



## *Evidentiary Problems of Multidisciplinarity in the Litigation of Business Method Patents*

NORMAN SIEBRASSE

**ABSTRACT (EN):** It is now widely accepted that judicial decision making is not a neutral exercise in interpretation of established law and consequently decisions, particularly in novel areas, should take account of policy considerations. In this article the author uses the example of litigation over the patentability of business methods to problematize this line of reasoning. Sound policy typically turns on empirical evidence, and while there is a significant body of research on the question of whether business method patents promote innovation, such evidence has been introduced only indirectly, though academic articles. This does not allow adequate examination of the reliability of the evidence. Introducing empirical social science evidence directly in litigation faces a number of hurdles which are discussed. Ultimately the author argues that it is beyond the institutional competence of the courts to adequately take account of empirical social science evidence on the issue of whether business method patents are good for innovation. While the details of the arguments are specific to the context of business method patents, the author suggests that the issue of institutional competence should always be taken into account when considering whether empirical social science evidence should drive judicial decision making.

**RÉSUMÉ (FR):** Il est maintenant largement admis que le processus de décision judiciaire n'est pas un exercice neutre d'application de principes de droit établis et que, par conséquent, les décisions, particulièrement dans des nouveaux domaines, devraient tenir compte des considérations d'ordre

politique. Dans ce chapitre, l'auteur s'appuie sur les arrêts qui se sont prononcés sur la brevetabilité des méthodes d'affaires commerciales pour étudier la problématique de cette ligne de pensée. Une politique rationnelle est normalement fondée sur des preuves empiriques, mais alors qu'il existe un important corpus de recherches sur la question de savoir si les brevets sur les méthodes d'affaires commerciales stimulent l'innovation, ces données empiriques ne peuvent être présentées en cour qu'indirectement, par le truchement d'articles scientifiques. Cela ne permet pas un examen adéquat de la fiabilité de ces études. La présentation directe de données de sciences sociales devant les tribunaux rencontre un certain nombre d'obstacles qui sont discutés dans ce chapitre. L'auteur conclut que le fait de tenir compte adéquatement des preuves empiriques des sciences sociales, lorsqu'il s'agit de décider si la brevetabilité des méthodes d'affaires est favorable à l'innovation, va au-delà de la compétence institutionnelle des tribunaux. Bien que le détail des arguments porte de manière spécifique sur la brevetabilité des méthodes d'affaires, l'auteur soutient que cette question de la compétence institutionnelle des tribunaux devrait toujours être prise en considération lorsqu'il faut décider si les preuves empiriques des sciences sociales seront déterminantes dans les prises de décision des tribunaux.

## A. INTRODUCTION

The turn to policy in legal analysis that began with the Realists has undoubtedly been salutary in its overall effect on the law, but we have yet to fully come to grips with the evidentiary problems that this insight implies. The Realist insight is that legal doctrines are not neutral, but reflect particular policy considerations. Making these considerations explicit should therefore improve the quality of legal decision making. The difficulty is that while the correct decision from a policy perspective often turns on empirical social science evidence, the relevant evidence is typically not before the court. Focusing on *Amazon.com*<sup>1</sup> in Canada, and *Bilski*<sup>2</sup> in the United States, the following chapter illustrates this problem with the example of litigation

---

1 *Amazon.com Inc v Canada (AG)*, 2011 FCA 328 [*Amazon.com FCA*], rev'g 2010 FC 1011 [*Amazon.com FC*], *Re Amazon.com, Inc Patent Application No 2,246,933* (2009), 75 CPR (4th) 85 (PAB and Comm'r of Patents) [*Re Amazon.com's Application*].

2 *Bilski v Kappos*, 561 US \_\_\_, 130 S Ct 3218 (2010) [*Bilski*]; see Norman Siebrasse, "The Rule Against Abstract Claims: A Canadian Perspective on US Jurisprudence" (2010) 27 CIPR 3 [Siebrasse, "US Law in Perspective"], for a discussion of the US jurisprudence.

over the patentability of business methods. My premise is not novel: while the law should reflect policy considerations, the courts are not always the place to introduce policy concerns. More precisely, old-fashioned “black-letter” textual interpretation, which itself reflects the policy consideration of supremacy of the legislature, may be preferable to an expansively purposive approach to interpretation. I argue that properly assessing the policy evidence relevant to whether business methods should be patentable is beyond the institutional competence of the courts. While the same conclusion does not necessarily follow in all contexts, this example suggests that we should not simply assume that relevant empirical social science evidence should be judicially considered in litigation.

## B. THEORY

The legal answer to the question of whether business methods are patentable turns on whether business methods are an “art” within the meaning of that term in the definition of “invention” in the *Patent Act*.<sup>3</sup> The modern approach to statutory interpretation requires consideration of the purpose of the statute as well as its text and context.<sup>4</sup> “When the words of a provision are precise and unequivocal, the ordinary meaning of the words play a dominant role in the interpretive process. On the other hand, where the words can support more than one reasonable meaning, the ordinary meaning of the words plays a lesser role.”<sup>5</sup> The word “art” is open-ended on its face, so this seems to be a good case in which a purposive interpretation should be important. Given that the uncontroversial purpose of the Act is to promote innovation, this implies that “art” should be interpreted to include business methods if and only if patents would promote innovation in business methods. This is an empirical question. There is a substantial body of empirical research as to whether patents in particular fields, including business methods, would promote or impede innovation. From this research it would seem to follow that the interpretation of “art” should turn on this empirical evidence.

---

3 RSC 1985, c P-4, s 2.

4 *Rizzo & Rizzo Shoes Ltd (Re)*, [1998] 1 SCR 27 at para 21.

5 *Canada Trustco Mortgage Co v Canada*, 2005 SCC 54 at para 10.

## C. PRACTICE

Despite this theory, consideration of whether patenting business methods would promote business innovation has not been central to the litigation. In *Amazon.com Phelen J* in the Federal Court decision expressly rejected consideration of policy in interpreting the term “art,”<sup>6</sup> while for both the Federal Court of Appeal in *Amazon.com* and for Kennedy J, writing the opinion of the United States Supreme Court in *Bilski*, the question turned solely on matters of legal principle.<sup>7</sup> The Patent Appeal Board in the decision under appeal in *Amazon.com* and the concurrence of Stevens J in the United States Supreme Court in *Bilski* recognized to some extent policy arguments in interpreting the term “art,” but neither relied upon any of the crucial empirical evidence.

The entirety of the policy discussion in the Patent Appeal Board decision in *Amazon.com*, which was introduced only after the Board had concluded that business methods are unpatentable in Canada, was the following paragraph, quoted from an English High Court decision:

Now let us consider business methods. What is the policy reason that lies behind the exclusion of those [under the *European Patent Convention* Article 52(2)(c)]<sup>8</sup>? It is because, historically, patents for business methods were never granted yet business innovation went on very well without the benefit of that protection and without the red tape. Businessmen have been every bit as inventive as engineers. It was probably business administrators (and not poets or priests) who made the greatest “invention” of all time: phonetic writing. Consider as further examples: the invention of money; of double-entry bookkeeping; of negotiable bills of exchange; of joint-stock companies; of insurance policies; of clearance banking; of business name franchising; of the supermarket; and so on. None of these needed patent protection to get started.<sup>9</sup>

---

6 *Amazon.com FC*, above note 1 at para 36.

7 The decision of the Federal Court of Appeal in *Amazon.com* relied largely on its own prior decision in *Schlumberger Canada Ltd v Commissioner of Patents*, [1982] 1 FC 845 (CA) [*Schlumberger*]; see Siebrasse, “US Law in Perspective,” above note 2, for a discussion of *Schlumberger* and *Bilski*.

8 *Convention on the Grant of European Patents*, 5 October 1973, 1065 UNTS 199 (entered into force 7 October 1977) [*European Patent Convention*].

9 *Re Amazon.com’s Application*, above note 1 at para 149, quoting *CFPH LLC v Comptroller-General of Patents, Designs and Trade Marks*, [2005] EWHC 1589 (Pat) at para 41.

The observation that there have been many business innovations without patents is accurate, but it is not a good argument against granting business method patents. While the list of pre-patent business innovations is impressive, so is the list of pre-patent inventions in purely traditional fields of endeavour: the wheel, the spoked wheel, the bow and compound bow, bronze, the pulley, the mouldboard plow, rib and plank ship construction, the compass, brick, pottery, glass and porcelain making, and the printing press, to name a few. No one supposes that innovation would cease without patents.

The argument in favour of patents is that they may increase the speed of innovation. The patent system developed in its modern form during the British Industrial Revolution when the speed of innovation increased dramatically. It is unlikely that patents caused the Industrial Revolution, but they may have accelerated it.<sup>10</sup> Similarly, the argument for patenting business methods is not that there will be no business innovation without patents, but that patents will increase the pace of business innovation. The observation that there have been innovations in business methods even in the absence of patents fails to address this central point.

#### D. JUSTICE STEVENS IN *BILSKI*

The majority in *Bilski* held the patent in question to be unpatentable subject matter as claiming abstract ideas.<sup>11</sup> This is a general legal principle which, in the view of the United States Supreme Court at least, does not turn on empirical evidence. While Justice Stevens accepted this, he was of the view that business method patents should be excluded *per se*, whether or not the patent in question claimed an abstract idea or a specific application.<sup>12</sup> He relied expressly on the argument that ambiguous patent laws should be interpreted in a manner that encourages, rather than impedes, innovation,<sup>13</sup> and he dealt extensively with the policy arguments and evidence.<sup>14</sup> Justice

---

10 See, for example, Petra Moser, "How Do Patent Laws Influence Innovation? Evidence from Nineteenth-Century World's Fairs" (2005) 95 *American Economic Review* 1214, concluding at 1233 that the decision to strengthen patent laws "may have played an important role in encouraging the American focus on manufacturing machinery that spurred economic growth toward the end of the [nineteenth] century."

11 *Bilski*, above note 2 at 3229–30.

12 *Ibid* at 3232 and 3257 (Justice Stevens, Ginsburg, Breyer, & Sotomayor JJ, concurring).

13 *Ibid* at 3252–53.

14 *Ibid* at 3252–57.

Stevens's opinion fits closely with the approach implied by the Realist paradigm, and is therefore worth treating in more detail.

Justice Stevens began by noting that it is uncontroversial that the basic argument in favour of patenting is the need to provide an incentive to undertake "expensive" and "risky" investment in innovations that are "easily copied."<sup>15</sup> He referenced the economic scholarship, which "suggest[s] that these dynamics of cost, risk, and reward vary by the type of thing being patented."<sup>16</sup> This point can now be considered to be well-established in the scholarly literature.

From these general points, Stevens J turned to business methods specifically. Justice Stevens relied on the same historical point made by the Patent Appeal Board in *Amazon.com* that business methods innovation has occurred even without patents, though he acknowledged that "counterfactuals are a dubious form of analysis."<sup>17</sup> Apart from this anecdotal evidence, Stevens J relied on academic articles giving theoretical reasons, backed up by empirical evidence, as to why the residual non-patent incentives such as "various first mover advantages, including lockins, branding, and networking effects," provide adequate non-patent innovation incentives.<sup>18</sup> He also explained how business method patents might impede innovation, rather than encourage it, as when patent holders may use business method patents "to threaten litigation and to bully competitors, especially those that cannot bear the costs of a drawn out, fact-intensive patent litigation."<sup>19</sup>

The general difficulty with these arguments is that exactly the same may be said, as a matter of theory, about patents in many traditional areas. First-mover advantages and so on give some advantage in any field, and a substantial reward in some fields. Similarly, patents in any field may impede innovation. The threat of a larger company bullying a smaller one by the threat of protracted litigation is a problem of intellectual property law generally; after all, while many are concerned about business method patents encouraging patent trolls, the trolls that have appeared to date have exploited patents in traditionally patentable fields. And indeed, bullying tactics are a feature of law generally, which is a consequence of the cost of

---

15 *Ibid* at 3253.

16 *Ibid* [footnote omitted].

17 *Ibid* at 3254 [footnote omitted].

18 *Ibid*, citing Dan L Burk & Mark A Lemley, "Policy Levers in Patent Law" (2003) 89 Va L Rev 1575 at 1618.

19 *Ibid* at 3257 [footnote omitted].

litigation, rather than any feature of intellectual property law in particular. It is true that business method patents may impede innovation by needlessly restricting competition and raising prices of basic building blocks, and exposing true innovators to opportunistic actions. On the other hand, the fundamental theoretical justification for patent protection, and indeed intellectual property rights generally, is that innovation is fundamentally knowledge. Knowledge may require substantial investment to develop, and yet by its intangible nature is easily appropriated by free riders who can then undercut the innovator's price. Business method innovations fit this basic theoretical paradigm perfectly. This theory is not new. While modern scholars have added some refinements and associated jargon, like "patent thickets" and "opportunism," the horns of the intellectual property dilemma have been understood for centuries.<sup>20</sup> However, theory alone does not resolve the question. It is possible to support the case for or against patenting in any industry by selectively citing the theoretical considerations on one side or the other. Business method patents may indeed impede innovation; they may also promote innovation. The question is not whether they may impede innovation, but whether they *do*. This is an empirical question, not a theoretical one.

Justice Stevens relied particularly on an important article by Burk and Lemley, "Policy Levers in Patent Law," for the proposition that business methods in particular are different, as "companies have ample incentives to develop business methods even without patent protection, because the competitive marketplace rewards companies that use more efficient business methods."<sup>21</sup> However, Burk and Lemley's article is theoretical, and while it refers extensively to the empirical literature, it does not rely on empirical evidence to support this particular proposition.<sup>22</sup> This is because the thrust of their article is that different models of innovation are applicable to differ-

---

20 See *Sayre v Moore* (1785), quoted in *Cary v Longman* (1801), 1 East 358, 362 n (b), 102 ER 138, 140 n (b) (KB).

21 *Bilski*, above note 2 at 3254, Stevens J quoting Burk & Lemley, above note 18 at 1618.

22 Rochelle Cooper Dreyfuss, "Are Business Method Patents Bad for Business?" (2000) 16:2 *Santa Clara Computer & High Tech LJ* 263 at 274-77, which is another article quoted or cited at various points in Stevens J's opinion. Without engaging in a detailed discussion of this article, I will simply note that it makes an entirely theoretical point, for which there is a strong *prima facie* counter argument: see Norman Siebrasse, "The Structure of the Law of Patentable Subject Matter" (2011) 23:2 *IPJ* 167 [Siebrasse, "Structure"]. This is not to say that Dreyfuss's point is necessarily wrong, but rather that once again, the theoretical debate can only be resolved by empirical evidence.

ent industries and they argue that patent law should take “industry-specific variation into account explicitly in applying general patent rules to specific cases.”<sup>23</sup> Their theoretical analysis is appropriate to support their thesis, as their ultimate conclusions are framed in general terms, which would be tailored to the facts of the specific case. They explicitly argue against different patent laws for different industries.<sup>24</sup> One of their main arguments on this point is that establishing industry patent laws specific policy requires information that goes beyond the current economic knowledge:

[W]hile economics can make useful policy suggestions as to how patents work in different industries, we are skeptical of the ability of a statute to dictate in detail the right patent rules for each industry. Many of the predictions of economic theory are fact-specific — they suggest different factors that should bear on the outcome of particular cases, but that require case-by-case application that cannot easily be captured in a statute. Economic theory is more useful in making general suggestions about how the patent system can be adapted to particular factual contexts than as the basis for a whole series of new statutes.<sup>25</sup>

Consistently with this observation, they do *not* argue that business methods should not be patentable. Rather, they argue that business method patents “should be rare and very modest in scope.”<sup>26</sup>

Justice Stevens did cite a leading empirical economic article on the industry specific nature of the patent incentive.<sup>27</sup> However, all that this study aimed to show is that the patent incentive varies by industry. Because the work was an early foray into this field of research, written before business method patents exploded onto the scene with *State Street Bank*,<sup>28</sup> it did not mention business method patents at all.<sup>29</sup>

Justice Stevens argued that “the functional case that patents promote progress generally is stronger for subject matter that has ‘historically been

---

23 Burk & Lemley, above note 18 at 1579.

24 *Ibid* at 1631–37.

25 *Ibid* at 1634–35 [footnotes omitted].

26 *Ibid* at 1619.

27 Richard C Levin et al, “Appropriating the Returns from Industrial Research and Development” (1987) 3 Brookings Papers on Economic Activity 783 at 794–95, cited by Stevens J in *Bilski*, above note 2 at 3254, n 50.

28 *State Street Bank & Trust Co v Signature Financial Group Inc*, 149 F 3d 1368 (Fed Cir 1998).

29 Levin et al, above note 27, cited in *Bilski*, above note 2 at 3254, Stevens J.



eligible to receive the protection of our patent laws'. . . ."<sup>30</sup> This conclusion simply is not supported by the empirical evidence. This is not because the evidence shows that patents are important for promoting business method innovation; it is because the empirical evidence that patents are important in most traditional areas is also weak.<sup>31</sup> Because business method patents are a relatively recent phenomenon, there has been little empirical research directly on whether they have had a positive net effect on innovation, and it should also be recognized that this type of research is inherently difficult. Consequently, it is difficult to draw any firm conclusions. In a review article, Bronwyn Hall, one of the leading empirical researchers in this field, remarks wryly that "[t]he only conclusion that is certain is that allowing business method patents will cause an increase in the patenting of business methods."<sup>32</sup> She continues:

Unfortunately . . . it is much more difficult to make predictions about the effects of this subject matter expansion on innovation that are not pure speculation. We know that patents are not considered essential for capturing the returns to innovation in many industries, and there seems no reason to think that this one is different. Casual observation suggests that business method patents are not being used to provide innovation incentives as much as they are being used to extract rents *ex post*, but this evidence could be misleading. We do not know whether there would have been as much entry into internet businesses or new financial offerings in the absence of the patent system, or even whether such entry is a good or a bad thing.<sup>33</sup>

We certainly cannot conclude that business method patents are good for innovation, but at this point we cannot conclude that they are particularly bad either.<sup>34</sup>

---

30 *Bilski*, above note 2 at 3253–54 [footnote omitted].

31 Siebrasse, "Structure," above note 22.

32 Bronwyn H Hall, "Business and Financial Method Patents, Innovation, and Policy" (2009) 56:4 *Scottish Journal of Political Economy* 443 at 459–60.

33 *Ibid* at 460 [emphasis in original]; see also Robert M Hunt, "Business Method Patents and US Financial Services" (2010) 28:3 *Contemporary Economic Policy* 322. The author concludes that "we still cannot determine whether these patents are creating value for the U.S. economy" at 349.

34 See Robert P Merges, "The Uninvited Guest: Patents on Wall Street" (2003) 88:4 *Federal Reserve Bank of Atlanta: Economic Review* 1. Merges is skeptical as to the value of patents in promoting innovation in finance, yet predicts that "[p]atents will not cause any real and lasting problems" as firms adapt to the new environment, at 12.

## E. JUDICIAL NOTICE CRITIQUE

To this point I have argued that the theoretical case against business method patents is inconclusive and the empirical evidence by Stevens J in *Bilski* is inadequate to resolve the question. There is also a distinct objection to Stevens J's use of empirical evidence to conclude that business method patents would impede innovation. Justice Stevens's approach of citing academic articles that review or report on empirical research amounts to taking judicial notice of contested facts. Empirical social science evidence is a matter of fact. As such it should normally be introduced through expert witnesses at trial.

Indeed, evidence of the efficacy of patents in promoting innovations in business methods is of a nature that it must be introduced at trial. As McLachlin CJ held for a unanimous Court in *R v Find*:<sup>35</sup>

Judicial notice dispenses with the need for proof of facts that are clearly uncontroversial or beyond reasonable dispute. Facts judicially noticed are not proved by evidence under oath. Nor are they tested by cross-examination. Therefore, the threshold for judicial notice is strict: a court may properly take judicial notice of facts that are either: (1) so notorious or generally accepted as not to be the subject of debate among reasonable persons; or (2) capable of immediate and accurate demonstration by resort to readily accessible sources of indisputable accuracy.<sup>36</sup>

Given the scholarly uncertainty reflected in Dr Hall's comments, quoted above, it is clearly impossible to say that the "fact" that business method patents are bad for innovation satisfies either of these tests.

*Find* articulated a relatively strict standard for judicial notice, which might be relaxed in certain circumstances in favour of an older and more flexible standard which would allow a court to take judicial notice of what "everybody knows."<sup>37</sup> However, statistical and survey evidence of the kind at issue in the debate over business method patents is not a candidate for a relaxed standard. In *Find* the information sought to be introduced through judicial notice concerned the existence of a widespread bias in the community, which ultimately would be established by statistical evidence sim-

---

35 *R v Find*, 2001 SCC 32 [*Find*].

36 *Ibid* at para 48.

37 *R v Spence*, 2005 SCC 71 at paras 49 and 56.

ilar in nature to that which would establish the incentive effect of patents. Chief Justice McLachlin in *Find* noted that

[t]he scientific and statistical nature of much of the information relied upon by the appellant further complicates this case. Expert evidence is by definition neither notorious nor capable of immediate and accurate demonstration. This is why it must be proved through an expert whose qualifications are accepted by the court and who is available for cross-examination.<sup>38</sup>

Some relevant evidence might be judicially noticed under the more relaxed standard. For example, there is no doubt that “everybody knows” that business method innovation took place without patents. However, the evidence that might properly be judicially noticed is not sufficient to resolve the question of whether business method patents promote innovation.

This is not a technical point. While many people have strong opinions as to whether business method patents will spur innovation, it is ultimately a contested question of fact over which there is scholarly controversy. Even if Stevens J were to have conducted a thorough literature review of the empirical evidence in order to support his opinion, this approach would have amounted to deciding a crucial and contested matter of fact through judicial notice. Such an approach is not permitted in the Canadian legal system, which insists that the evidence must be tested by the parties, precisely in order to ensure that decisions are not made on the basis of supposed “facts” that are actually wrong.<sup>39</sup> No lawyer or legal scholar would suggest that a court could make a determination as to obviousness of a new pharmaceutical without extensive expert testimony, tested by cross-examination. The question of whether patents impede or encourage progress in a particular field of endeavour is at least equally complex and has far more far-reaching consequences than the validity of a single patent. To suggest that a court should decide a difficult empirical question on the basis of speculation and anecdote is just as absurd as suggesting that it should decide, without expert evidence, whether it is obvious to separate a racemate into its isomers using fractional crystallization.

---

38 *Find*, above note 35 at para 49.

39 *Ibid* at para 51.

## F. RESPONSE

### 1) Introduce Fact Evidence at Trial

The most straightforward response to this problem would be to introduce the empirical evidence as to the incentive effect of business method patents at trial, through expert witnesses who could be cross-examined. However, there are significant practical impediments to this.

The first impediment is that it would be necessary to reconceptualize the interpretation of the definition of “invention” in section 2 of the *Patent Act* as turning directly on whether patents in the field in question would help or hinder innovation. At present, this is raised indirectly, as an aspect of a purposive interpretation of the Act, but the bulk of the effort and argument in both *Amazon.com* and *Bilski* were addressed to more traditional legal arguments over precedent and principle. A clear reconceptualization of the definition of “invention” is necessary as expert witness evidence is expensive to introduce and cross-examine and the parties are unlikely to undertake that expense unless it is clear that such evidence is likely to be determinative. This reconceptualization would be difficult, but is not unheard of. Competition law, for example, has been reconceptualized as turning on economic concerns, as opposed to the older emphasis on power relations.

Assuming that the necessary reconceptualization took place, a second problem is defining the scope of the exception. For example, it is not clear on the present evidence that business methods are the appropriate category for exclusion or inclusion. It might be that patenting would encourage innovation in financial services, but impede innovation in retail sales techniques. At a higher level of generality, it may be that patenting encourages innovation in “discrete product” industries, but not in “complex product” industries. What would be the appropriate question for the court? So, in *Amazon.com*, should the court be asked to decide whether inventions in complex products industries are patentable, or whether inventions in business methods are patentable, or whether inventions in retail sales methods are patentable?

It is not necessary to answer that question if the issue does not turn on the empirical evidence. For example, a decision that the application at issue in *Amazon.com* does not claim a patentable invention does not necessarily mean that business methods are not patentable; it only means that the particular method in question was not patentable. As the caselaw develops, lawyers can then extract generalizations representing their predictions as

to whether a particular patent will be granted. However, if the court is to enunciate a general rule, the question of the appropriate level of generalization will arise.

If the court phrases the rule at a very high level of generality, the decision would run the risk of excluding patents in some sub-categories where they were important. That is, supposing that patenting would encourage innovation in financial services, a rule that patents are not available in complex product industries would wrongly exclude financial services methods from patentability. The other difficulty with a general rule of this type is that it is difficult to know whether a particular patent would be subject to a rule that is stated in such general terms. Which industries are “complex product” industries? How should a particular method be assigned to a particular industry? Should the assembly line, to pick an old example, be considered a mechanical method, an automotive industry method, an electronic industry method, or a manufacturing method? Correct categorization is particularly problematic because certainty is very important in patent law, which provides forward looking incentives through patents that are typically not litigated until years after the investment in the invention is made.<sup>40</sup>

The other extreme would be to draw the relevant category narrowly. The difficulty with this is that it would require repeated litigation of different categories. It would also undermine certainty, as we would not have confidence that any particular category was patentable, or not, until it was litigated. It would also make the empirical question more difficult, since there is typically less data available for a narrowly defined industry.

No doubt the optimal level of categorization is somewhere in the middle. However, it is not evident what that optimal level might be; indeed, that in itself is another empirical question. But that cannot be left to repeated litigation. The parties have to know what they are litigating before the litigation starts, so that they will know what evidence is relevant. The parties will no doubt call different evidence, and likely different experts, depending on whether the question is whether business method patents promote innovation, or whether retail sales patents promote innovation.

Another difficulty is that the empirical evidence is limited. If the category at issue is drawn too narrowly, there may be insufficient evidence to draw sound conclusions one way or the other, even if, in fact, patents ac-

---

40 *Human Genome Sciences Inc v Eli Lilly & Co*, [2011] UKSC 51, rev’g [2010] EWCA Civ 33, aff’g [2008] EWHC 1903 (Pat); *Bilski*, above note 2 at 3231.

tually have a major impact. But it is not satisfactory to let the categories be defined by the existing empirical research, as there is no reason to believe that the categories used in the research define optimal categories from an incentive perspective. The question of whether patents in a particular field promote innovation in that field is inherently difficult to answer, and particular studies are often tailored to the available data set. Further, the evidence itself may be affected by the litigation. A number of the leading studies involve survey evidence. Survey evidence in future studies is likely to become biased if survey participants realize that their answers are likely to determine whether inventions are patentable in their industry.

## 2) Presumption

The law typically deals with evidentiary difficulties through presumptions. The immediate question is whether the presumption should be in favour or against patenting in new fields, such as business methods.

There are a number of difficulties with a presumption against patenting in new fields. One is the narrowly legal point that this would be contrary to our obligations under *Agreement on Trade-Related Aspects of Intellectual Property Rights* to allow patents “in all fields of technology.”<sup>41</sup>

There are also difficulties from a policy perspective. First, it is not clear how to define a field in order to say whether it is new or not. All patents must be new in a narrow sense, to satisfy the novelty requirement, so the nature of the invention claimed in a particular application does not tell us what new category that invention belongs in. Is an automobile gas pedal that uses an electronic linkage instead of a mechanical linkage in the old field of mechanical patents, or perhaps automotive patents, or is it in a new field of computer-controlled automobile controls, or perhaps computer-controlled automobile throttles?<sup>42</sup>

Secondly, a presumption against patenting in new fields would mean that patentability would turn on the vagaries of what has been patented in the past. Recent scholarship shows that roughly 8 percent of the earliest US patents were for business methods.<sup>43</sup> Should this establish that business

---

41 *Agreement on Trade-Related Aspects of Intellectual Property Rights*, 15 April 1994, 1869 UNTS 299, 33 ILM 1197 at art 27 (Annex 1C of the Marrakesh Agreement Establishing the World Trade Organization).

42 See the patent at issue in *KSR Int'l Co v Teleflex Inc*, 550 US 398 (2007).

43 Michael Risch, “America’s First Patents” (2012) 64:5 Fla L Rev 1279 at 1320.

methods are patentable? Conversely, there is no suggestion that patents were granted in the field of nanotechnology until recently; does this mean that nanotechnology should be unpatentable? Software patents have been routinely granted in Canada for about thirty-five years.<sup>44</sup> Are software patents new or old?

The broader point here is that the question of whether patents were historically granted in a particular area does not map well onto the fields in which patents are likely to promote innovation. I have argued above that empirical evidence is needed to establish whether patents are good or bad for innovation in any particular field, but this is not to deny that research to date has shown that patents are more likely to be good in so-called simple product industries and less likely to be beneficial in complex product industries. While it is difficult to define these categories precisely, it is clear enough that historical patterns of patenting do not mirror this distinction even roughly. Many of the most traditional industries are complex product industries, and conversely, some of the new fields are at least arguably simple product industries.<sup>45</sup>

Further, truly new categories of invention will necessarily have the least empirical evidence. A presumption against patenting in new fields without empirical evidence would effectively preclude patenting in new fields since there will be no evidence that patenting helps innovation if such patents are not permitted. This is a peculiar result in patent law, because, as Binie J noted in *Harvard College v Canada*, “by definition the *Patent Act* must contemplate the unforeseeable.”<sup>46</sup> Presumably over time, as industrial patterns change, patents would become available in fewer and fewer industries of practical importance, so this presumption would amount to a gradual repeal of the *Patent Act*. It may be that the *Patent Act* should be generally repealed, and perhaps retained only in a few industries such as pharmaceuticals, but this is clearly a decision for the legislature and not one to be implemented surreptitiously by a judicial presumption.

---

44 While the Federal Court of Appeal in *Schlumberger*, above note 7, refused to allow a patent for a computer implemented invention in which the only novel element was an algorithm, the Patent Office has interpreted *Schlumberger* generously, and routinely granted such patents since the mid-1980s: see, for example, *Re Application for Patent of Batelle Memorial Institute* (1984), 8 CPR (3d) 133 (PAB and Comm’r of Patents) and *Re Application for Patent of Mobil Oil Corp* (1985), 24 CPR (3d) 571.

45 *Mayo Collaborative Services v Prometheus Labs, Inc*, 130 S Ct 3543 (2010), where the diagnostic correlations were found to be unpatentable.

46 *Harvard College v Canada* (Commissioner of Patents), 2002 SCC 76 at para 87.

## **G. CONCLUSION**

There is a straightforward argument that the legal question of whether business methods should be patentable as falling within the meaning of the term “art” in the definition of “invention” should turn on the empirical evidence as to whether business method patents would be good for innovation. However, the courts in the recent high-profile cases have not considered that empirical evidence systematically. I have argued that rather than encouraging the courts to take such evidence into account, we should recognize that it is not within their institutional competence to do so. There is a good argument to be made that business method patents would be bad for innovation and should not be allowed, but the evidence that bears on this issue is of a nature that should be considered by the legislature, and not by the courts. Concerns of institutional competence are as much a valid policy consideration as concerns for encouraging innovation. I am *not* arguing that I believe that patenting is necessarily, or even likely to be beneficial in all new fields. My position is simply that making this determination is a question for the legislature, not the courts.

More broadly, the Realist insight that law inevitably implicates policy is not a licence for the courts to make policy based on guesswork and intuition. While I have used the example of business method patents and some of the arguments I have advanced in this chapter are specific to that context, the basic concern regarding institutional competence is a more general one. I do not suggest that this concern will lead to the same conclusion in every context, but I do suggest that it is always worth considering. I hope that this chapter may prompt a broader discussion about the appropriate use of social science evidence in litigation.