounted to a general approach of indifference and to a lack of thorough and strict scrutiny of the public benefits and the policy considerations involved with specific invention patent grants. Except for particular cases when some issue deemed to be of

¹¹³ MacLeod, *supra* note 3, at 20-22; Davies, *supra* note 3, at 108-109.

¹¹⁴ MacLeod, *supra* note 3, at 22-24.

¹¹⁵ *Id.*, 24-30.

¹¹⁶ Fox, *supra* note 3, at 157.

¹¹⁷ MacLeod, *supra* note 3, at 31-33.

direct and substantial relevance to a national interest was involved, patents for invention came to be granted as a matter of routine and standard procedure with no specific investigation and discretion involved. In order to understand the exact implications of this development to the concept of patents as a discretionary prerogative-based policy tool one needs to take a closer look at the ex-ante process of granting patents and at the ex-post procedures for reviewing their validity.

2. *The Lingering Prerogative Concept*

The procedure of patent petitions during the seventeenth and eighteenth century was governed by the Clerks Act of 1535.¹¹⁸ The Act's original purpose, stated in its preamble, was to finance unsalaried government clerks. It created a complex and expensive bureaucratic maze that prospective patentees had to cross on their way to their desired patent.¹¹⁹ In later times this procedure received a fair amount of criticism for its obsolescence and the procedural troubles it piled before petitioners.¹²⁰ Still,

¹¹⁸ Henry VIII c. 2.

¹¹⁹ The procedure involved ten separate stages taking place at different offices in London between which the applicant had to transfer the petition by himself, all involving substantial fees and time. See: Coulter, *supra* note 3, at 16-18. MacLeod, *supra* note 3, at 40-41. Patent agents as a distinct and designated professional class appeared only at the second quarter of the nineteenth century, though those who had the means could hire others to take care of some of the bureaucratic errands involved earlier. See: Dirk Van Zyl Smit, 'Professional' Patent Agents and the Development of the English Patent System, 13 International Journal of the Sociology of the Law 79 (1985); Dutton, *supra* note 3, at 86-102. For a description of the tortuous and costly path a petitioner had to endure based on a 1722-23 diary by Samuel Taylor see: A.A. Gomme, *Patent Practice in the 18th Century: The Diary of Samuel Taylor, Threadmaker and Inventor, 1722-23*, 19 J. Pa. Off. Soc. 256 (1937).

¹²⁰ See: Coulter *supra* note 3, at 18-21. Charles Dickens satirized in his writing the clumsy and costly patent procedure and all the bureaucrats involved which "no man in England could get a patent for Indian-rubber band, or an iron-hoop, without feeling all of them. Some of them, over and over again." See: Charles Dickens, *A Poor Man's Tale of Patent*, in THE WORKS OF CHARLES DICKENS 133 (Andrew Land ed. 1900). See also: Charles Dickens, LITTLE DORIT (1967) Chap. 10.

the main pitfalls were procedural. Unless a patent was challenged, only one out of the ten bureaucratic stages involved was more than a mere formality. This was the report of the law officers (either the Attorney General or the Solicitor General) about whether the patent would meet the requirements of the Statute of Monopolies. Even during this stage the system was, for the most part, one of registration rather than examination. In the usual case the law officers did little to scrutinize petitioners' declarations about novelty, utility and the expected social and economic effects of the patent. Gradually this bureaucratic momentum developed into a general governmental approach to the grant of patents that Christine MacLeod called, somewhat misleadingly, "laissez-faire."¹²¹ This meant that in most cases, if the petitioner managed to pass all the procedural and formal obstacles, he received his patent with little investigation or discretion on the part of government officials.

Here it might be tempting to conclude that the English patent system of the late seventeenth and early eighteenth century was characterized by a vast gap between "law in the books" and "law in action." Law in the books- legal doctrine as found in the formal sources of law- was still premised on the traditional concept of patents as case-specific discretionary policy tools under the Statute of Monopolies framework (see fig. 3). However, law in action- the actual social practices and their everyday commonsense understanding by the relevant actors- moved toward the modern framework. In this new framework, that was prevalent in practice, patents became general rights. They created a uniform set of entitlements and they were issued in a standard procedure that involved no case-specific governmental discretion (see: fig. 1).

There is some truth to this law in the books/law in action conclusion. However, it must not be overstated. The assumption that the patent grant practices that consolidated during the late seventeenth century created a patent rights framework similar to the modern one is only partially true. It must be mitigated by taking into account the entire structure of the system of granting a patent and reviewing its validity. This entire structure included background norms and institutional practices that came into action in only a

¹²¹ MacLeod, *supra* note 3, at 47. Walterscheid follows MacLeod in using the term. Walterscheid (pt. 4), *supra* note 3, at 88. The term *laissez-faire* is misleading because patents constituted, then as today, active involvement on the part of the state in market conditions. The reference simply points to the fact that in the common case government officials did little investigation and hardly weighed any policy considerations before they authorized such state involvement.

fraction of the cases, and yet played an important role in defining the general category of patents for invention.

It seems indisputable that since the late seventeenth century invention patents were often granted with little substantive investigation or consideration.¹²² This was usually the case when no specific important state interest, such as the revenue or the military, was deemed to be directly implicated. However, when it appeared to relevant governmental officials that such interests were involved they tended to be much more engaged in examining patent petitions, scrutinizing the social benefits offered and drawing the grant's contours carefully.¹²³

More importantly, the passive approach dominated only as long as no interested party initiated objection to a particular patent grant. When an objection did occur, it usually prompted the law officers to demand more information and conduct a more thorough investigation.¹²⁴ Furthermore, objections either ex-ante prior to the grant or ex-post after it was complete, often resulted in a review process in the Privy Council. Such procedures had all the traditional characteristics of the concept of patents as case-specific policy decisions. In fact, the default attitude of initial passivity was often explicitly justified on the ground of the always-present option of turning to the Privy Council if it turned out that the patent was contrary to law or

¹²² There are difficulties in assessing the exact frequency and intensity of official investigation and examination mainly due to lack of empirical information. An important factor in that regard is that usually no reasons at all were provided upon rejection of a patent application. See: MacLeod, *supra* note 3, at 42; Walterscheid (pt. 4), *supra* note 3, at 87. The degree of scrutiny of patent application also varied somewhat according to the persons who occupied the relevant legal positions during different periods. See: MacLeod, *supra* note 3, at 44-45.

¹²³ MacLeod explains that "in those areas where its interests were directly involved, the crown was quite unscrupulous in its administration of patents," and that naval and military supplies "remained an area in which the usually laissez-faire attitudes of eighteenth century administration regarding patents were compromised." MacLeod, *supra* note 3, at 36, 37. See in general for such areas of special attention: *Id.*, at 34-38.

¹²⁴ See: *Id.*, at 45-47.

“inconvenient.”¹²⁵ Thus the usual lack of scrutiny in the grant process and the strict discretionary review by the Privy Council in particular cases were not opposite trends, but rather two parts of a whole. To a large extent, the whole purpose of revocation clauses, whose incorporation in grants continued, and of Privy Council jurisdiction was to enable little scrutiny as the default. It also allowed recourse to the traditional discretionary policy-based process whenever the need arose.

When patents were subjected to review in the Privy Council, either on prior objection by an interested party or in revocation proceedings, the process was much closer to the traditional case-specific policy calculus and was not limited to “examination” of general uniform requirements of patentability. Privy Council proceedings kept their character as a public forum where interested parties argued and tried to convince the council whether a particular patent was beneficial to the public and lawful or not. In this process arguments about novelty and priority of invention were indiscriminately used alongside arguments about specific social benefits and harmful effects associated with an invention.¹²⁶

The net effect was a subtler law-in-the-books/law-in-action character of the patent system. Formal doctrine and the formal procedural framework governing patents did not change. As far as formal law was concerned no major change in patent law that affected the English concept of patents as discretionary policy tools occurred until the nineteenth century. The seeds of the transformation of patents from particularistic privileges into standard rights were sown in a kind of a (salutary?) neglect. The actual practice of patent grants moved an inch by an inch toward standardization. This process was neither consciously planned nor centrally dictated. It was, at least at the beginning, mainly an outcome of the growing royal disinterest and the decline of monopoly grants. The patent-rights framework gradually grew out of practice, well before legal thought or doctrine adopted it.

Nevertheless, for a long time practice itself remained complex and ambiguous. While statistically most patents were granted with little objection, investigation or deliberation, the cases that did trigger such deliberation preserved much of the traditional framework alive. Privy Council proceedings, which were prompted by interested parties, constituted the main

¹²⁵ In 1663, for example, Lord Treasurer Southampton supported his recommendation of Garil’s patent by saying that “in case any unseen abuse be found out” it could be revoked by the council. *Id.*, at 47.

¹²⁶ See *supra* Section A(3)(c).

institutional site where the actual practice of patent grants remained rooted in the discretionary privilege concept. As long as those proceedings remained viable the traditional discretionary concept of patents also retained some of its vitality.

Is it possible to trace a clear moment in time when this last bastion of the traditional scheme of patent grants finally gave way? Most historical accounts follow E. Wyndham Hulme in pointing to one dramatic moment in 1753 in which “a reconsideration, from a constitutional standpoint, of the Council’s jurisdiction” occurred, leading the Privy Council to “divest itself of its functions.”¹²⁷ It is not entirely clear, however, what Hulme meant by writing that the 1753 incident led to a constitutional crisis and to a divestment of the Privy Council powers in the field of patents. Hulme’s own account details later Privy Council patent proceedings.¹²⁸ It seems that such proceedings persisted at least up to the end of the eighteenth century and that

¹²⁷ Hulme “Privy Council Law,” *supra* note 3, at 194. The dispute that led to the reconsideration according to Hume was about Dr. James’s patent for fever powder. According to this version, parallel proceedings in the Council and the courts led to a petition for ordering the Council’s clerk to testify in the trial, which in turn triggered the reconsideration of the Council’s jurisdiction. Mossoff provides a clear summary of this incident. Mossoff, *supra* note 104, at 1285-1286. Mossoff follows Hulme’s narrative of a dramatic moment in which “the Privy Council relinquished to the law courts jurisdiction over determining the validity of patents for invention. *Id.*, at 1286. So does MacLeod. See: MacLeod, *supra* note 3, at 59-60. See also: 11 Holdsworth, *supra* note 36, at 426-427.

¹²⁸ See: Hulme “Privy Council Law,” *supra* note 3, at 191-193. The answer may be found in Hulme’s explanation that after 1754 the Council limited itself “strictly to the performance of duties imposed by the defeasance clause in Letters Patent. Its action is practically directed to compelling patentees to take their common law remedy under the threat of revocation in case of refusal.” *Id.*, at 193-194. A defeasance clause was what I referred to as a revocation clause. See: *supra*, text accompanying notes 34-37. Again it is not entirely clear what Hulme meant. However, if the argument is about a division of work between the courts and the council- the former dealing with the “legal” patent requirement and the latter exercising its jurisdiction to revoke “inconvenient” patents, than it is plain to see that as long as such proceedings in the council survived much of the discretionary flavor of patents persisted. It was exactly the revocation authority on the basis of the open textured “inconveniency” ground that manifested most strongly the traditional character of patents as discretionary privileges.

their disappearance was by way of gradual dissolution rather than a dramatic crisis.¹²⁹

As late as 1847, in one of the earliest patent law treatises W.M. Hindmarch included a section devoted to “the Revocation of a Patent by the Queen or the Privy Council.”¹³⁰ Hindmarch described such proceedings in terms that corresponded to the traditional privilege concept: “The grant of a patent is a matter of grace and favour and therefore... the Crown may annex any conditions it pleases to the grant... with the view of enabling the Crown to determine any illegal grant which may be unadvisedly made, without allowing the public to be put to the trouble or cost of resisting the unlawful patent.”¹³¹ By 1847, however, this was already a relic from the past with little practical significance. Hindmarch concluded that “There is no instance in modern times of the determination of a patent under this proviso, but there can be no doubt that the power it confers could be exercised if a case should arise calling for such an extraordinary interference of the Crown for the protection of the public.”¹³²

¹²⁹ The last Privy Council revocation application found by Hulme (who searched the records up to 1810) and Davies took place in 1794. Davies reports that the last record of actual revocation by the council is from 1779. See: Hulme “Privy Council Law,” *supra* note 3, at 193.; Davies, *supra* note 3, at 103. As mentioned before, the practice of incorporating in the patent grants revocation clauses empowering the Privy Council persisted up to 1902. See: *supra*, note 35.

¹³⁰ Hindmarch, *supra* note 80, at 431. See also: Godson *supra* note 80, at 49.

¹³¹ Hindmarch, *supra* note 80, at 431.

¹³² *Id.*, at 432. Even in this later period some discretionary Privy Council power remained operable and relevant to the practices of patents, albeit confined to a much narrower zone. In 1835 the Act to Amend the Law Touching Letters Patent for Invention, 5 & 6 Wm. IV c. 83 (1835), created a new power to the Privy Council to extend the duration of patents beyond the fourteen years term. Looking backward from 1883 Thomas Terrell reported that “at first an impression gained around that the Privy Council were to put themselves in the position of Parliament and not in that of a court of law in considering the claims of applicants who appeared before them; that they were to weigh the claims of the public interest in the balance as against the inventor.” THOMAS TERRELL, LETTERS PATENT FOR INVENTIONS 124 (1884). This approach was moderated in a series of decisions in which the council decided that it would grant extensions even in some cases where the

The evidence regarding the decline of Privy Council jurisdiction is sketchy at the moment, and it will take a thorough research of the records to reconstruct the exact process. Even in the absence of such data, however, two things seem clear. First, the relations between the Privy Council and the common law courts were more complex than usually acknowledged. Probably under the influence of the narrative of common law struggle against the prerogative, there is a tendency to describe the interaction between the Privy Council and the courts in the field of patents as a continuous conflict that ended only when the council finally submitted.¹³³ Even on the basis of current sparse evidence, this conflict story seems too one-dimensional. It does not capture well a complex set of relations that spanned over two hundred years. While cases of conflict from the seventeenth century when the council tried to stay court proceedings (contrary to the Statute of Monopolies) are known,¹³⁴ there is also much evidence of the council referring parties to

legislature would not. See e.g.: Soames's Patent, 1 Web P.C. 729, 733-734 (1843). Even under this more lenient approach, however, the prevalent view was as put by Lord Brougham that "they [the Privy Council] here represent the Legislature and that they are invested with somewhat similar powers of discretion to those exercised formerly by the whole three branches of parliament." Morgan's Patent, 1 Web. P. C. 737, 739 (1843). The reports of extension proceedings convey the discretionary nature of the decisions. Parties and the decisions themselves often argue about the specific public benefits or harms created by the invention, the effects of the grant on the trade, the level of monopoly profits by patentee, the usefulness of the invention and specific equities of the case. For early representative examples see: Extension of WhiteHouse's Patent, 1 Web. P. C. 473 (1838) Downton's Patent, 1 Web. P. C. 565 (1839). In other words, the extension arrangement preserved the traditional discretionary power of the Privy Council that was disappearing from the core of patent law, but limited it to the smaller and much more peripheral zone of extensions.

¹³³ See: Mossoff, *supra* note 104, at 1277-1287. Mossoff's description follows the conflict narrative though he does mention that there were a few cases in which the council referred cases to the common law courts.

¹³⁴ See for example: A 1626 Privy Council stay for common law patent proceedings described by Walterscheid (pt. 3), *supra* note 3, at 774. In 1624 Glanville remarked that "heretofore when a man would speak against a patent of monopoly, it must be before a council table and there have a perpetual emparlance and could not have the trial of it by common law." Cited in Read Foster, *supra* note 37, at 79, note 7. Glanville was explaining the explicit protection of a common law action in the Statute of Monopolies. Further

try their claims in the courts of law.¹³⁵ Thus, alongside conflict there seem to have been coexistence and even some symbiosis between the two institutions.

Second, it does not appear that the Privy Council's jurisdiction over patent grants and the discretionary nature of the patent grant that it preserved had ended abruptly in the middle of the eighteenth century. Rather it seems that there was a gradual decline that lasted into the nineteenth century accompanied by a long period of ambiguity. In this fossilization process Privy Council proceedings slowly lost their practical and semantic importance in the patent system. By the mid-nineteenth century all that was left were hollow shells that were still referred to by the legal treatises.

3. The Transformation of the Concept of Invention

The character of patents as discretionary case-specific policy instruments gradually eroded during the eighteenth century. Yet the relevant formal framework did not change and bureaucratic practices remained ambiguous and retained some of the traditional elements. In contrast, the concept of invention, as well as the formal doctrines and procedures that reflected and created that concept, had undergone a much more complete and clear transformation during the same period. The original understanding of invention as the introduction of a new trade faded away and was replaced by the emerging modern concept of invention as technological discoveries and improvements. This conceptual transformation was first manifested in the administrative practice of the patent grant. Only later- in the second half of the eighteenth century- it brought about a major change in the structure of formal patent doctrine.

a. The Rise of Technological Innovation

The eighteenth century English economy was very different from that of the early seventeenth century. As England closed the gap and began to

indication of institutional conflict is the explicit penalties created by the statute to any person who "cause or procure any action at the common law grounded upon this statute to be stayed or delayed before judgment." See: *supra* text accompanying note 103.

¹³⁵ See: Hulme "Privy Council Law," *supra* note 3, at 72-73.

surpass the degree of economic development, sophistication and strength of continental countries, the phenomenon of importation of trades declined in frequency and in significance. During the early eighteenth century a few of the once-traditional patents to foreign immigrating craftsmen were still granted. But in 1730 Attorney General Yorke in his report on a patent application of this brand remarked: “it appears to me that patents of this kind for the sole use of manufacture newly brought into England and never before made here have formerly passed.”¹³⁶ The lead of invention passed to different sectors. Instead of immigrant tradesmen and those with ties in the court, patentees were increasingly local entrepreneurs of different kinds, from small manufacturers innovating in their field to amateur inventors.¹³⁷

At the same time the character of innovation was changing. Innovation became less and less the introduction of an entire industry or a branch of it and more a matter of particular technological improvements of processes, machines and products within existing industries.¹³⁸ The aspect of technological discovery and improvement, that always existed of course, was gradually advancing to the foreground of the practice and concept of invention. Eventually it replaced the traditional notion of the introduction of a trade as the essence of invention.

This was not just a matter of changing modes of economic activity and patterns of innovation. Social concepts and ideologies about innovation were also changing. Technological experimentation and development rather than the introduction of non-existing economic trades gradually took their place as the engines of progress in eighteenth century thinking.¹³⁹ In practice patents that covered entire trades or business initiatives that had little to do with technological innovations were still granted early in the eighteenth

¹³⁶ Cited in MacLeod, *supra* note 3, at 82. See also: Walterscheid (pt.4), *supra* note 3, at 88.

¹³⁷ MacLeod supplies a thorough analysis of the of eighteenth century patentees according to occupation, industry relevant to the invention and geographical location. The professional inventor- though he started to appear- was mainly a phenomenon of the nineteenth century. MacLeod, *supra* note 3, at ; Dutton, *supra* note 3, at .112-116

¹³⁸ See: MacLeod, *supra* note 3, at 54.

¹³⁹ See generally: TECHNOLOGICAL REVOLUTION IN EUROPE: HISTORICAL PERSPECTIVES (Maxine Berg & Kristine Bruland eds. 1998); ROBERT K. MERTON, SCIENCE, TECHNOLOGY AND SOCIETY IN SEVENTEENTH CENTURY ENGLAND (1970).

century. However, by the second half of the century, such patents tended to disappear. In a gradual process the concept of “invention” lost its old meaning and connotations and assumed the new ones with which we are familiar today.

Thus it is not surprising that when changing practice and consciousness were eventually reflected in formal legal doctrine the first victim was the traditional common law rule against patents for mere improvements. As explained, under the early practice and concept of invention the rule against mere improvements functioned as a rational legal construct for regulating the permissible boundaries of patent grants.¹⁴⁰ It was used in seventeenth and early eighteenth century cases.¹⁴¹ However, when its social environment underwent a fundamental change the rule lost the context that supported its meaningfulness. In a society where “mere” technological improvement came to dominate the practice of invention and to constitute the essence of the concept, the rule was bound to be regarded as an incoherent confusion.

Thus when the opportunity presented itself in the 1776 case of *Morris v. Bramson*¹⁴² Mansfield could perform a doctrinal revolution in patent law by simply dismissing the more than a century old rule against patents for improvements as unintelligible. If it were taken seriously, Mansfield explained, it “would go to repeal almost every patent that was ever granted.”¹⁴³ To a late eighteenth century observer Mansfield’s observation was already self-evident.¹⁴⁴ The death of the rule against improvements was

¹⁴⁰ See *supra* Section I(B)(1)(c).

¹⁴¹ MacLeod describes two unreported pre-1750 cases that turned around the issue of improvement vs. invention. The one is Dwight’s case (1693-1698) and the other is Stanyforth’s case (1741). MacLeod, *supra* note 3, at 64-68.

¹⁴² The case is also sometimes referred to as *Morris v. Branson*. The case is unreported. It is known mainly from Justice Buller’s reference to it in *Boulton & Watt v. Bull*, 2 H. Bl. 463, 489, 126 Eng. Rep. 651, 664 (C.P. 1795). The succinct report of the case in 1 Carp. P.C. 30 is based on that reference.

¹⁴³ 2 H. Bl. 489, 126 Eng. Rep. 664.

¹⁴⁴ In 1795 Justice Buller in *Boulton & Watt v. Bull* explained the transformation of the traditional rule of *Branson* through a narrative of progress from an underdeveloped past in which the dynamic of science and technology was ill-understood into a more enlightened present: “in truth arts and sciences at that period were at so low an ebb, in comparison with that

an important new stronghold in legal doctrine of the new concept of invention.¹⁴⁵

b. The New “Patent Deal”: The Rise of the Specification

The second major change in the concept of invention was the rise of patent specification. The specification- that is to say a detailed written account of the technological innovation involved- gradually became a central component of the administrative practice of the patent grant. Subsequently it also became the core of a new legal understanding of the patent deal between the state and the individual patentee. Cases of written disclosures regarding the technological inventions involved appeared occasionally in some

point to which they have been since then advanced, and the effect and utility of improvement so little known, that I do not think that case ought to preclude the question.” 126 Eng. Rep. 664.

¹⁴⁵ Contrary to the general methodology employed here, the description of the decline of the rule against improvements seems to take a Marxist base/superstructure form. That is to say, according to the account given here changing economic and technological practices determined the changing form of legal doctrine. I think that with one important reservation, whatever one thinks of such modes of historical accounts, an explanation that present law as mainly reactive to and reflective of social realities rather than vice-versa simply captures better this specific development in the concept of invention. It seems quite clear that by the time that any formal change in law occurred, that is the time of *Morris v. Branson*, the social practice and concept of invention changed to such an extent that the old doctrine lost all coherence. Thus Mansfield could simply dismiss it as confused and absurd. By the time that this happened, this aspect of changed legal doctrine had little to contribute to the transformation of social practices that were already quite entrenched and established. The one reservation is that contrary to strict Marxist accounts, the social changes that were eventually reflected in law were not only material changes. Nor did they necessarily flow [in the last analysis] only from economic/technological factors to ideological ones. Changing ideology and social attitudes seem to have changed together and partially independently of economic changes. It is law that in this particular instance seems to have been reactive to both ideological and material developments.

seventeenth century patent grants.¹⁴⁶ This became a common practice, however, only in the early eighteenth century. Nasmith's 1711 patent is usually pointed to as the watershed line.¹⁴⁷ Since 1723 further standardization occurred when clauses that voided the grant in case that specification was not enrolled within a set time became widespread. After 1734 the requirement of enrolment of specification backed-up by the sanction of annulment became the uniform standard. Even then, however, the practice of specification remained obscure and flexible. For a long period there was no clear formal standard regarding the required level of details and precision of the specification, not to mention a consistent application of such a standard. In most cases this left much room for maneuver and manipulation for patentees.¹⁴⁸

There are different explanations of why specification was introduced and on whose initiative. Hulme's version, later supported by Davies was that specification were introduced on the initiative of patentees seeking to make

¹⁴⁶ See: MacLeod, *supra* note 3, at 49. In such cases the disclosure was an outcome of either voluntary undertaking of the patentee or of specific negotiation between the patentee and the crown. One early famous case is Simon Sturtevant who attached to his 1611 patent petition a "treatise on Metallica" accompanied by a promise for a fuller treatise upon reception of the patent. See: Hulme "On the Consideration of the Patent Grant," *supra* note 3, at 315; Klitzke, *supra* note 3, at 647. In 1663 the Privy Council while debating Garil's application for patent for his metal casting method, was presented by interested parties- the Officers of the Mint and Goldsmiths and Wire drawers of London- with the objection that since the invention was not properly disclosed the patent may cover existing trades. The Council responded by ordering Garil to provide full description of his method in order to provide a basis for evaluating the allegation. Garil refused and the patent application was rejected. See: Hulme "Privy Council Patent Law," *supra* note 3, at 65-67; MacLeod, *supra* note 3, at 42. See also: Walterscheid (pt. 3), *supra* note 3, at 783-785 for discussion of patent grants that included descriptions of the invention rather than separate specification.

¹⁴⁷ See: Hulme "On the Consideration of the Patent Grant," *supra* note 3, at 316; Coulter, *supra* note 3, at 15. MacLeod *supra* note 3, at 49. According to MacLeod about 20 percent of the patents granted in this period from 1711 to 1734 included specification. *Id.*

¹⁴⁸ Coulter *supra* note 3 at 15. MacLeod *supra* note 3 at 49-51; John N. Adams & Gwen Averley, *The Patent Specification: The Role of Liardet v. Johnson*, 7 J. Legal Hist. 156, 160 (1986).

their grant more secure and clear for cases of future disputes.¹⁴⁹ MacLeod, while agreeing that “it was certainly not for the purpose of disseminating invention by disclosure” suggested that the specification requirement was actually introduced by the law officers.¹⁵⁰ According to this version the description in the specification was designed to facilitate the passive role taken by the law officers in granting patents. Since in the usual case the patent was granted with little investigation and discretion, the responsibility for determining the validity and breadth of patents was laid mainly on subsequent institutions that came into play in cases of disputes. In MacLeod’s account these were the courts, but as we have seen for most of the century the Privy Council was just as relevant and important. The specification helped shift responsibility to these institutions that dealt with ex-post disputes by providing a basis for their decisions and making it clear, at least ideally, what exactly was patented to begin with.¹⁵¹

Under either of the two available explanations the requirement of disclosure of the invention did not initially appear as part of a coherent reconceptualization of the “patent deal.” Written disclosure was introduced subtly and gradually through the everyday administrative practices of the grant. The initial catalysts were the emerging focus of inventions on technological innovation, the interests and needs of patentees or the concerns of bureaucrats; or, most likely, some mix of all of these. It is hard to say whether the accumulating weight of administrative practices gradually developed out of its own inertia a new ideology of the patent grant “consideration.” In other words, it is not clear to what extent patentees and others started to identify the “consideration” given to the public and the

¹⁴⁹ Hulme “On the Consideration of the Patent Grant,” *supra* note 3, at 317; Davies, *supra* note 3, at 90. Adams and Averley critiqued this view by wondering how is it that so many of the early eighteenth century specification were so vague and evasive- presumably bearing the marks of reluctant patentees- if they were filed for the benefit of patentees on their own initiative. Adams & Averley, *supra* note 148, at 160-161.

¹⁵⁰ MacLeod, *supra* note 3, at 51.

¹⁵¹ Late in the century James Watt subscribed to a similar view, saying that the specification requirement “seems to have been originally intended not so much as to secure the public in the secret of the invention, as to discriminate one inventor’s property from that of the other.” Cited in: Erick Robinson, *James Watt and the Law of Patents*, 13 *Technology and Culture* 115, 125 (1972).

object of patent protection with the information divulged in the specification.¹⁵²

We know, however, that this was exactly the theory that eventually developed in legal doctrine late in the century. The canonical case in this context is Mansfield's 1778 decision in *Liardet v. Johnson*.¹⁵³ Lately some of the glamour of the case was dimmed by the discovery of earlier cases in which Mansfield made references to the new theory of the patent considerations¹⁵⁴ and by doubts raised regarding the revolutionary nature of

¹⁵² This seems to be the argument of Adams & Averley, who conclude from it that *Liardet v. Johnson* was neither revolutionary nor important. It is hard to assess this claim since even if one is convinced by the authors' critique of the view that specification were introduced on the initiative of patentees, it is clear that the critique is irrelevant to MacLeod's explanation. Robinson, on the other hand, says that "when James Watt sought his first patent, he and his friends clearly regarded the specification as a very serious matter, but it is unlikely that they thought that it would have to bear the entire weight of making the invention known to the public." *Id.*, at 118. Watt was one of the more knowledgeable persons in his time regarding patent practice and law. Whether and how soon the specification procedure gave rise in practice to the view that the disclosure of information is the "consideration" given by the patentee remains an open question that requires additional thorough research of the relevant possible sources.

¹⁵³ There were two separate trials, none of which was officially reported. Information on the cases is based mainly on newspaper reports. Reports of the first trial were published in the *Morning Post* and *Daily Advertiser* on February 23 1778, and in the *London Chronicle* and *Daily Advertiser* on February 24 1778. The *Morning Post* report is reproduced fully by Hulme. See: Hulme "On the History of Patent Law," *supra* note 3, at 283-284. Reports of the second trial were published in the *Morning Post*, *Gazeteer* and the *New Daily Advertiser* on July 20 1778. A short summary that misstates the outcome exists in: 1 Carp. P.C. 35. For surveys of the proceedings see: Adams & Averley, *supra* note 315, at 162-165; Walterscheid (pt. 3), *supra* note 3, at 793-79.

¹⁵⁴ The cases, which are not reported, were summarized in Mansfield's notebooks discovered in 1967 in an attic at Scone Palace near Perth- the family home of the Earls of Mansfield. They are: *Yerbury v. Wallace* (1768); *Taylor v. Suckett* (1770); *Horton v. Harvey* (1781). For references to the cases see: John Adams, *Intellectual property cases in Lord Mansfield's court notebooks*, 8 J. Legal Hist. 18 (1987); 1 JAMES OLDHAM, *THE MANSFIELD*

the decision in *Liardet*.¹⁵⁵ Still, it seems that the basic fact remains that sometime during the late eighteenth century a new coherent and explicit theory of the patent grant appeared in legal doctrine for the first time and that Mansfield played a cardinal part in its introduction. By the end of the century it became settled law, the taken for granted basic paradigm of patent jurisprudence.¹⁵⁶

The basic shift occurred in the understanding of the consideration exchanged in the patent “deal” between the patentee and the crown.¹⁵⁷ Under the traditional concept of invention the usual consideration expected of the patentee was an actual introduction of his new invention under the parameters defined in the grant. In the new framework the focus shifted to information. What the patentee was “giving to the public” came to be the disclosure of the abstract information about the technological innovation. In *Liardet* Mansfield deployed this new theory that became the central premises of patent law orthodoxy:

“for the condition of giving encouragement is this: that you must specify upon record your invention in such a way as shall teach an artist, when your term is out, to make it- and to make it as well as you by your directions: for then at the end of the term the public have the benefit

MANUSCRIPTS AND THE GROWTH OF ENGLISH LAW IN THE EIGHTEENTH CENTURY 762 (1992). See in general: Mossof, *supra* note 104, at 1293.

¹⁵⁵ Adams & Averley, *supra* note 148.

¹⁵⁶ See: Walterscheid (pt. 3), *supra* note 3, at 801.

¹⁵⁷ Sometimes the transformation is described as one from conceiving of the patent as a deal between the patentee and the King to perceiving it as a special contract between the patentee and society. Dutton, *supra* note 3, at 75; Waletscheid (pt.3), *supra* note 3 at 793; Mossoff, *supra* note 104, at 1300. It is not clear, however, what exactly is meant by that. It is true that a significant transformation has occurred as to what the “patent deal’s consideration” was understood to be, but as to the “parties” there appears to have been no significant change. Before the rise of the new theory of the patent deal a central ingredient in its concept was that the King is making the deal for the “public good.” After the rise of the new theory, it was still the King who had the discretion to craft the particular deal as to best serve the public interest. In other words under both schemes it was the King who “contracted” with the patentee for the public good, only the conceptualization of the consideration of the deal changed.

of *i*. The inventor have the benefit during the term and the public have the benefit after.”¹⁵⁸

Mansfield’s specification decisions galvanized a new paradigm for understanding patents out of the ambiguities and subtle changes created by earlier decades of administrative practices. By the last decade of the century this new conceptualization of the patent deal as focused on the disclosure of information came to be taken for granted by the courts. In the 1787 *Turner v. Winter* one of the counsels argued confidently in the terms of the new orthodoxy. “[T]he consideration which the patentee gives for his monopoly,” he explained, “is the benefit which the public are to derive from his invention after his patent is expired: and that benefit is secured to them by means of a specification of the invention.”¹⁵⁹ The Judges’ analysis of the specification in their decision adhered to this framework.¹⁶⁰ Similarly in the 1795 *Boulton & Watt v. Bull* Justice Buller declared that “the specification is the price which the patentee is to pay for the monopoly.”¹⁶¹

Patent law was not truly conceived of as regulating entitlements in intellectual resources until the late eighteenth century rise of the new concept of the patent deal that was heavily based on the rising role of the specification. As long as the patent “consideration” was conceptualized in terms of the actual introduction of a new trade or even a new “manufacture,” the subject matter of patents did not come to be the abstract entity we call today the “invention.” Under the traditional concept the patentee’s consideration for his grant- the benefit he gave to the public- was the actual introduction in practice of a new industry. Accordingly the privileges granted to him in the patent grant were understood as referring to this actual economic activity. The patent privilege was the exclusive right to practice the new trade for a limited time.

The new concept of the patent deal changed this scheme and created a new center of gravity for patent law: the “invention” as an incorporeal object of rights. Under this new concept the consideration given by the patentee to the public was the information or the useful “idea.” Accordingly the matching consideration- the entitlements bestowed by the patent grant- came to be thought of as limited exclusive rights to use this information or the

¹⁵⁸ Hulme “On The History of Patent Law,” *supra* note 3, at 285.

¹⁵⁹ 1 T.R. 602, 605, 99 Eng. Rep. 1274, 1276 (K.B. 1787).

¹⁶⁰ *Id.* at 1276-1277.

¹⁶¹ 2 H. Bl. 463, 472, 126 Eng. Rep. 651, 656 (C.P. 1795).

“idea.” In the schemes of jurists this newly constructed intangible entity soon became the postulated object of ownership. Thus, in an important sense the new late eighteenth century concept of invention in patent law was the origin of the later process that was referred to as “the dephysicalization of property.”¹⁶² It was a move, albeit limited in scope at this stage, toward a general conceptualization of ownership that did not rely on physical objects as a central or essential component.

4. The Concept of Patents in Late Eighteenth Century England

The conceptual framework embedded in the doctrines and the administrative practices of patents was in a state of deep ambiguity during the late eighteenth century. The meaning of patents was in flux. Obviously it was much different from that of early seventeenth century patents. Yet the full modern scheme of patents as rights in intangibles was not firmly in place yet. The conceptual area where the transformation was most noticeable was the concept of invention. There, a slow process of change (that crept for more than a century through practice) was reaching culmination and taking over the formal doctrines of patent law. Nevertheless, by the end of the century there were still many open textures in the legal doctrines and concepts that dealt with invention. Jurists were still coming to terms with and working out the implications of the new understanding of invention. On the other front of change, the shift from ad-hoc privileges to patent-rights was even more ambiguous and partial.

a. Invention and Patentability: Boulton & Watt v. Bull

The shift in the concept of invention that consolidated during the late eighteenth century consisted of two main aspects (see: fig.4). First, the focus of the concept of invention moved from introduction of a new trade to technological innovation. Technological innovation, that in earlier times constituted only a background ingredient of the concept of establishing a new trade in the English economy, moved to the foreground. It came to be seen as the essence of inventing. To invent increasingly meant to discover or develop

¹⁶² MORTON J. HORWITZ, *THE TRANSFORMATION OF AMERICAN LAW, 1870-1960: THE CRISIS OF LEGAL ORTHODOXY* 156 (1992); Kenneth J. Vandavelde, *The New Property of the Nineteenth Century: The Development of the Modern Concept of Property*, 29 *Buffalo L. Rev.* 325 (1980).

some new technological innovation. As explained, this transformation occurred through gradual social changes of both economic practice and ideology. These changes were eventually reflected in new doctrinal forms, the most conspicuous of which was the decline of the traditional rule against improvements.¹⁶³

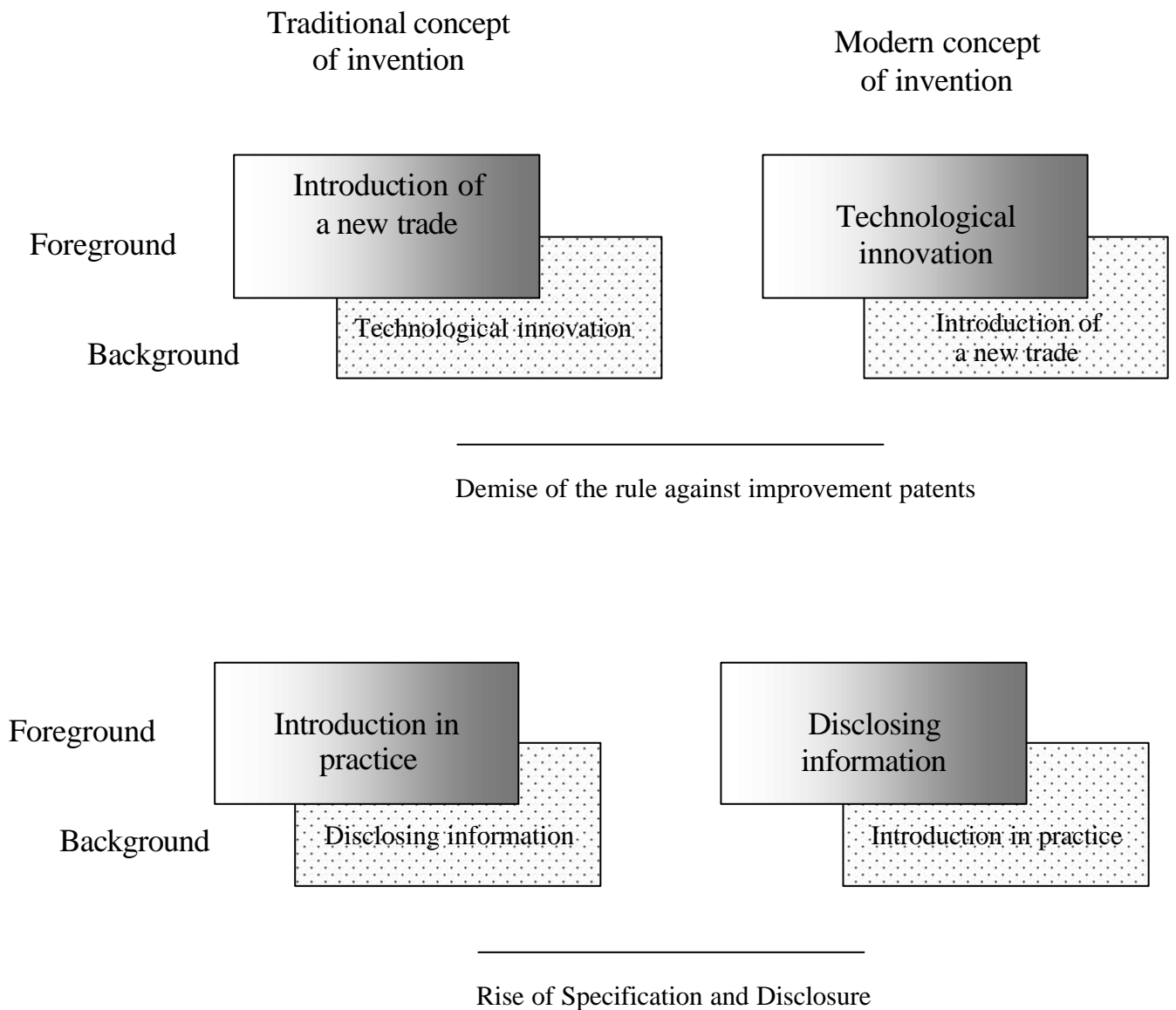


Fig. 4 Changing Concept of Invention

Second, the focal meaning of the activity of inventing shifted from introducing in practice, to discovering and disclosing information. The idea that “to invent” meant to accomplish some actual change in social reality- to do a service, to produce a product of a certain quality or price- moved to the background. The foreground came to be occupied by the understanding of invention as discovering information- sometimes referred to as the “idea” or “knowledge”- and giving this information to the public by disclosure.

This second aspect too involved a gradual process that gathered force slowly through changes of practice and ideology. On the level of the patent grant practice these changes were evident in the gradual fading away of working clauses and specific requirements of quantity and quality; as well as in the standardization of the specification procedure. The doctrinal counterpart of these trends was the rise of the requirement of proper disclosure in the specification and the reconceptualization of the “patent deal.” Patents came to be seen as granting a limited monopoly in the use of an “idea” in return for disclosure of that idea; rather than as monopolies for the exercise of a trade granted in return for the accomplishment of some specifically defined actual economic activity or service.

By the end of the eighteenth century the transformation of the legal concept of invention along these two dimensions was substantial. Nevertheless, loose ends and open textures were left. Some of these loose ends were: remnants of suspicion toward “mere” technological improvements;¹⁶⁴ debates about the exact character and purpose of the specification;¹⁶⁵ and open questions regarding certain details in the legal requirement of novelty.¹⁶⁶ But the most significant open texture left by the

¹⁶⁴ In 1829 the House of Commons appointed a Select Committee to study the patent laws. One of the issues reviewed was the cost of attaining a patent. Surprisingly enough, the proposal that cost would be reduced encountered vigorous opposition. The main argument was that reduction of cost will create a flood of patent applications for small technical improvements made by “workmen.” This fear and its implied distinction between mere technological improvements and “genuine” valuable inventions echoed *Bricot’s* case and the old rule against patents for improvements. See: Coutler *supra* note 3, at 32- 33.

¹⁶⁵ See: Robinson, *supra* note 151, at 118-122; Walterscheid (pt. 3), *supra* note 3, at 797; Dutton *supra* note 3, at 76.

¹⁶⁶ Remnants of the old concept of invention as the introduction of trade in the doctrine of novelty can be traced to the issues of prior publication and patents of importation. The traditional rule that prior publication did not

transformation was the question of the exact definition and scope of patentable inventions. Once the notion of invention was reshaped on the most general level to be seen as innovative technological information, practical and conceptual pressures brought to the surface new questions regarding the exact coverage of this category. Such questions about the object of the patent entitlement were only beginning to be pondered at the end of the eighteenth century.

The open textures of the new concept of invention were most dramatically and conspicuously exposed in the 1795 case of *Boulton & Watt v. Bull*. The case involved all the complexities and obscurities of both

disqualify the novelty of an invention was clearly rooted in the concept of introducing in practice rather than disclosure of information. There is some obscurity in our knowledge regarding when publication came to constitute a bar for novelty. The general view, followed virtually by all writers, is that Mansfield in the 1778 case of *Liardet v. Johnson* replaced the old rule for that of prior publication in England as a bar for novelty. See: 11 Holdsworth, *supra* note 36, at 429; Walterscheid (pt. 3), *supra* note 3, at 849-850, Mossoff, *supra* note 104, at 1308. All of these sources cite Hulme for this proposition. The source of the ambiguity is that Hulme seems to take different positions regarding this issue. In 1897 he indeed explained that *Liardet* constituted the transformation in this respect. See: Hulme "On the Consideration of the Patent Grant," *supra* note 3 at 318. Yet in 1902 he seems to argue that the defendant's argument in *Liardet* according to which publication disqualifies novelty was rejected, and to criticize Mansfield for this inadequacy vis-à-vis the changing concept of the patent consideration. Hulme "On the History of Patent Law," *supra* note 3, at 287. Colier's 1803 treatise is also somewhat obscure on the subject. While he supplies the rationale according to which "if the public be already in the possession of the discovery, the patentee can make no... return or compensation for the patent," he mentions only prior publication by the patentee himself of his own invention as a bar for novelty. Colier, *supra* note 84, at 99. Things are clearer regarding the survival of the rule that inventions practiced and published in foreign countries which are imported into England are considered new. This rule that was formally announced in *Edgeberry v. Stephens*, 91 Eng. Rep. 387 (K.B. 1691) continued to be the norm into the nineteenth century. This norm was obviously rooted in the old concept of invention as the introduction of non-existent trade rather than the new one of discovery and disclosure of new information by an "inventor." Foreign publication became a bar for novelty only in the Patent Law Amendment Act 1852 (15 & 16 Vict. C.83).

technology and law that since then had become the hallmark of patent cases. However, beneath the technicalities the fundamental conceptual dilemmas brought about by the ongoing transformation of patents can be clearly discerned. At the heart of the dispute was a patent granted to Watt for a new and more efficient steam engine. The term of the patent was later extended by a parliamentary act. In 1769 Watt was advised not to describe any particular machinery in his specification, but rather to state the “new principles” he discovered and to do so “as generally as possible” in order to receive broad protection.¹⁶⁷ Following this advice Watt specified his invention as a new method for “lessening the consumption of steam and fuel in fire engines” based on the principle of keeping the cylinder in the same temperature as the steam. He did not describe in detail any particular engine.¹⁶⁸ In doing so, Watt was following a common practice at the time. He was also treading in a zone of considerable uncertainty regarding the applicable legal norms. This got him in troubles later when in his infringement suit against Bull his patent was challenged as invalid.

There were many arguments raised against the patent in *Boulton & Watt* that dealt with the specification of the patent and with the extension statute. At the heart of all arguments, however, were two fundamental questions that went to the root of the concept of invention. The essence of defendant’s argument was that “the word invention, when applied to mechanical subjects, properly signifies something which has been already formed, some manufacture or machine and it is not applicable to mere unorganized principles.”¹⁶⁹ The plaintiff retorted that “[t]he patent is neither for a formed instrument, nor is the specification for a principle unorganized.” Instead the patented invention was for a “new invented method” that was properly specified.¹⁷⁰ This left the court to decide two questions. First, it had to decide whether general principles (as opposed to a particular concrete application of a principle) were patentable. Second, it had to tackle the issue of the patentability of methods as inventions. In fact, these two issues were not always neatly distinguished. In the arguments of counsel and judges they often blended into each other.

¹⁶⁷ Robinson, *supra* note 151, at 120-121.

¹⁶⁸ The specification is reproduced in 126 Eng. Rep. 652.

¹⁶⁹ 126 Eng. Rep. 655.

¹⁷⁰ *Id.* at 658.

The opinions of the four Justices divided and hence the question of the validity of Watt's patent was not decided.¹⁷¹ Nevertheless, the written opinions offer a valuable window for observing the attempts of late eighteenth century leading jurists to come to terms with the changing concept of invention.

Regarding the first question of the patentability of "general principles" it appears, at first blush, that all parties and Justices agreed that general principles could not be patented. Things become more complex and interesting, however, once one focuses on the specific elaborations of the Justices as to their understanding of general principles, as well as their antinomy- patentable inventions. The opinions of Justice Heath and Justice Rooke represent two opposite poles in this respect. Heath, explained his opposition to the patentability of general principles in the following way:

"... whatever machinery may be hereafter invented would be an infringement of the patent, if it be founded on the same principle. If this were so, it would reverse the clearest positions of law respecting patents for machinery, by which it has been always holden, that the organization of a machine may be the subject of a patent, but principles cannot... Therefore the patent for the application of the principle must be as bad as the patent for the principle itself."¹⁷²

Underlying Heath's argument is an anxiety about broadening the scope of the invention and of the monopoly power of the patentee. His distinction between "application of principle" and "organization of a machine" strove to define the invention in narrow terms and on a low level of abstraction, as close as possible to one particular design of a specific machine or device.

Heath's attempt to narrow down the level of abstraction of the patented invention became clear in his analysis of the specification. To the argument of plaintiff that he could not specify all the particular cases to which his new machinery applied Heath responded:

¹⁷¹ According to the report "[t]he court being thus equally divided, no judgment was given." *Id.* at 500, 126 Eng. Rep. 670. The validity of Watt's patent was finally upheld four years later in *Hornblower & Maberly v. Boulton*, 8 T.R. 95, 101 Eng. Rep. 1285, (K.B. 1799).

¹⁷² 126 Eng. Rep. 661.

“The answer seems obvious, that what he cannot specify he has not invented... Indeed it seems impossible to specify a principle, and its application to all cases, which furnishes an argument that it cannot be the subject of a patent.”¹⁷³

The effort to limit the scope of the invention to a stable and concrete form is apparent.

In his opinion Justice Rooke presented a diametrically opposed attitude. He defined non-patentable principles as follows:

“... either the radical elementary truths of a science or those consequential axioms which are founded on radical truths, but which are used as fundamental truths by those who do not find it expedient to have recourse to first principles.”¹⁷⁴

In the case of steam engines, he explained, the general principle was “the natural properties of steam, its expansiveness and condensability.”¹⁷⁵ When Rooke came to define the opposite of a principle- the patentable invention, the difference of his approach from Heath’s came to the surface. Rooke too exposed his conception of the proper scope of the invention in the context of the specification. Answering the argument of insufficient disclosure he wrote:

“Had a drawing or a model been made, and any man copied the improvement, and made a machine in a different form, no doubt this would have been an infringement of the patent. Why? Because the mechanical improvement would have been introduced into the machine, though the form was varied. It followed from thence that the mechanical improvement, and not the form of the machine, is the object of the patent.”¹⁷⁶

Thus, while Heath was struggling to limit the scope of invention, Rooke was motivated by an opposite urge. He conceded that the “radical truths of

¹⁷³ *Id.* at 661.

¹⁷⁴ *Id.* at 659.

¹⁷⁵ *Id.*

¹⁷⁶ *Id.*

science” could not be patented, but he strove to define the invention on a high level of abstraction and in the broadest terms possible. In his account the invention was an abstract and flexible entity called “the mechanical improvement.” This constructed entity persisted and was the same even when the specific “form” of the machine varied. In Rooke’s analysis the inability to specify a particular concrete machine flowed naturally from this broad conception of the invention. The patented subject matter was not any concrete “form” but the more abstract “improvement” which covered many forms.

The debate in *Bull & Watt* over the patentability of general principles was the source of the modern rule against patentability of laws of nature and abstract ideas, but it was also more than that. The decision was the first major rhetorical space where the new conception of the invention was beginning to be pondered, articulated and endowed with specific competing meanings. In this process there were forces pulling in different directions. This basic tension would go on haunting patent law.

Rooke’s effort to inflate the scope of invention echoed a prevailing concern among inventors who tried to secure broad protection and to frustrate evasion of the patent by minor variations. The turn to patenting “principles,” as Watt attempted to do, was motivated by such concerns. Thus in 1784 Aimée Argand wrote to Boulton about his new lamp patent:

“... because the patent was taken upon the principle which may be applied to numberless shapes and forms, whereas giving particular description and drawings would be confining ourselves to these particular forms and enabling others to use the same principle under other forms.”¹⁷⁷

Similarly Boulton suggested that no person should be permitted to take out a patent “for another person invention” even if “he change the names and forms of the parts of Machines invented by others.”¹⁷⁸ These inventors and the jurists sharing their concerns were motivated by the concern of securing a meaningful zone of protection against competitors. When they translated this motivation into the language of legal arguments they constructed a concept of the invention as an abstract, broad and dynamic entity, an intellectual “essence” that covers a myriad of specific “forms.”

¹⁷⁷ Argand to Boulton, July 4 1784, cited in Robinson, *supra note* 151, at 121.

¹⁷⁸ Boulton to Watt, September 19, 1785, cited in *id.* at 122.

On the other hand, Heath's striving to ground the "invention" in a concrete and stable form was motivated by an equally prevalent set of concerns. As one of Bull's lawyers put it:

"The reason seems obvious why this privilege of a monopoly which is to be granted by the Crown should not be granted merely for the Principle or for the first idea which may occur an ingenious mind because if that is the case he is to reserve to himself the sole power of every possible improvement which may be made upon that idea in bringing it forward to perfection in the shape of a complete instrument."¹⁷⁹

This, then, was a diametrically opposed concern, about the effects of an overbroad definition of the invention. Behind the argument one can trace the traditional disdain of broad monopolies. Yet this old concern received a new articulation in terms of technological innovation. The argument was based on a view of technological innovation as a cumulative piecemeal activity. Its main concern was that a broad patent monopoly might restrain subsequent innovation which was had to us and build on existing knowledge.

Hence, the consensus in *Boulton & Watt*, according to which general principles were not patentable, was only a thin crust over a developing debate. The questions of the patentability of principles and the exact meaning of the term would remain hotly contested and debated well into the nineteenth century.¹⁸⁰ The decision in *Boulton* can be pointed at as the starting point of a process of inflating and abstracting the concept of invention in legal discourse. This process was parallel to the construction of the "work" in copyright law.¹⁸¹ It opened up the conceptual space, within which competing notions of the invention were articulated, and it started to

¹⁷⁹ Short Hand Notes of the Argument in the Court of Common Pleas 28th June 1794, cited in *id.* See also: 126 Eng. Rep. 656.

¹⁸⁰ The issue was still debated in England in 1829 when a special committee was hearing evidence regarding reform of the patent system. See Robinson, *supra* note 151, at 122-124. On the obscurities regarding the question of patenting general principles and processes, which lasted into the 1830s see also: Dutton, *supra* note 3, at 72-75; Walterscheid (pt.3), *supra* note 3, at 799, 854-856. As for the American context see: *infra* Chapter 4, sec. B(1)(b).

¹⁸¹ See *infra* Chapter 3, sec. IC(1).

construct the zone within which the unstable concept would oscillate. These were beginnings that were to be further played out in the nineteenth century.

Regarding the second question of the patentability of methods opinions differed more overtly. The technical legal question involved was about the interpretation of the text of the Statute of Monopolies. The statute exempted from its ban on monopolies only “new manufactures,” and hence the debate turned around the issue of whether a method could be considered a “manufacture.” Yet the issue at stake and the arguments deployed went well beyond the textual interpretive question.

Chief Justice Eyre’s analysis would be the one most familiar to the eyes of a modern lawyer. Eyre made a crisp analytical distinction between a principle and a method.¹⁸² He explained that in some cases when there is no new effect, substance or mechanism involved the invention consists of the “new manner of using” or the “process.”¹⁸³ According to Eyre, there was no reason why the “manner of using” in itself could not be an invention, a proper subject matter of a patent. On the level of policy Eyre explained that “[t]he advantage to the public of improvement of this kind, are beyond all calculation important to a commercial country, and the ingenuity of artists... is itself deserving of encouragement.”¹⁸⁴

On the conceptual level, once one internalizes the idea of intellectual property- that is, once one gives up any vestiges of bundling the object of the right with some physical entity- there is no reason why a method should not constitute a possible subject matter of patents. Eyre made this exact argument. Interestingly enough, he chose to do so by reference to the emerging conceptualization of the object of the right in copyright:

“It must be for the method; and I would say in the very significant words of Lord Mansfield (4 Burr. 2397) in the

¹⁸² As he put it: “It is not that the patentee has conceived an abstract notion that the consumption of steam in fire-engines may be lessened but he has discovered a practical manner of doing it; and for that practical manner of doing it he has taken his patent. Surely this is a very different thing from taking a patent for a principle; it is not for a principle, but for a process.” 126 Eng. Rep. 667.

¹⁸³ *Id.* at 666.

¹⁸⁴ *Id.* at 667.

great case of the copy-right, it must be for the method detached from all physical existence whatever.”¹⁸⁵

For Eyre both copyright and patents became completely dephysicalized. He presented them as legal entitlements in abstract objects “detached from all physical existence.”

The three other Justices denied the patentability of methods. Heath and Buller did so by denying outright that a method, independent of a material product or substance could be a “manufacture.” Heath supplied the following taxonomy:

“What then falls within the scope of the proviso? Such manufactures as are reducible to two classes. The first class includes machinery, the second substances (such as medicines) formed by chemical and other processes, where the vendible substance is the thing produced, and that which operates preserves no permanent form. In the first class the machine and in the second the substance produced, is the subject of the patent... That which is the subject of a patent, ought to be specified, and it ought to be that which is vendible, otherwise it cannot be a manufacture.”¹⁸⁶

Rooke chose a somewhat subtler way to avoid directly recognizing the patentability of methods. He attempted to collapse all methods into products. As he explained: “what does a method mean but mode or manner of effecting? What method can there be of saving steam or fuel in engines, but by some variation in the construction of them? A new invented method therefore conveys to my understanding the idea of a new mode of construction.”¹⁸⁷ Rooke achieved this collapse and managed to avoid the thorny question of patenting methods as such by ignoring the troublesome

¹⁸⁵ *Id.* Eyre’s reference is to *Millar v. Taylor*, 4 Burr. 2302, 98 Eng. Rep 201. Eyre had also textual argument why the term “manufacture” could encompass a method. A common use of “manufacture,” he explained, referred to the art of producing or doing something as in “the manufacture of glass.” 126 Eng. Rep. 667.

¹⁸⁶ *Id.* at 660-661.

¹⁸⁷ *Id.*, at 659.

cases in which a new and useful method could not be reduced to or did not involve a new device or product.¹⁸⁸

What were the broader conceptual differences underlying these three different opinions? It is tempting to reduce the differences between Eyre and his brethren merely to the degree in which they accepted and came to terms with the notion of intellectual property, of legal entitlements in an abstracted object which is utterly devoid of physical characteristics. Indeed, to some extent, it appears plain that the refusal to accept a method as patentable subject matter was rooted in a mode of thought that conceptualized the object of property in physicalist terms. As long as an insistence to ground the object of the property right in some physical-material object persisted, recognizing methods as such as the object of patents was inconceivable. Hence the importance of Eyre's reference to Mansfield's views on copyright and his reminder that the object of the right was indeed a "method detached from all physical existence whatever."

The difficulties in accepting the new concept of an abstracted and intangible object of property are apparent in Rooke's attempt to collapse all methods into materialist terms, to reinterpret them as the equivalents of the devices or products involved. The same need for a physical object to serve as a referent of the legal entitlements is also reflected in Buller's insistence on the production of "some new substance"¹⁸⁹ or Heath's requirement of a "vendible substance."¹⁹⁰ All three Justices had difficulties conceptualizing the abstraction of a "thing"- a commodity which is vendible and constitutes the object of a property right- and yet consists of something so elusive and devoid of physical existence as a method or a "manner of using." Lord Kenyon's definition of manufacture four years later in *Hornblower &*

¹⁸⁸ Heath in his questions to counsel and opinion focused exactly on these cases that brought out to the open the question of a method as such. During argument Heath inquired: "Is there any instance of a patent for a mere method?" *Id.* at 654. Not satisfied with the answer he explained in his opinion: "I asked in the argument for an instance of a patent for a method, and none such could be produced. I was then pressed with patents for chemical processes, many of which are for a method, but that is from an inaccuracy of expression, because the patent in truth is for a vendible substance." *Id.* at 661.

¹⁸⁹ *Id.* at 663.

¹⁹⁰ *Id.* at 661.

Maberly v. Boulton & Watt as “something made by the hands of man,”¹⁹¹ that was constantly cited by early patent treatises, demonstrated the same clinging to physicalist notions in conceptualizing the intangible invention.

However, this is only part of the story. While the conceptual difficulties undeniably existed, there seems to have been another substantial motivation for the objection of Heath and Buller to recognizing methods as patentable inventions. A method, exactly because of its conspicuous abstract character as an object of property, stood as an epitome of the instability of the scope of the right once traditional physicalist concepts were deserted. A “method” as the object of the right seemed highly elusive and unstable. It could shift its exact form and scope and it could be defined in broad terms as to encompass many various specific products or substances. Thus Buller referred to the case of the “water tabbies” as an instructive example:

“That invention first owed its rise to the accident of a man’s spitting on a floor cloth, which changed its colour, from which he reasoned on the effect of intermixing water with oils or colours, and found out how to make water tabbies and had his patent for water tabbies only. But if he could have a patent fore the principle of intermixing water with oil or colours, no man could have had a patent for any distinct manufacture produced on the same principle. Suppose painted floor cloths to be produced on the same principle, yet as the floor cloth and the tabby are distinct substances, calculated for distinct purposes, and were unknown to the world before, a patent for one would be no objection to a patent for another.”¹⁹²

For Buller, the real trouble with methods as objects of property was their lack of clear and stable boundaries. Methods had an obvious potential for covering a broad and shifting array of concrete cases.

As Buller’s example illustrates, the concern over the instability and the abstract character of the invention was exactly the site where the two distinct questions in the case met. From the perspective of Buller and Heath the question of the level of abstraction (whether “principles” were patentable) and the question of the patentability of methods converged. They blurred the two questions and often used the term “principles” in their opinions in a

¹⁹¹ *Hornblower v. Boulton*, 8 TR 95, 98, Eng. Rep. 1285, 1288 (K.B. 1799).

¹⁹² 126 Eng. Rep. 664.

confusing way because they saw the “method” as the epitome of an abstract, unstable and overbroad object of a property right.

Of course, once one completely internalizes a dephysicalized conception of property, as Justice Eyre did, the uniqueness of a “method” disappears. Once the object of the right is conceptualized as an abstract entity called the “invention” which consists of information, products can be just as unstable as methods. The ability to define the invention on different levels of generality equally applies to machines or substances and to methods. Yet for Heath and Rooke, conceptualizing the invention in semi-physicalist terms supplied a way to repress the problem. Although it was clear that the object of the right was not one particular physical object, as long as the invention was defined in a way that seemed to preserve some tangible quality at least a semblance of stability was retained. In this view, the protection attached to a specific “machine” or a “substance.” These represented one, more or less, stable and concrete form, as opposed to the specter of unlimited myriad of particular forms created by the “principle” or the “method.” Much like the “book” or the “copy” in copyright,¹⁹³ the “machine” supplied a sort of a semi-physical object to which to attach the legal entitlements, and helped soothe concerns brought about by the abstraction of the object of protection.

This repression mechanism could be maintained with some success regarding machines and substances, but it could hardly apply to methods. In the case of methods, unless they were collapsed into physical objects as Rooke attempted to do, the need to abstract and dephysicalize the object of the right was more inescapably apparent. Buller and Heath’s position had a circular self-reinforcing power. Maintaining a semi-physicalist conception of the invention singled out methods as exceptionally abstract and unstable objects of property. Recognizing methods as inventions was avoided exactly in order to maintain such a semi-physicalist conception of the invention.

The question of the patentability of methods remained contested well into the nineteenth century. It seems, however, that at least until the middle of that century the views of Heath and Buller were the dominant ones. When Watt’s patent was finally upheld in the 1799 *Hornblower* case the Justices who mentioned the question opted for Rooke’s tactic of avoidance and collapsed all methods into the material products produced, namely, machines and substances.¹⁹⁴ William Hands in his 1806 treatise expressed the fear of

¹⁹³ See *infra* Chapter 2, sec. I(B)(2)(b); *infra* Chapter 3, Sec. C(1)(a).

¹⁹⁴ Justice Grose, again merging the questions of methods and principles, said “I think, that although in words the privilege granted is to exercise a method

the unstable scope of the abstract method. He wrote: “where the patent really is for only a method, if it not be affected or accompanied by a manufacture, it seems the patent is not good. The subject of every grant must be certain; now a mere method is uncertain.”¹⁹⁵ In 1823 Godson, after conceding the existence of differing opinions on the question, denied the patentability of methods. He based his conclusion on the criterion of materiality of the object of property. Godson explained that it “cannot be a manufacture within the meaning of the statute of James, because it is destitute of one of the qualities absolutely necessary to be found in a *new manufacture*, or subject proper for a patent,- *materiality*... [it] is not of any thing that can be made. There is nothing corporeal, nothing tangible- nothing that can be bought or sold.”¹⁹⁶ In 1823 the idea that the pure abstract information or knowledge itself was the object “to be bought and sold” was for many still hard to accept.

Sherman and Bently argued that while modern intellectual property law tends to conceptualize the intangible as a concrete and static object, during the late eighteenth and much of the nineteenth century it was understood in more dynamic terms as an action or performance. This, they argue, constituted a paradox: while the intangible was understood mainly in dynamic terms, legal discourse lacked the language and terminology to capture this performative aspect and hence it usually referred to it as an object.¹⁹⁷

It is certainly true that the demise of the traditional concept of invention as the introduction and exercise of a trade or an art was gradual and

of making or doing any thing, yet if that thing is to be made or done by a manufacture, and the mode of making that manufacture is described, it then becomes in effect (by whatever name it may be called) not a patent for mere principle, but for a manufacture for the thing so made, and not merely for the principle upon which it is made” 101 Eng. Rep. 1291. According to Justice Lawrence: “‘Method’ properly speaking is only placing several things and performing several operations in the most convenient order: but it may signify a contrivance or device; so may an engine, and there I think it may answer the word ‘method.’” *Id.* at 1292.

¹⁹⁵ Hands, *supra* note 80, at 6.

¹⁹⁶ Godson, *supra* note 80, at 84.

¹⁹⁷ BRAD SHERMAN & LIONEL BENTLY, *THE MAKING OF MODERN INTELLECTUAL PROPERTY LAW, 1760-1911* 47-50 (1999).

that vestiges of it survived even in the nineteenth century.¹⁹⁸ Yet the interaction of the elements of dynamic performance and static object in the late eighteenth century concept of the invention, as it emerges from the patentability debates, seems to be quite different. By the last quarter of the century the old traditional concept of the invention as the introduction and exercise of a trade or an art was, to a large extent, supplanted. It was replaced by the new notions of disclosure and control of information. The invention in this new sense was reconceptualized. Instead of a performative or rather an economic activity it was increasingly understood as an (intangible) object in the world to be controlled, used or assigned by the patentee.

As Eyre's opinion exemplifies, to those who completely internalized this process of abstraction there was little difference between a method and a product. In both cases it was an abstracted, purely ideal or informational, entity called the "invention" that constituted the object of property. However, for those like Heath and Buller who resisted the total abstraction of the invention and struggled to maintain some physicalist traces in it, methods and products differed. The method as patentable invention was the epitome of instability brought about by abstraction. If Sherman & Bently are right and jurists remained immersed in the traditional concept of invention as the exercise of trade one could hardly expect such anxiety in this context. The method – the mode of doing or using something- which is quite close to the notion of exercising a trade or an art should have been the easy case of patentability. In reality products became the easy self-evident case of patentable inventions, while methods attracted much difficulties and resistance.

The reason for this pattern is that at the end of the eighteenth century, despite the fact that vestiges of the old idea of exercising an art still existed; jurists were already thinking about the invention as an object. For those who insisted on conceptualizing this object in semi-physicalist terms the method was an unacceptable candidate. On the other hand, Eyre and later others who embraced the method as a patentable invention did not do so under the traditional concept of a patent as the privilege to exercise a trade. Rather they employed the new abstract conception of the invention as an intangible informational object. Thus the gradual acceptance of a method as a patentable subject matter, which lasted till the middle of the next century, did not reflect

¹⁹⁸ Hence it is hardly surprising that Sherman & Bently can point to nineteenth century treatises that still define the object of protection in the case of patents in terms that still resonate the traditional concept of trade or art. *Id.* at 48.

a persisting tendency to understand the invention in dynamic performative terms. Quite the contrary, only once abstraction taken to its logical conclusion allowed to “objectify” the method, to turn it into an informational object, it was accepted as patentable invention.¹⁹⁹

b. Patents as General Rights

On the other main axis of transformation- the move from discretionary particular privileges to general patent rights- things were much more obscure at the end of the eighteenth century. There too a century of practice had eroded the traditional framework within which a patent was a particularistic policy decision based on royal discretion limited only by the external restrictions imposed by common law and the Statute of Monopolies on “unlawful monopolies” (see fig.3). A long enduring administrative practice of granting patents with little investigation or discretion in most cases and increasing standardization of the patent entitlements, prepared the ground for the modern concept of patent-rights (fig. 1).

¹⁹⁹ Sheramn & Bently realize the fact that the issue of patentability of methods was highly controversial during the late eighteenth century, but fail to address the implications of this fact for their argument. On the other hand, the authors point to a 1890 treatise in which the author describes methods as the focal case of invention and denies the patentability of product inventions independently of the method of their production. See: *id.* at 48-50; R. FROST, PATENT LAW AND PRACTICE 49 (1891). It is hard to account here for the reasons for this reversal, but it is significant to point out that it is a reversal comparing to the late eighteenth century. At that earlier period products were the focal case of invention and methods constituted the difficulty even for those who supported their patentability. This work does not extend to cover late nineteenth century English law, but one speculation regarding the motivation for Frost’s argument may be that it laid mainly in the attempt to inflate the scope of the invention. It is possible that Frost was in fact making an opposite move to that of Heath and Buller in *Boulton & Watt*. By placing the method as the focal case of invention he was insuring that the invention would be conceptualized on a high level of abstraction detached from all physicalist traces which, in turn, would cover a broad scope. On the use of this tactic in the context of late nineteenth century American patent law see: *infra* Chapter 4, sec. B(1)(c).

Indeed, late in the eighteenth century voices expressing this modern understanding of patents as rights started to appear in the increasingly self-conscious community of inventors and innovators.²⁰⁰ Nevertheless, one should be careful when examining such references from the relevant period. Not every reference to “rights” and “property” necessarily implies a move toward what I call here the patent-rights model. In fact, it was not uncommon to use the term “property right” under the traditional scheme. Speakers occasionally talked about patent “rights” or “property” meaning simply the familiar traditional privileges created in a particularistic discretionary policy decision of the sovereign.²⁰¹ Other utterances seem chiefly to reflect the ambiguity and fluidity of the concept at the time, swirling together the old privilege and the new right concepts. A 1791 publication that defined patents as “a grant of the crown substantiating private property” is a good example of this kind.²⁰²

Still, there is no doubt that some unequivocally articulated the new right concept.²⁰³ The inventor Joseph Bramah wrote in a 1791 letter to James Eyre Chief Justice of the Common Pleas that “inventions... those efforts of the mind and understanding... may justly be denimanted the right of every individual, unconnected with any political expediency.”²⁰⁴ James Watt was

²⁰⁰ On the consolidation of a self-conscious inventors’ interest group during the late eighteenth and early nineteenth centuries see: Dutton, *supra* note 3, at 34-56. On the changing concept of invention and inventors from men of technical skill who put into practice a stock of useful inventions supplied by Providence to the individual genius who creates new ideas see: MacLeod, *supra* note 3, at 201-223.

²⁰¹ MacLeod, for example, cites a patentee who in 1724 applied for a patent, stating the purpose as “securing to him the property in the practice of the said method” and points out that similar phrasing reappears sporadically in patent application during the century. MacLeod, *supra* note 3, at 198.

²⁰² OBSERVATION ON THE UTILITY OF PATENTS, AND OF THE SENTIMENTS OF LORD KENYON RESPECTING THAT SUBJECT 42 (4th ed. 1791). Cited in MacLeod, *supra* note 3, at 199. For examples of mixed and obscure use of the different concepts see also: Mossoff, *supra* note 104, at 1301-1302.

²⁰³ For a long list of examples see: Mossoff, *supra* note 104, at 1295-1296. Some of the examples cited there seem to fit rather to uses of the “property” and “right” terms within the traditional framework or to ambiguous uses, but others do reflect the appearance of a new concept of patents.

²⁰⁴ MacLeod, *supra* note 3 at 199. Citing a letter from Joseph Bramah to Sir James Eyre 77 (1797).

one of the cardinal proponents of this position. In 1780 Watt published his *Heads of a Bill to explain and amend the laws relative to Letters Patent and grants of privileges for new inventions*, which articulated the proposals of a group of agitators for reform. He called for a recognition that the “first introducer” of new inventions was “legally entitled” to the grant of patent privileges.²⁰⁵ Some started using the analogy to “literary property.” In that context a strong clear position claiming author’s natural property rights emerged in the late eighteenth century. According to the analogy inventors too had a natural right in their inventions that an enlightened government had to recognize.²⁰⁶

This move toward an understanding of patents as rights was echoed by some legal figures and texts. In the 1785 *Arkwright v. Nightingale* Lord Longborough explained that: “The law has established the right of patents for new inventions; that law is extremely wise and just.”²⁰⁷ He went on to instruct the jury that “we must never decide private rights upon any idea of public benefit.”²⁰⁸ In the 1787 *Turner v. Winter* Justice Buller confessed in his jury instruction that “whenever it appears that the patentee has made a fair disclosure, I have always had a strong bias in his favour, because in that case he is entitled to the protection which the law gives him.”²⁰⁹ Mansfield revealed similar sympathies, though in a somewhat equivocal manner, when he instructed the jury in *Liardet v. Johnson* as follows: “if the composition is good for nothing the plaintiff gets nothing, and nobody gains by it. Is it a new

²⁰⁵ Coulter *supra* note 3, at 27.

²⁰⁶ For example, during the proceedings of *Millar v. Taylor* in the House of Lords two lords were ready to assume that “previous to the monopoly statute, there existed a common law right, equally to the inventor of a machine and an author of a book.” 17 COBBET’S PARLIAMENTARY DEBATES 974, 972. As an historical argument the claim was baseless, but it expressed the new intellectual wind regarding patents. See also: MacLeod, *supra* note 3, at 199. On the other hand others used the copyright-patent analogy in the opposite direction. Defenders of literary property tried to distinguish inventors from authors and critics like Justice Yates used the privilege nature of patents to equate copyright with it claiming that no common law right existed in any of the fields. See: *Millar v. Taylor*, 4 Burr. 2303, 2387, 98 Eng Rep. 201 (K.B. 1796).

²⁰⁷ *Arkwright v. Nightingale*, 1 Carp. P. C. 38, 49 (C.P. 1785).

²⁰⁸ *Id.* at 47.

²⁰⁹ 99 Eng. Rep. 1274, 1277.

invention? Is it new? For if it is new and good for nothing nobody will make use of it.”²¹⁰

As Mansfield’s instruction indicates, there started to appear also the argument that “the market” rather than the sovereign should evaluate the usefulness and value of the invention. The traditional argument that patents were preferable to other methods of rewarding and encouraging invention because they cost government nothing, started acquiring different tones. The new emphasis was no longer only the advantage of “cheapness” of the method but also the fact that government employs no discrimination and discretion in evaluating the utility and desirability of particular inventions. Adam Smith expressed his support for patents in 1766 writing that “if the invention be good and such as is profitable to mankind, he will probably make a fortune by it; but if it be of no value he will reap no benefit.”²¹¹ Similar views were expressed by others.²¹² These were the first signs of a

²¹⁰ Hulme “On the History of Patent Law,” *supra* note 3, at 286. Citing the *Morning Report*. Mansfield’s instructions were somewhat equivocal in adopting the right concept of patents because he was instructing a jury regarding the review of the validity of a patent that was already granted. Obviously the logical extension of the market reward to patentees view-according to which the market should judge the utility of the patentee’s invention and allocate him the proper reward- was that patents should be granted as a matter of right to anybody meeting the novelty condition to begin with. One may conclude that this view is implied in Mansfield’s position, but in the context of the case he had no opportunity to express it. Mansfield’s views regarding the irrelevancy of utility were not unanimously accepted. See for example: *Hornblower v. Boulton*, Eng. Rep. 1285, 1287-1288 where all three justices put emphasis on the “usefulness” of inventions as a basis for the validity of a patent. Chief Justice Kenyon expressed his dislike for patents “for though in many instances... the public are benefited by them yet on striking the balance on this subject, I think that great oppression is practiced on inferior mechanics by those who are more opulent.”

²¹¹ Adam Smith, *LECTURES ON JURISPRUDENCE* 83 (R.L. Meek et al eds., 1978). Smith also explained that “the property one has in a book he has written or a machine he has invented which continues by patent in this country for fourteen years, is actually a real right.” *Id.*, at 11. About the views of Smith about patents and for those of Bentham and Mill who later argued in a similar vein see: Dutton, *supra* note 3, at 18-20.

²¹² See: MacLeod, *supra* note 3, at 198-197, Dutton, *supra* note 3, at 20.

crisp principled position against governmental discretion in the grant of patents.

In spite of these important indicators of change, this aspect of the traditional framework of patents proved much more entrenched and slow to change than the concept of invention. While some started thinking of patents and referring to them as rights, many others adhered to the privilege model. The legal community was especially slow in changing its formal concepts. Commentators kept referring to patents as a matter of royal “grace and favour” and explained that their specific content was to be determined by royal authority in each case (as long as the scope of discretion set by common law and statute was not overstepped). In his 1823 path-breaking treatise on patents and copyright Richard Godson included a subsection entitled “No Right to Demand Patent” which explained:

“... there is not any clause or enactment, by which the subject can *demand* them as a *right*. This great encouragement to industry, this fruitful source of wealth, is still the free gift of the King. It emanates from him as *the Patron of Arts and Sciences* at the humble request of his subject; and it is as a gracious favour that he extends his protection to the inventor.”²¹³

As late as 1846 Hindmarch could explain in his treatise:

“Inventors are *never entitled as of right* to letters patent, granting them the sole use of their inventions, but they must obtain them from the Crown by petition, and *as a matter of grace and favour*.”²¹⁴

While standing in tension with the administrative practices and some newly appearing views, these were not the kind of statements that sometimes survive as empty shells in the opening pages of legal treatises, echoing older conceptions that were already superseded in actual doctrine. On the contrary, such statements were at the turn of the century well grounded in legal doctrines and operable concepts. Formal legal doctrine itself, some judicial references to patent rights notwithstanding, did not change at all²¹⁵ in this

²¹³ Godson, *supra* note 84, at 47.

²¹⁴ Hindmarch, *supra* note 84, at 3 (emphasis in the original).

²¹⁵ This led Macleod to conclude, after surveying the new emerging rhetoric of patent rights, that “it remained unclear what this might mean since the

respect. As far as legal doctrine was concerned no manifestation of the emerging concept of patent rights appeared.²¹⁶

inventor's property was unprotected in law until he bought his certification from the crown in a patent." MacLeod *supra* note 3, at 198.

²¹⁶ For a similar argument see: Walterscheid (pt. 4), *supra* note 3, at 92. In a recent excellent article Adam Mossoff argued that late eighteenth century transformations of English patent law expressed, to a substantial extent, a move toward a Lockean conception of natural property rights. See: Mossoff, *supra* note 104. Throughout the article the argument is presented on varying degrees of strength. Inasmuch as the argument is that judicial rhetoric and some decisions were influenced by concepts taken from Lockean natural rights thought, it seems plausible. Indeed, it would have been strange if such a dominant and influential intellectual current at the time had left no marks on this slowly rising field of law. But at times it seems that Mossoff argues a stronger claim according to which: by the end of the eighteenth century "patent doctrine is burned pure of its functions as a tool of royal prerogative," and the new patent right concept that has taken control by that time constitutes a manifestation of natural rights ideas. *Id.*, at 1321. As explained, the assumption that by the end of the eighteenth century patents had completely lost their character as discretionary royal privileges and became general rights is simply false. While the seventeenth century concept was in a state of flux in that respect, things were much more obscure with traditional ideas still having a substantial hold. The place where a move toward a right concept was less apparent than all was formal legal doctrine. Mossoff acknowledges the lack of a clear doctrinal proclamation that patents are rights. Hence he turns to support his argument by the changing doctrinal concept of invention and novelty claiming that these expressed the move toward a Lockean understanding of property right. The problem is that this is not enough to support the strong version of the argument. Changes in the concept of invention through the specification and novelty doctrines laid an important base for the modern concept of property rights. The move from an actual introduction of trade to the disclosure of new information about an "invention" constituted a standard "object" in which general rights could be created. But as long as patent doctrine remained entangled with the traditional royal privilege understanding- as was the case at the end of the eighteenth century- there could be no definite transformation of the concept of patents to rights. Only during the nineteenth century when ambiguity started clearing out and the old privilege model finally faded away could the change of "invention" be the ground for a (natural or positivist) property right in the modern sense.

Colier, who opened the preface of his 1803 patent treatise with references to “property” which is “daily assuming new forms” and to “this honourable reward of productive talent,”²¹⁷ reverted to the traditional privilege model when he started discussing actual doctrine. In full adherence to the familiar framework of case-specific royal discretion exercised within a prescribed scope he explained that patents are granted as a matter of royal prerogative of the king who is “the arbiter of commerce,” to “such persons as he shall think proper.” This prerogative, Colier explained further, is limited by “limitations of the royal prerogative by bounds so certain and notorious, that the king cannot easily exceed them without the consent of the people.”²¹⁸ The fact that the system did not move to an unequivocal general rights framework is also apparent from the complaints and demands of those who preached for such a system. In 1829 a correspondent of the *Mechanic Magazine* noted that: “The almost annual attempt at amending the patent laws are only so many trials to make the theory of privilege, and its consequent practice, fit the universal feel of right; but the crooked billet offers no fare that will fit.”²¹⁹

The long standing administrative practices as well as newly emerging ideology of patent rights on the one hand, and the entrenched legal doctrine and adherence of the legal community to the old scheme on the other, created a state of deep ambiguity. This duality and uncertainty regarding the exact character of patents lasted well into the nineteenth century. As late as the mid-century debates surrounding the issue of patent law reform there were still sharp and viable difference on this point between those who claimed that a patent was the “natural right” of every inventor who met a few standard

²¹⁷ Colier, *supra* note 84, at v, xiv.

²¹⁸ *Id.*, at 64-65. Regarding the term of the patent Colier said that “motives may arise which shall induce the king to limit his grant of letters patent in such cases for shorter term, but he cannot now extend them beyond the duration of *fourteen years*.” *Id.*, at 70 (emphasis in the original).

²¹⁹ 25 MECHANIC’S MAG. 229 (1836), quoted in Van Zyl Smit, *supra* note 119, at 95. For similar sentiments expressed in 1829, advocating a move to a system which assures rights for invention on demand with no substantive discretion as to the usefulness of the invention see: *id.*, at 93.

requirements, and others who insisted that patent privileges were created by the sovereign exercising discretion as a matter of grace and favor.²²⁰

The disparity between the formal doctrines of patent law and the actual practices of the patent grant played an interesting role in sustaining this basic ambiguity. On the one hand, this disparity created a serious dissonance regarding one of the most fundamental traits of patents. Legal discourse clung to a privilege concept while the administrative practices increasingly expressed a right framework. One might have expected that sooner or later such a dissonance would lead to a head-on collision and be resolved. On the other hand, the very disparity between legal doctrine and actual practice constituted a mediating mechanism that seems to have prevented such a direct conflict. Exactly because as a matter of practice a patentee who survived the bureaucratic nightmare was likely in most cases to receive a patent protecting standard entitlements with little investigation or selection, the question of the character of patents could be left unresolved. Inventors and patentees who insisted on the new concept of patent-rights had other

²²⁰ For the different views in the nineteenth century debates see: Coutler, *supra* note 3 at 73-100; Dutton *supra* note 3, at 17-33. The array of opinions during the nineteenth century debates was more complex than two coherent positions. At the very least there were two different axes of disagreement and three substantive positions. First there was the question of whether patents were “natural rights”- pre-political rights characteristic of a “state of nature” and only recognized by the sovereign rather than created by him; or positivist rights- that is rights that are created by the political power of the sovereign. Second, there was the question of whether patents were discretionary privileges or rights in the modern sense. The traditional view employed by many commentators was that patents were discretionary privileges created by the sovereign. The proponents of the rising ideology of the inventor usually took the symmetrically opposed position according to which patents were not only rights but also natural rights. Yet, there was also a third position that was gathering force throughout the nineteenth century. This was the rising utilitarianism of Bentham and Mill (both took interest in and discussed patents). Both Bentham and Mill took the position that patents were rights- in fact they saw the absence of particularistic discretion as one of the main advantages of the system. On the other hand they rejected, of course, the idea of patents as natural rights which went against their strong positivist convictions (Bentham called the idea of natural rights “nonsense on stilts”). From this perspective patents were state created rights, whose standard content and scope should be set (as a general ex-ante standard rather than a case specific decision) as to serve the general social welfare.

reforms of the patent laws and procedures higher on their priorities. Jurists could go on adhering to the familiar privilege concept with little disturbance. Thus ambiguity on this point managed to survive for a long time.²²¹

One may summarize the state of the late eighteenth century English conceptual framework of patents for invention as follows. Despite the persistence of open conceptual textures and unresolved issues, the concept of invention transformed substantially. It lost most of its traditional focus on introduction in practice of a trade and acquired its modern meaning as innovative technological information. In contrast, the move from the traditional patent-privileges model to the modern patent-rights framework was only beginning. At the risk of some anachronism, we may say that in 1800 patents already came to be thought of as “intellectual,” but not quite as “property.”

²²¹ A dramatic event that could have created a conflict and a resolution of the ambiguity would have been an action of an applicant whose patent application was rejected demanding remedy and arguing that since he meets all requirements for a valid patent he has a right to receive it. Such a case would have been a real litmus test for the concept of patent as right or a discretionary privilege. As far as I know there is no such case during the relevant period. Walterscheid declares regarding this point that “insofar as can be ascertained, the issue seems never to have been addressed in any of the common law court opinions involving patents for invention issued in the eighteenth century.” Walterscheid (pt. 4), *supra* note 3, at 92. Though some future research of the records may retrieve new information in this respect, at the moment it seems highly doubtful. Again, it was the effect of the lenient administrative practice of patent grants that made it very unlikely for such a case to appear. One may read in this context James Watt’s solicitor- Abraham Weston- 1785 remark that “the general questions of law on the subject have never been brought forward on any important trial it may with truth be said that that the books are silent on the subject and furnish no clue to go by, in agitating the question, ‘what is the law of patents?’” Cited in: Robinson, *supra* note 151, at 116. To the extent that we know of judicial references to this issue they point toward the traditional privilege concept. In 1790 Lord Chancellor Thurlow said in dictum: “if the king refused the patent, it would be upon reason very unfit for me or any one to dispute, because it rests entirely in his royal breast, and it cannot be in one more honourable.” *Ex Parte O’Reilly*, 1 Vest. Jun. 112 (Cha. 1790).

II. Early American Patents

A. Colonial Patents

American colonial patents for invention were a parochial and somewhat rudimentary version of the early English patent practice.²²² In fact, patent is a misnomer for the grants of exclusivity handed out by colonial assemblies (a misnomer which I will use here nevertheless). Letters patent, as explained, were a form of the exercise of the royal prerogative and hence only the king could grant them.²²³ In the American colonies it was the local

²²² About Colonial Patents see: BRUCE W. BUGBEE, EARLY AMERICAN LAW OF INTELLECTUAL PROPERTY 57-83 (1960); P.J. Federico, *Colonial Monopolies and Patents*, 11 J. Pat. Off. Soc. 358; Inlow, *supra* note 3, at 36-43; Edward C. Walterscheid, *To Promote The Progress Of Science And Useful Arts: The Background And Origin Of The Intellectual Property Clause Of The United States Constitution*, 2 J. of Intellectual Property Law 1, 14-17 (1994). Bugbee's is the most comprehensive survey of colonial patents in America. The reader, however, should be aware of the fact that the survey is fraught with the anachronism of focusing on "genuine" patents for invention in the modern sense. A fundamental trait of the colonial grants was exactly that a concept of patents for invention as a crisp separate category did not exist.

²²³ There is little evidence of royal letter patents for invention in the American colonies during the seventeenth and eighteenth century. It seems that during this period the use of the patent instrument in the colonies was of little interest or cost effectiveness both to the crown and to potential patentees. Apart from a few scattered references to royal patents in some colonies, there seem to be no evidence of such patents being common. It appears that only toward the turn of the eighteenth century there is a growth in the interest and use of royal patents in the colonies. Bugbee reports that in 1717 Thomas Masters successfully petitioned for leave to record in Pennsylvania two patents issued in England to his wife. See: Bugbee, *supra* note 222, at 72; MINUTES OF THE PROVINCIAL COUNCIL OF PENNSYLVANIA, FROM THE ORGANIZATION TO THE TERMINATION OF THE PROPRIETY GOVERNMENT vol.3 6-7 (Samuel Hazard ed., 1838). Colier's 1802 treatise which tried to be a practical manual for the patentee points out that "if it be the design of the inventor to extend the exclusive privilege further, he may, on application, have inserted in the patent the additional words 'in all your majesty's colonies and plantations abroad,' which will establish his patent rights in those countries." Colier, *supra* note 84, at 55. It seems that by that time this was a rather standardized procedure, though still not very often

legislatures that assumed the role of issuing grants conferring exclusive privileges of manufacture and sometimes sale within their territory.²²⁴ Not all colonies issued patents, and the grants, which never consolidated into a uniform and standardized body of law or administrative practice, changed in

used, that entailed mainly the payment of additional application fees. As the nineteenth century progressed the use of colonial patents became more common. In 1845 200 out of 560 patents granted applied to the colonies. See: Robert H. Barrgar & Christopher Robinson, *Some Notes on the Historical Development of Patent Law in Colonial Canada and Other British Colonies*, 5 I.P.J. 391 (1990).

²²⁴ It is an interesting fact that it was the colonial legislatures rather than the governors or the councils that came to exercise the power of granting local patents. If a miniature version of the English patent grants were to be followed, the granting power should have been exercised by the governor. However, it was local politics, material conditions and with time probably ideology too, rather than logical symmetries, that dictated otherwise. See: Walterscheid, *supra* note 222, at 15. This may be an interesting fact to consider in view of what in American historiography is known as the “rise of the assemblies” thesis, either in its original or recently revisited form. The rise of the assemblies thesis highlighted the process in which colonial assemblies gradually came to hold and exercise powers and responsibilities much wider than those allocated to them under the colonial government structure (and in some aspects much wider even than equivalent parliamentary powers in England). The revisited version of the thesis, does not question the basic fact of the rise in assembly power, but rather offers to analyze it in specific context of the local politics, interests, practices and interactions rather than as a story of inevitable progress. For general discussion of the rise of the assemblies thesis and references see: Christine A. Desan, *The Constitutional Commitment to Legislative Adjudication in the Early American Tradition*, 111 Harv. L. Rev. 1381, 1391 (1998); Jack P. Greene, *Political Mimesis: A Consideration of the Historical and Cultural Roots of Legislative Behavior in the British Colonies in the Eighteenth Century*, 75 Am. Hist. Rev. 337 (1969). Some of the classic works deploying the thesis are: Evarts B. Greene, *THE PROVINCIAL GOVERNOR IN THE ENGLISH COLONIES OF NORTH AMERICA* (1898); A.B. Keith, *CONSTITUTIONAL REVOLUTION OF THE FIRST BRITISH EMPIRE* (1930); Leonard W. Labaree, *ROYAL GOVERNMENT IN AMERICA: A STUDY OF THE BRITISH COLONIAL SYSTEM BEFORE 1783* (1930).

frequency and character over a period of 150 years.²²⁵ Still, a few basic common features of the colonial patent grant can be traced. These common features endowed the colonial patents with the two basic traits of their English cousins. First, the grant was a case-specific discretionary policy decision. Second, the concept of invention employed in the grant practice was that of the introduction of a new trade or industry. Moreover, by the end of the colonial period these two traits survived in the colonial patent practice to a greater extent than in England.

Like the early English grants colonial patents for invention were not conceived of as forming a separate well differentiated channel for stimulating economic growth. The colonies striving to promote the “public good,” to accommodate various interests, and in some periods to insure their very survival and their basic needs employed a whole arsenal of tools and tactics. The assembly constituted in this respect a local miniature version of the mercantilist scheme with the king as the “arbiter of commerce” (though it was not put in these terms) having the de-facto power and duty to actively foster economic growth and prosperity. As McCusker & Menard put it: “It was universally acknowledged that government’s primary responsibility was the security of the state and its citizens. There were few limits in theory or practice to what government might do in carrying out its responsibilities. The economy, as simply another element of national life, had to be subservient to the common good.”²²⁶

A variety of methods was used: bonuses, prizes, subsidies, payment of salaries to skilled artisans, loans, permissions to hold lotteries for raising funds, exemption from tax and military service and also grants of limited monopoly for various economic activities.²²⁷ Monopoly grants covered all kinds of enterprises and manufactures, everything from mills to iron works or

²²⁵ Walterscheid assess that the entire number of patents issued in the colonies which became the United States did not exceed fifty. Again, the reader should remember that this number applies to patents for invention which were not differentiated at the time from other grants of exclusivity. The problems of exact quantification of colonial patents arise mainly from the absence of adequate records. See: Walterscheid, *supra* note 222, at 15 note 46.

²²⁶ JOHN J. MCCUSKER & RUSSEL R. MENARD, *THE ECONOMY OF BRITISH AMERICA 1607-1789* 331-332 (1991 2nd ed.).

²²⁷ *Id.*, at 96, 343. Federico, *supra* note 222, at 360; Bugbee, *supra* note 222, at 57.

the operation of ferries. Occasionally such grants applied also to what we would recognize as the introduction of new inventions. The latter, however, were not differentiated from other grants in any way. They were simply a few among many monopoly grants for publicly beneficial economic activities.

The colonial patent grant never consolidated into a separate administrative practice or legal category. It subsisted in case-specific enactments. The usual procedure involved a petition of the would be grantee to the assembly detailing his invention as well as the particular benefits it had to offer to the public and praying exclusivity privileges. In a fashion similar to the early English grants applicants usually detailed specific tangible benefits offered by their inventions such as lower prices, the supply of a scarce commodity or the saving of labor.²²⁸ Next came a phrasing of a bill detailing the exact terms of the grant, the particular privileges it conferred and its specific conditions. The scope of the privileges, the conditions imposed on the grantee and penalties for infringement varied substantially and were tailored specifically in each case.²²⁹ The most conspicuous variation

²²⁸ This last benefit of saving labor commonly offered in many colonial patent applications both in the seventeenth and eighteenth centuries reflected the different conditions in the American colonies. In England there was a traditional fear of the taking away of livelihoods and jobs that only faded away gradually in the late eighteenth century and hence inventors seldom mentioned saving of labor and often pointed out the creation of employment by the invention. As MacLeod showed, this only changed during the late eighteenth century. In contrast, many of the American colonies experienced periods of extreme shortage in working hands, and hence it was much more common to assert the saving of labor as a potential benefit of the invention. A southern variation of this last theme was evident in South Carolina where many of the eighteenth century petitions followed the form of Hugh Swinton's 1743 application which asserted that his rice cleaning machine "would be the Means of rendering the Labor of one Negro equally profitable with that of many." JOURNAL OF THE COMMONS HOUSE OF ASSEMBLY, SEPTEMBER 14 1742 - JANUARY 27, 1744 (J.H. Easterby ed.) 175-178. (Hereafter cited as: SOUTH CAROLINA JOURNAL OF THE COMMONS HOUSE, 1742-1744) See also: Bugbee, *supra* note 222, at 78.

²²⁹ The scope of the exact entitlements of exclusivity as well as the penalties for infringers varied. It was not uncommon for grants to provide for what we would call today a liability rule, or a rudimentary form of "compulsory license." Such grants provided that whoever produced identical artifacts to those covered by the grant would pay a fixed amount to the patentee. Peter Guerard's 1691 South Carolina grant, for example, stipulated that "noe

was the duration of the privileges that usually oscillated between seven and twenty years. Finally, the legislature had to consider and pass the bill through the standard legislative process.

Such particularistic statutes were the ultimate manifestation of a privilege rather than a right concept of patents. The assembly was in charge of a specific calculus of the public good in each case, considering whether a patent was justified and what its specific terms should be. The practice and form of the grants mixed together a governmental policy measure and a sort of a deal or transaction with specific private parties. The flavor of this mixed nature, as well as the character of the grants as case-specific discretionary measures is demonstrated by one of the earliest grants issued in 1641 by the General Court of Massachusetts:

“Whereas Samu: Winslow hath made a proposition to this Court to furnish the countrey wth salt at more easy rates then otherwise can be had, & to make it by a meanes and way wch hitherto hath not bene discovered, it is therefore ordered, that if the said Samu: shall, wthin the space of one yeare, set upon the said worke, he shall enjoy the same to him & his associates, for the space of 10 yeares, so as it shall not be lawfull for any pson to bring in any salt, or make salt after any othr way, during the said time.”²³⁰

Sometimes colonial legislatures appointed special committees to inspect the invention at issue and report as to its utility and the desirability of a patent.²³¹ This, however, was not the equivalent of modern examination.

person... shall at any time during the space of two years after the ratification of this Act make, sett up or use the said Pendulum Engine, unless he or they first pay unto the said Peter Jacob Guerard forty shillings current money of this Province, for every such Engine he or they make, sett up or use as aforesaid.” STATUTES AT LARGE OF SOUTH CAROLINA vol. II 63 (Thomas Cooper ed., 1837-1868). Bugbee, *supra* note 222, at 75.

²³⁰ RECORDS OF THE GOVERNOR AND COMPANY OF MASSACHUSETTS BAY IN NEW ENGLAND (1628-1686) vol. I 331 (Nathaniel B. Shurtleff ed. 1853-1854). (Hereafter cited as: MASSACHUSETTS RECORDS). Bugbbe, *supra* note 222, at 60-61.

²³¹ See for example: The Massachusetts General Court implied examination by referring to “careful view and examination” of Houghton’s 1736 invention of a surveying device. ACTS AND RESOLVES, PUBLIC AND PRIVATE OF THE

Such committees did not engage in certifying the fulfillment of standard requirements that entitled one to a patent. Their role was to inform the legislature regarding the specific benefits of the invention, the chances of petitioner's success and possible effects on relevant interests. This report provided the legislature with a basis for its discretionary decision.

Other specific characteristics of the colonial grants, similar to those of the early English practice, manifested the two basic traits of the concept of patents. Many colonial patents included working clauses, stipulating the privileges on the successful putting into practice of the invention and voiding the grant in case of failure to do so within a prescribed time. Working clauses, similar to the one year putting into practice stipulation in Winslow's Massachusetts grant, appeared in almost all of the colonial patents for invention, including those made toward the end of the period. Working clauses sometimes stipulated the quality or price of the product to be produced.²³² There were also occasional apprentice clauses mandating that the grantee would take a certain number of local apprentices.²³³

No specification or similar disclosure procedures appeared in colonial grants. Sometimes petitioners had to present to the legislature or to an inspection committee information regarding their invention and occasionally they even presented models. George Timmons, for example, offered in 1743

PROVINCE OF THE MASSACHUSETTS BAY vol. II 788 (1869-1922). (Hereinafter: MASSACHUSETTS ACTS AND RESOLVES). Bugbee, *supra* note 222, at 67-68; Both of Maryland's colonial patents for invention issued in 1770 to John Clayton and Isaac Perkins were granted after inspection by an appointed committee. PROCEEDINGS AND ACTS OF THE GENERAL ASSEMBLY OF MARYLAND, 1769-1770 (Raphael Semmes ed., 1883-1964) vol. LXII 12, 231, 315-316; 285, 289 316 334-335. (hereafter: Maryland Proceedings and Acts) Bugbee, *supra* note 222, at 73-74. Hugh Swinston's 1743 patent was granted in South Carolina after examination and report by an appointed committee. SOUTH CAROLINA JOURNAL OF THE COMMONS HOUSE, 1742-1744, 178, 187-188, 191-192, 198, 204. Bugbee, *supra* note 222, at 78.

²³² Maryland's 1770 patent to John Clayton, for example noted his claim that his thresher will be sold at a "reasonable price." MARYLAND PROCEEDINGS AND ACTS, vol. LXII 12. Bugbee, *supra* note 222, at 73.

²³³ A known example is Benjamin Crabb's 1750 patent for making candles which stipulated that Crabb had to teach his process to five inhabitants of the colony. MASSACHUSETTS ACTS AND RESOLVES, vol. III 546-547. Bugbee, *supra* note 222, at 68.

a model of his wind-driven rice cleaner for inspection by the South Carolina legislature.²³⁴ The basic rationale of such information disclosure, however, was to facilitate the assembly's assessment of the public benefits offered by the invention and its prospects. It was not meant to provide lasting knowledge in the form of written information. In the case of Timmons, for example, the sole use of his model was to inform the committee that inspected his invention. This committee expressed its concern that Timmons' machine "may be attended with some Charge and Risque and other Disadvantages" but went on nevertheless to recommend the award of exclusive privileges.²³⁵ There was never any routine administrative mechanism for the disclosure, preservation and display of information, and certainly there was no trace of the theory that eventually appeared in England according to which the disclosure of information capable of instructing others in producing the invention was the consideration of the patent deal.

Working clauses, definition of quality and price, apprentice clauses and the varying character of the entitlements and penalties for infringement; all expressed the ad-hoc discretionary nature of the grant. No one had a right to claim a patent. Rather the legislature employing specific discretion weighed the public good, the interests implicated as well as the cost and the benefit involved and crafted particular "deals." Those deals granted patentees entitlements of exclusivity in return for a specifically defined consideration.

Working clauses and apprentice clauses and especially the lack of specification also manifested the concept of invention as a trade or industry. While technological innovations or discoveries were sometimes involved, this was a background ingredient rather than a defining feature of the grants, which often covered merely beneficial economic activities. A patent for the production and operation of a newly invented machine was not categorically different from one for the operation of a (standard) mill. Thus, for example one of the most important grants of early Massachusetts was the 1664 twenty one years monopoly grant to the "Company of Undertakers of Iron Works in New England."²³⁶ There was probably no discovery or development of any

²³⁴ SOUTH CAROLINA JOURNAL OF THE COMMONS HOUSE, 1742-1744, 207-208. Bugbee, *supra* note 222, at 79. Two patents awarded in Maryland in 1770 also involved an examination by an appointed committee. *Id.*, at 73-74.

²³⁵ SOUTH CAROLINA JOURNAL OF THE COMMONS HOUSE, 1742-1744, 240.

²³⁶ MASSACHUSETTS RECORDS II, 61-62, 81-82, 103-104, 125-128, 185-186. Bugbee, *supra* note 222, at 68; E.N. HARTLEY, IRON WORKS ON THE SAUGUS: THE LYNN AND BRAINTREE VENTURES OF THE COMPANY OF UNDERTAKERS OF THE IRONWORKS IN NEW ENGLAND (1957).

new technological knowledge involved. Still, there is no indication that this grant or many like it were treated or even conceived of differently than those involving inventions in the modern sense. The Iron Works grant as well as those which did involve technological discoveries covered introduction of new and useful economic activities, and that was their defining trait. As Inlow puts it “By far the greatest bulk of the patents issued in the seventeenth and eighteenth centuries were patents for what we would describe today as ‘manufacturing’ purposes. There seems to have been absolutely no concept prevailing... of the systematic patenting of invention as it came to be known later.”²³⁷ Furthermore this focus of the grant on the introduction of a new and useful economic activity implied also the notion that the “consideration” provided by the patentee was introduction in practice rather than disclosure of abstract information.

While the concept of patents implicit in the colonial grant practice was very close to the early English one, the processes that gradually reshaped this concept in England were either absent or much diluted in the American colonies. The most significant difference in this respect is the absence, or at least the much reduced intensity and relevancy, of the struggle against monopolies and its repercussions in political discourse, statutory and common law. There was never an equivalent in the colonies of the common law and parliamentary struggle against the unlimited power of the royal prerogative in issuing monopolies. Although royal charters played an important role in the history of some colonies, royal monopolies of the sort that caused the upheaval in England were of little relevance there. At any rate, it is hard to imagine a direct attack on the royal prerogative similar to the one that launched by Parliament in England. It also seems plausible that the initial structural differences in the granting practice made the replication of the English conflict over monopolies unlikely. Since, to begin with, it was the assemblies rather than the governors who assumed the role of granting

²³⁷ Inlow, *supra* note 3, at 43. Inlow overstates, however, the difference from England in this respect when he goes on to argue that “by the time of the Restoration (1660), this older concept had pretty well disappeared in Britain. *Id.* As we saw the change in the concept of invention in England was much more gradual and it ripened into conscious ideology and legal form only in the second half of the eighteenth century. See also: Federico, *supra* note 222, at 359.

patents there was simply no institutional center or substantive drive to initiate a struggle for enforcing limitations on the grant power.²³⁸

As far as common law was concerned, there were no judicial attempts to develop restrictions on monopolies similar to those which appeared in England, much less an emergence of case law dealing specifically with patents for invention. In fact, there are no known colonial cases dealing with patents at all.²³⁹ In a few of the more sophisticated colonies faint echoes of the Statute of Monopolies appeared during the seventeenth century. When in 1641 the General Court of Massachusetts adopted the *Body of Liberties* it included a clause providing that:

“No monopolies shall be granted or allowed amongst us, but of such new Inventions yt are pfitable to ye Countrie, & yt for a short time.”²⁴⁰

Connecticut enacted in 1672 a law (apparently modeled after the Massachusetts one) providing that:

“It is ordered; That there shall be no Monopolies granted or allowed amongst us, but of such new Inventions as

²³⁸ In England where the parliament had power to grant exclusive entitlements parallel to the royal patent grants, this venue was used only sporadically and unsystematically. But when it was used the background assumption accepted by all was that the limitations of the Statute of Monopolies as well the model of generally defined limits on the scope of discretion did not apply to it. While the King’s scope of discretion to grant monopolies was marked with borders laid in the name of the public good, parliament remained free to define the public good in each of its grants.

²³⁹ Inlow who points this out observes that this is especially remarkable in view of what he assumes to be the extremely litigious propensities of the American colonists. Inlow, *supra* note 3, at 39.

²⁴⁰ *The Body of Liberties- 1641; A Copie of the Liberties of the Massachusetts Colonie in New England*, in THE COLONIAL LAWS OF MASSACHUSETTS, REPRINTED FROM THE EDITION OF 1660 WITH THE SUPPLEMENT TO 1672 34-35 (1889), Clause 9. This clause was retained in the 1648 enlarged version of the Massachusetts code: THE LAWS AND LIBERTIES OF MASSACHUSETTS (Max Farrand ed., 1929).

shall be judged profitable for the Country, and that for such time as the General Court shall judge meet.²⁴¹

These were Creole versions of the English political discourse of the time. It is not surprising that when the General Court of Massachusetts decided to enact a Body of Liberties for its people- under the influence of an existing and forming discourse of “English Liberties”²⁴²- the right of Englishmen to be free from “odious monopolies,” which was a prevalent theme in England’s political culture of the time, found its way into it.²⁴³

However, these local miniatures of the Statute of Monopolies remained declaratory statements of policy with little practical effect. The supposed restrictions they laid on monopoly grants were defined in much vaguer terms than those of the Statute of Monopolies and they created no alternative institutional power for their enforcement. In effect, such enactments recited the English political wisdom of the time that monopolies should be granted only for the public good and for a limited time, and then left the power making the grants- the assembly- to decide what the public good and a limited period were in each specific case. Thus the whole structure of discretionary prerogative limited by generally defined boundaries enforceable in the courts did not appear in the colonies. Instead, colonial grants were exercised under a framework similar to the early English “plenary discretion” understanding of patent grants (fig. 2). The only difference was that in the colonies it was the assembly and not the king that exercised this plenary discretion power.

Another process that never took place in the colonies was the standardization of the bureaucratic procedure for the grant of patents. In

²⁴¹ The Laws of Connecticut: An Exact Reprint of the Original Edition of 1673 52 (1865). About the colonial practice of “copying” laws from each other and the influence of the 1648 Laws and Liberties of Massachusetts in this respect see: Geroge L. Haskings & Samuel E. Ewing, *The Spread of Massachusetts Law in the Seventeenth Century*, 106 U. Pa. L. Rev. 413 (1958).

²⁴² For a discussion of the Laws and Liberties of 1648, its origins, and its changing orientation from a document of general principles to an attempt of a comprehensive code see: Throp L. Wolford, *The Laws and Liberties of 1648: The First Code of Laws Enacted and Printed in English America*, 28 B. U. L. Rev. 426 (1948).

²⁴³ See: *id.*, at 459.

England patents were the creature of the prerogative. This, in time, gave rise to an entire bureaucratic apparatus and procedure for the handling of the patent grant. In periods when the monarchs lost interest in the patents, the practical outcome was lack of investigation and discretion on the part of the crown or its representatives in the grant decisions, and standardization of the procedure for receiving a patent. This gradually eroded the privilege concept and by the end of the eighteenth century, while not yet giving rise to an unequivocal right concept, created substantial ambiguity on this issue. By contrast in the colonies the fact that each grant was a separate legislative act preserved the nature of the patent as a particularistic discretionary decision clear and viable. There was no standard procedure one could go through and expect the reception of a patent upon fulfillment of a few procedural requirements. A patent grant was in all cases a process of political deliberation and discretion. In periods when certain colonies lost interest in patents for invention there was no executive process that kept on rolling. The outcome was the absence of such patents rather than their issue on demand.

Another side-effect of the absence of a standard procedure for patent grants may have been the fact that specification never appeared in the colonies. As we saw, specification first appeared in England as a matter of bureaucratic procedure. It was probably intended, at first, to facilitate the passive governmental approach in granting patents. Subsequently the practice evolved into reconceptualization of invention and of the patent deal. Such a gradual development from practice into ideology never had a channel in which to start working its way in the colonies.

As for the changing concept of invention, again all that seems to have reached the colonial practice were faint echoes from the motherland. In the eighteenth century one can trace such echoes of the gradual rise of the modern concept of invention mainly in the kind of grants made. The number of grants for invention covering straightforward technological innovations seems to have risen, even though other patent grants did not disappear. Furthermore, in some discussions regarding patent grants, as well as in some of the petitions and bills, there started to appear the image of the genius inventor who discovers new technology, as categorically different from the mere entrepreneur. Thus, for example, when a South Carolina committee recommended a grant to George Timmons in 1743 it explained that “they are of the opinion that all possible Encouragement should be given to the People of a mechanical Genius.”²⁴⁴ Still, these signs of change stayed mainly on the

²⁴⁴ SOUTH CAROLINA JOURNAL OF THE COMMONS HOUSE, 1742-1744, 240 458-459. Bugbee, *supra* note 222, at 79.

rhetorical level. There was no corresponding structural change in the grant practices.

One isolated exception to this rule may have been a short episode in South Carolina that never came to fruition. In 1744 two attempts were made in that colony to introduce a bill for “the Encouragement of such Persons as shall invent Machines that may be useful in the Manufactures of this Province.”²⁴⁵ Nothing came of this and the bill was never passed. It is hard to assess to what extent, if at all, the proposed bill expressed a move toward a concept of general rights, but the very incident indicates modest beginnings of new ideas regarding patents. By the end of the colonial era, however, such new ideas and their implementation in practice were mainly a thing of the future.

Like many other American colonial practices and laws the colonial patent grant was a somewhat haphazard institution that bore strong traces of its English origins and yet acquired different local character. These local mutations were created by diverse causes such as different material conditions, partial and distorted knowledge of the original English institutions and influence of locally prevailing interests and ideologies.²⁴⁶ The

²⁴⁵ JOURNAL OF THE COMMONS HOUSE OF ASSEMBLY, FEBRUARY 20 1744 – MAY 25, 1745 (J.H. Easterby ed.) 245. See in general: Bugbee, *supra* note 222, at 80-81.

²⁴⁶ The prominent cause supplied for the infrequent use of patents in the American colonies as well as their different features (sometimes referred to as “undeveloped”) is a material one: the fact that the colonial economy was based mainly on agriculture and had a very small manufacture sector to which technological innovation was relevant. See for example: Federico, *supra* note 222, at 58. Inlow, *supra* note 3, at 37-38. Inlow mentions also the English policy against dissemination of technological information abroad, and the cost/benefit ratio of obtaining a patent for innovators. See also: Walterscheid, *supra* note 222, at 15-16. The different material conditions are certainly an important part in explaining the character of the colonial patent grant, but the entire story of the shaping of the colonial concept and practice could not be reduced to it. Some other factors that one may want to consider in this context are of different kinds. One such kind is ideological factors, such as the reduced intensity and relevancy of the English political monopoly struggle, and different local conceptions of the purpose and shape of government. Another set of factors is that of local politics and political practice, namely both the interaction and alignment of power between different interests and the institutional structure of government and the

irony of the colonial patent grant is that by the late eighteenth century the local *mélange* of practices that was formed there, with all its peculiarity, was much closer to the English Elizabethan patent grants than the English patent practice of the time. It remained deeply rooted in the concepts of patents as particularistic privileges and of invention as the introduction in practice of an economic activity.

B. State Patents

Between independence and the Constitution no national patent system appeared in the United-States.²⁴⁷ Individual states granted patents during this period in a fashion that was a direct continuation of the colonial patent grant tradition.²⁴⁸ Still a few faint signs of change in the traditional framework of the concept and practice of patents started to appear. After a decline during the revolution and the war the 1780s saw a surge of patent grants in many of the states, including some that did not grant patents during the colonial era. Such grants carried over all the characteristics of the colonial grants and the concept of patents implicit in them. The traditional colonial understanding of government as having a right and a duty to promote the public good by actively intervening in the economy and encouraging useful enterprises was

everyday practices and concepts that such structure gave rise to. In the end the form of the colonial patent grant was shaped by and woven into all these factors, and probably others, rather than just the nature of the colonial economy.

²⁴⁷ The Continental Congress, despite several approaches for particularistic bills following the pattern of state patents, never granted patents, much less legislated a general patent regime. It is unlikely that the question was even considered, but as Walterscheid explains under the Articles of Confederation the Congress actually had no authority to legislate in that field. For discussion of the power of Congress in this respect see: Walterscheid: *supra* note 222, at 4-9. On May 2, 1783 the Congress issued a resolution calling upon the states to legislate copyright laws. However, it made no reference to patents for invention in that resolution or on any other occasion. See: JOURNALS OF THE CONTINENTAL CONGRESS vol. 24 326-327 (Worthington C. Ford ed. 1906).

²⁴⁸ On State patents see: Bugbee, *supra* note 222, at 84-103; Inlow, *supra* note 3, at 43-46; P. J. Federico, *State Patents*, 13 J. Pat. Off. Soc. 166 (1931) Walterscheid, *supra* note 222, at 16-17.

very much alive in the states.²⁴⁹ State patents for invention were only one channel the state governments employed in order to try and actively encourage an economy damaged by war and struck by depression, and it was not sharply differentiated from other forms of monopoly grants not involving invention in the modern sense.

Patents continued to be granted by ad-hoc enactments that expressed the discretionary and case-specific character of this tool. Typically, the grantee petitioned the legislature hoping to persuade it of the usefulness of the invention and the desirability of a patent grant.²⁵⁰ The legislature would employ discretion and make specific decision in each case. Furthermore, at least in some states where the issue arose it seems to have been assumed that patents were revocable. The presumption there was that what the legislature's discretion could award in the patent grant could also be taken away by the same power.²⁵¹ This general assumption never consolidated into, and indeed may have made redundant, a general administrative practice of inserting standard revocation clauses in the grants similar to the English ones. Other

²⁴⁹ See: OSCAR & MARY HANDLIN, COMMONWEALTH- A STUDY OF THE ROLE OF GOVERNMENT IN THE AMERICAN ECONOMY: MASSACHUSETTS 1774-1861 (1947); LOUIS HARTZ, ECONOMIC POLICY AND DEMOCRATIC THOUGHT: PENNSYLVANIA 1776-1860 (1948).

²⁵⁰ One interesting phenomenon that seems to have developed and occurred in a few of the petitions was the attachments of recommendation letters from people of influence and reputation, recommending the inventor and his invention. James Rumsey was equipped with a letter from George Washington recommending his steamboat. See: Bugbee, *supra* note 222, at 96. John Fitch was armed with a letter from John Dickenson in order to help secure his Delaware patent. *Id.*, at 97.

²⁵¹ Unlike the parallel issue of corporate charters here was no legal dispute that directly involved the question of whether the legislature could revoke a patent grant, but from a few instances in which such revocations happened it seems that at least during the eighteenth century the assumption was that the legislature could take away what it granted. The issue was evoked in retrospect in the case of *Livingston v. Van Ingen*, 9 Johns 507 (N.Y. 1812). The facts of the case involved the revocation of the 1787 patent to John Fitch for the use of steamboats on all waterways in New York and a subsequent grant to Robert R. Livingston. While the defendant in the case used various arguments to attack the validity of the grant to Livingston, no argument that the state didn't have power to revoke Fitch's original patent was raised. It seems that all assumed that the legislature had such power.

states expressly made some of their grants revocable at the discretion of the legislature upon payment of a lump sum to the patentee.²⁵²

Starting in the late colonial era and growing after independence a stream of utterances justifying the award of patents on general policy grounds of two kinds appeared. The first ground was that of rewarding inventors for their useful services with a just desert, or in the words of the Pennsylvania legislature: “provide suitable recompense for those who, by their own expense, ingenuity or dint of application have made new and useful discoveries.”²⁵³ The other ground was the utilitarian one focused on the desire “to encourage useful inventions.”²⁵⁴ Both of these, however, remained justifications of specific patent bills, rather than reasons for a general regime or for patent rights.

A lonely sign of change in this respect was a 1784 South Carolina statute that is often referred to as the first general patent act in America. This was, in fact, a provision in the newly enacted copyright law of the state or the “Act for the Encouragement of Arts and Sciences.”²⁵⁵ The provision created equivalence between the entitlements of authors and inventors declaring that:

“The Inventors of useful machines shall have a like exclusive privilege of making or vending their machines for the like terms of 14 years, under the same privileges

²⁵² Many of James Rumsey’s patents for his steamboat had revocation compensation clauses. This may have been a result of his invention being considered as having vital importance to the state interests. Rumsey’s 1785 Virginia patent had the highest revocation fee of £10,000. See: THE STATUTE AT LARGE, BEING A COLLECTION OF ALL THE LAWS OF VIRGINIA (1619-1792) vol. XI 502 (William Waller ed. 1809-1823). For a survey of all of Rumsey’s patents and their revocation fees see: Bugbee, *supra* note 222, at 96-99.

²⁵³ STATUTE AT LARGE OF PENNSYLVANIA FROM 1682 TO 1801 vol. X 131-132 (James T. Mitchell ed. 1896-1911). (hereinafter: PENNSYLVANIA STATUTE AT LARGE). Bugbee, *supra* note 222, at 86.

²⁵⁴ This appeared in the preamble of Maryland’s 1787 grant to Robert Lemmon. LAWS OF MARYLAND vol. II Session of November 6, 1786-January 20, 1787 c. 23 (William Kilty ed. Annapolis 1799-1800). (Hereafter: LAWS OF MARYLAND). Bugbee, *supra* note 222, at 95.

²⁵⁵ STATUTE AT LARGE OF SOUTH CAROLINA vol. VI 618-620 (Thomas Cooper ed. 1837-1868). (hereinafter: SOUTH CAROLINA STATUTES).

and restrictions hereby granted to, and imposed on authors of books.’²⁵⁶

The South Carolina patent provision was an important landmark but it was not a definite move from privileges to general patent rights. Though it proclaimed in general language that inventors of useful machines “shall have” a standard set of entitlements, it did not create any procedure or apparatus for the award of these entitlements. The very limited character of the change is evident from the fact that the patents issued in South Carolina after the 1784 statute were still granted on a particularistic basis of specific petition and legislation.²⁵⁷ Hence it seems that the importance of the provision was mainly in expressing a general policy of rewarding inventors of useful machines²⁵⁸ while leaving the actual decision whether a machine was useful and whether to grant privileges to the traditional legislative discretionary process. There was no patent right created by the provision. One possible consequence of the statute, however, may have been some standardization of the patent privileges. Grants made in South Carolina after 1784 appear to have adhered to a standard term of fourteen years.²⁵⁹

Most of the old practices of the colonial patent grants persisted in those of the states. Working clauses, as well as specification of price, quality and occasionally more case-specific terms continued to be common in patent grants. These expressed not only the lingering concept of patents as discretionary privileges but also that of invention as an introduction in practice of a trade. Yet it was regarding this last feature that the strongest indications of change began to appear in state patent grants. Invention was gradually changing its old meaning. In continuation to the late colonial developments, many of the grants and the discussions in state legislatures regarding patents for invention contained language that identified invention with technological innovation and the inventor as the discoverer of new ideas. Thus, when the Pennsylvania legislature granted a patent to Arthur

²⁵⁶ *Id.*

²⁵⁷ For examples of such grants see: Bugbee, *supra* note 222, at 93-95. Federico notes that “in practice this section only operated as an invitation to inventors to request the legislature for patents.” Federico, *supra* note 222, at 167.

²⁵⁸ The provision as well as its expressed policy were often cited in later South Carolina grants. See for example: The 1786 grant to Peter Belin. SOUTH CAROLINA STATUTES, vol. IV 755. Bugbee, *supra* note 222, at 93.

²⁵⁹ See: Bugbee, *supra* note 222, at 93-95.

Donaldson for his “hippopotamus” (a dredging machine used in ports and docks) it declared that:

“it is consistent with the honor of this state to reward the inventors of useful machines and the most rational and just mode of such reward is and ought to be the exclusive advantage resulting from the invention for a term of years.”²⁶⁰

The preamble of the South Carolina grant to Briggs and Longstreet explained that:

“the principles of natural equity and justice require that authors and inventors should be secured in receiving the profits that may arise from the sale or disposal of their respective writings and discoveries, and such security may encourage men of learning and genius to publish and put in practice such writings and discoveries as may do honor to their country and service to mankind.”²⁶¹

Invention was evidently acquiring its modern distinctive association with technological innovation. Furthermore, invention was gradually distinguished from the broader concept of introduction in practice and came to be associated exclusively with original discovery and development. Thus, a growing number of grants showed a developing concern about this new meaning of invention by incorporating clauses that voided the patent in case it would be revealed that the grantee was not “the true and original” inventor.²⁶² A 1788 publication of the Pennsylvania Society for the Encouragement of Manufacture and the Useful Arts demonstrated both the ascendancy of this modern concept of the inventor as the original discoverer of a new idea and the lingering of the old notions of introduction of a useful new trade or technology. The Society hailed the award by the Pennsylvania legislature of a monetary prize to Joseph Hague, a British subject who

²⁶⁰ PENNSYLVANIA STATUTE AT LARGE, vol. XI 412-415. Bugbee, *supra* note 222, at 89.

²⁶¹ SOUTH CAROLINA STATUTES, vol. V 71. Bugbee, *supra* note 222, at 95.

²⁶² See for example: Pennsylvania’s 1789 grant to Robert Leslie. PENNSYLVANIA STATUTE AT LARGE, vol. XII 309-312. Bugbee, *supra* note 222, at 91. Maryland’s 1787 patent to Robert Lemmon. LAWS OF MARYLAND vol. II Session of November 6, 1786- January 20, 1787 c. 23. Bugbee, *supra* note 222, at 95.

smuggled a cotton carding machine to Philadelphia.²⁶³ In its announcement it referred to Hague as “the ingenious Artizan, who counterfeited the Carding and Spinning Machine, though not the original inventor (being only the introducer).”²⁶⁴ One can discern here the new clear distinction between the inventor and the introducer. Yet the introducer was still conceived of as both “ingenious” and worthy of reward. “Counterfeited,” could still be used in this context as a praise. Although as a matter of administrative practice or legal definition patents for invention in the modern sense were still not sharply differentiated as a separate category, there appeared clear signs that they were starting to acquire a distinct meaning as an independent brand of exclusivity grants, based on the modern concept of invention as original development of technological innovations.

The one area where the changing concept of invention was beginning to be embedded in actual administrative practice was the gradual emergence of a rudimentary version of specification in some of the states. Reminiscent of the earlier process in England the requirement of a detailed description of this invention first appeared as an administrative requirement designed to facilitate procedural needs. Thus, some grants stipulated that the patentee would deposit descriptions of his invention in order to enable others to know what exactly was patented.²⁶⁵ In some states, however, this practice started to give rise to a concept of the invention as information and of the “consideration” of the patent deal as the disclosure of the information.

Especially interesting in this respect were two patents granted to Henry Guest in 1780 in Pennsylvania and New-York.²⁶⁶ These grants signaled the transition period by clinging to both concepts of invention: as introduction in practice and as the disclosure of information. The grants had both working clauses that required that the invention would be introduced in practice within a prescribed time and a specification requirement based upon

²⁶³ See DORON S. BEN-ATAR, *TRADE SECRETS: INTELLECTUAL PIRACY AND THE ORIGINS OF AMERICAN INDUSTRIAL POWER* 79-80 (2004).

²⁶⁴ Cited in *id.*, at 80. I Minutes of the Manufacturing Committee, January 19, 22, March 12 1788, Papers of Tench Coxe Historical Society of Pennsylvania.

²⁶⁵ See for example: Peter Belin’s 1784 South Carolina Patent stipulated that he would deposit with the Secretary of the State plans or models of his devices in order to “prevent any person from pleading ignorance.” *SOUTH CAROLINA STATUTES*, vol. IV 755-756. Bugbee, *supra* note 222, at 94.

²⁶⁶ See in general: Bugbee, *supra* note 222, at 85-88.

the idea of disclosure as the consideration. The Pennsylvania, grant while mandating revocation in the case of failure to introduce in practice within eight months, went on to require that “before or as soon as the said Henry Guest begins to manufacture the aforesaid oil and blubber in this state he shall put up in his said manufactory or manufactories a printed account in English and German of the said material by him discovered or invented and use in the making oil and blubber, subject to the inspection of all persons.” It explained the requirement as follows: “in order that no person may unknowingly offend and that all after the expiration of the term of five years may be enabled to prosecute the said manufactures to their own advantage.”²⁶⁷

The state patent regimes were never formally abolished. When the federal system appeared, some questions of preemption arose,²⁶⁸ but the states’ power to grant patents was never sweepingly declared unconstitutional. In fact, some states went on to granting patents for invention through specific legislation into the early nineteenth century. States’ patents for invention gradually decayed and fell into disuse once the federal system was introduced and inventors were attracted by the obvious advantages of a national patent covering a national market. The short period in which state patents bloomed created a practice that was well grounded in the colonial grant tradition and nevertheless started showing some indications of change. There were very faint signs of standardization of the patent entitlements and some thoughts about general patent regimes rather than case-specific legislation, but there was no clear move toward general patent rights.

²⁶⁷ PENNSYLVANIA STATUTE AT LARGE, vol. X 133.

²⁶⁸ In *Livingston v. Van Ingen* the New York Court overturned the Chancellor’s decision who had struck down New York’s patent legislation as unconstitutional due to preemption by the federal Constitution. The court ruled that the federal regime did not prohibit state’s power to issue patent as long as the latter was “exercised in harmony with, and in subordination to, the superior powers of Congress.” 9 Johns Cas. 567. *Gibbons v. Ogden*, 22 U.S. 1 (1824) which is known as a celebrated commerce clause case, dealt with the same New York patent grant for the use of steamboats. The Supreme Court that struck down the New York legislation based its opinion solely on interstate commerce grounds. Regarding the state powers to grant patents Chief Justice Marshall remarked only that “I have not touched upon the right of the states to grant patents for invention or improvements, generally, because it does not necessarily arise in this cause. It is enough to for all the purposes of this decision, if they cannot exercise it so as to restrain a free intercourse among states.” *Id.*, at 80.

Somewhat more noticeable change occurred regarding the concept of invention. The state grants showed a gradual consolidation of the new meaning of invention as technological innovation and of the object of the patent “deal” as the information disclosed by the inventor and protected by the patent. Patents for invention in this new sense, started to emerge as a separate category; if not legally and administratively, at least on a preliminary conceptual level.