

MICHEL CHEVALIER'S FORGOTTEN CASE AGAINST THE PATENT SYSTEM

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FRÉDÉRIC BASTIAT'S REPUTATION among contemporary American libertarians unfortunately obscures the diversity of authors and ideas within the French school of political economy throughout the nineteenth century. One of the key figures of this period was Michel Chevalier (1806–1879), still widely known for his political contribution to the achievement of free trade. As minister during the second empire, he led the movement that resulted in the Cobden–Chevalier Treaty of 1860. The economic success of this free-trade agreement between France and England led to numerous other free-trade agreements and to a free-trade period in Europe. Chevalier was a student at the *École Polytechnique*, a center of Saint-Simonism—a protosocialist, industrialist, and cultish ideology—and positivism. As Hayek (1955) remarks, the Polytechnique was “the source of scientific hubris.” It is no surprise then that Chevalier was a Saint-Simonian socialist at the beginning of his career and that he became an advocate of classical liberalism only progressively. His Saint-Simonian background, however, led him to support and participate in immense projects such as the Panama and Suez Canals and the tunnel under the English Channel (Simon 1889).

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Michel Chevalier is, however, less well-known for his contribution to the intellectual-property debate.¹ In contrast to Jean-Baptiste Say, Gustave de Molinari, Charles Coquelin, and most other French economists,² Michel Chevalier fiercely opposed the patent system on economic grounds. Furthermore, Michel Chevalier had a broad knowledge of new technologies, having been an engineer. Thus, he cited numerous empirical examples of inventions and technical problems with patents. However, Chevalier was not the only French economist to criticize patents. Indeed, other great classical liberals, such as Charles Comte (1834) and Charles Dunoyer (1864), were opposed to the patent system as well.

The patent debate was one of the most-discussed economic subjects during the nineteenth century. As Machlup and Penrose (1950) note, “the [patent] controversy was at its height between 1850 and 1875. The opposition demanded not merely reform but abolition of the patent system. And for a few years it looked as if the anti-patent movement was going to be victorious.” At the time, in several countries, such as France, England, and Germany, the patent controversy attracted the widest public interest. Many newspapers and magazines, such as *The Economist*, dealt with the issue of intellectual property regularly. Likewise, intense debates took place among economists, and, as Machlup and Penrose (1950) remark, “Among French economists, Michel Chevalier was probably the most emphatic in the joint antagonism to tariffs and patents, declaring that both ‘stem from the same doctrine and result in the same abuses.’” Chevalier’s intellectual courage was all the more impressive since the idea of intellectual property was accepted most in France. In other countries, relatively few economists were in favor of it, whereas after the 1789 Revolution, most people in France considered patents legitimate (Machlup and Penrose 1950; Lemennicier 1997).

Les Brevets d’Invention (1878) by Chevalier is not only a well-written and powerful book, but continues to be relevant. All the arguments it advances anticipate current arguments made by the opponents of intellectual property. In addition, Chevalier’s other work and recorded debates (Chevalier 1862; Mignet 1863; Chevalier 1869) on the patent system develop points similar to

¹ Machlup and Penrose (1950) only briefly discuss Chevalier.

² Cf. Say (1803); Molinari (1855). For an attenuated defense of patents, cf. Coquelin (1853). Gustave de Molinari, following Frédéric Bastiat, was undoubtedly the most radical proponent of intellectual property among the French liberals. Indeed, he was in favor of perpetual intellectual property, and for this reason opposed many other economists in favor of patents, including Frédéric Passy. Cf. Passy (1855, pp. 262–268) and Molinari (1856, pp. 133–136).

those found in his book. Given the extent of his work, it can be said that Michel Chevalier was the most consistent and influential French antipatent thinker of the nineteenth century.

Patents as contrary to freedom and economic progress

Chevalier claimed that patents cannot be justified if they are contrary to freedom, even if they are conducive to technological change. According to him, “from the moment we can make effective the patent only through inquisitorial expedients, violent and subversive of liberty of labor, it is proof that we must renounce patents.”³ Further, “it is unlawful to perpetuate such an offensive institution of patents for the liberty of labor.”⁴ Thus, Chevalier rejected utilitarianism as a sufficient basis to justify or criticize the patent system. In addition, Chevalier argued that to protect so-called intellectual property, government must use means that themselves violate private property and invade privacy. Indeed, respect for patents necessitates inquisitorial methods that violate natural rights. Chevalier (1878) showed that these violations of liberty are of the same nature as those committed by custom before the Cobden–Chevalier Treaty of 1860. He wrote that,

before 1860, when the country was under the yoke of prohibition, customs had monstrous powers that the law had conferred upon them: house searches, confiscation, paid denunciations, body searches, outrages to public morality and to decency. There is no longer anything like it. The patentee, on the contrary, has over the manufacturer he pleases to qualify as being counterfeiter, similar powers to those deplorable practices we erase from our customs legislation in 1860.

The patentee may, without any kind of trial, seize or put in receivership, the machine or the products they claimed to be counterfeited, without consulting with an expert. He may close workshops. He enjoys the right to confiscation.⁵

³ All translations are by the author. The French is: “Du moment qu’on ne peut rendre effectif le brevet d’invention qu’au moyen d’expédients inquisitoriaux, violents et subversifs de la liberté du travail, c’est la preuve qu’il faut renoncer aux brevets” (Chevalier 1878, p. 97).

⁴ The French is: “Il est illicite de perpétuer une institution aussi offensive pour la liberté du travail que l’est le brevet d’invention” (Chevalier 1878, p. 91).

⁵ The French is: “Avant 1860, quand le pays était sous le joug de la prohibition, la douane avait des pouvoirs monstrueux que la loi lui avait conférés: les visites domiciliaires, la confiscation, la dénonciation soldée, les visites à corps, outrage à la

Thus, Chevalier made a strong moral case against the patent system. To those who claimed it was not possible to abolish it and that it could only be reformed, Chevalier answered by comparing the potential abolition of the patent system to the actual abolition of slavery. Before the abolition of slavery, some people had said it was impossible for practical reasons. History, Chevalier said, had shown they were wrong.

However, Chevalier's opposition to patents was not exclusively based on moral arguments. Prior to Chevalier's *Les Brevets d'Invention*, critiques of the patent system were mainly about the legitimacy of the right granted. Chevalier, however, preferred to show the disastrous effects of this system for the entire industry, foreign trade, and the economy in general. Above all he condemned violations of the principle of liberty of labor because they lead to economic impoverishment. For Chevalier, patents are a direct violation of this principle.

According to Chevalier, patents are of the same nature as the privileges and monopolies that prevailed during the ancien régime. They are also comparable in their effects to protectionist policies. Thus,

in absolute terms, patents diminish the productive power of nations that recognize them: an evident proposition for those who believe that freedom, free competition, is the great lever of industrial progress.⁶

He added,

If I'm not free to follow in my workshop the best known process, or if I can only do so by paying an expensive premium to someone that the legislator had the mistaken idea to favor, disregarding the rights of its citizens, I am no longer in the best conditions to produce at

morale publique et à la pudeur. Il n'existe plus rien de pareil. Le breveté, au contraire, a sur tout manufacturier, qu'il lui convient de qualifier de contrefacteur, des pouvoirs analogues à ces pratiques déplorables qu'on a effacées, en 1860, de notre législation douanière.

Le breveté peut, sans forme de procès, saisir ou mettre sous séquestre, chez autrui, la machine ou les produits qu'il prétend être des contre-façons, sans qu'un expert soit consulté. Il peut ainsi faire fermer des ateliers. Il jouit du droit de confiscation." (Chevalier 1878, p. 39)

⁶ The French is: "D'une manière absolue, les brevets diminuent la puissance productive des peuples qui les reconnaissent: proposition évidente pour ceux qui croient que la liberté, la libre concurrence est le grand levier du progrès industriel" (Chevalier 1878, p. 92).

low prices. It can happen that an important branch of the national industry is stricken by a fatal blow.⁷

Chevalier recalled the conservative and anti-innovative nature of monopolies, and gave many examples of monopolies during the *ancien régime* that deterred innovators. According to him, innovators throughout the *ancien régime* were not rewarded, not because of the absence of patents, but because of the corporation guild system, which limited competition and prevented free entry. Thus, the innovators were constantly sued by guilds and could rarely benefit consumers with their inventions. This argument is still relevant today. Indeed, government-owned corporations and firms protected from competition are often less innovative. Sectors typically run by government, such as schools, see little technological progress. On the other hand, the competitive process of the market provides incentives for producers to differentiate from competitors. As Pascal Salin writes, the company that makes the highest profits on a free market is the company that is best able to “invent the future.”⁸ The essential virtue of competition, defined by freedom of entry, is that it encourages producers to innovate to better serve the needs of consumers. Elsewhere in his book, Chevalier used the case of aniline⁹ to show how monopoly resulting from patents hampers innovation. His interpretation of patents in the chemical industry is consistent with more recent studies such as Boldrin and Levine (2008).¹⁰

⁷ The French is: “Si je ne suis pas libre de suivre dans mon atelier le meilleur procédé connu, ou si je ne le puis qu’en payant une prime onéreuse à quelqu’un que le législateur a eu la fausse idée de favoriser au mépris des droits de ses concitoyens, je ne suis plus dans les meilleures conditions pour produire à bas prix. Il peut arriver ainsi qu’un coup funeste soit porté à une branche importante de l’industrie nationale” (Chevalier 1878, pp. 92–93).

⁸ Pascal Salin (n.d.).

⁹ Aniline is a dye, and was a major innovation in the chemical industry.

¹⁰ Boldrin and Levine (2008) write that,

prior to the rise of the pharmaceutical industry, the most important form of chemical production was the paint and coloring industry. At its inception, the dye industry was a French-British business the same way that almost any industry was a French-British business until the second half of the nineteenth century. In both countries patent protection applied to all kinds of industrial products. In 1862 British firms controlled about 50% of the world market, and French firms another 40%, Swiss and German companies being marginal players. By 1873 German companies had 50% of the market, while French, Swiss and British firms controlled between 13% and 17% each. In 1913 German firms had a market share of more than 80%, the Swiss had about 8%, and firms in the rest of the world had largely disappeared. During this entire

Chevalier further argued that “patents sometimes work in the same way as the revocation of the Edict of Nantes.”¹¹ The Edict of Nantes (1598) protected freedom of conscience, particularly for Protestants. Its revocation led Huguenots to leave France with their skills and a part of their capital, which in turn had negative economic consequences for the country. Thus, Chevalier’s analogy means that some industries flee a country with a patent system to settle in other places where no patent laws are in place—for example, the chemical industry in his time was moving to Switzerland. The analogy between patents and the revocation of the Edict of Nantes is persuasive. Indeed, the French economists during the nineteenth century saw the revocation of the Edict of Nantes as a disaster for the French economy.

Innovation as a process

Chevalier understood that innovation is above all a cumulative process. Initial innovations are never perfect, and must be complemented by further innovation in order to reach their full potential. Thus, giving privileges to the first innovator will destroy this process, leading to fewer inventions, not more. Chevalier wrote,

Every industrial discovery is the product of the general ferment of ideas. Each discovery is the result of internal work that was accomplished with the support of a large number of successive or simultaneous collaborators in society, over centuries. Industrial discovery is far from offering the same degree of individuality as compared to most other productions of the mind which require a relationship to the author. This is why it is hard to claim being the originator.¹²

period there was no patent protection at all in Switzerland, while in Germany processes become patentable in 1877 but products did not. In France, the U.K. and the U.S. both products and processes had been patentable all along.

¹¹ The French is: “Les brevets agissent quelquefois de la même manière que la révocation de l’édit de Nantes” (Chevalier 1878, p. 92).

¹² The French is: “Toute découverte industrielle est le produit de la fermentation générale des idées, le fruit d’un travail interne qui s’est accompli, avec le concours d’un grand nombre de collaborateurs successifs ou simultanés, dans le sein de la société, souvent pendant des siècles. Une découverte industrielle est loin d’offrir au même degré que la plupart des autres productions de l’esprit une empreinte d’individualité qui oblige de la rapporter à qui s’en dit l’auteur, et c’est ce qui rend très équivoque la prétention de celui-ci à la paternité” (Chevalier 1878, p. 45).

This argument was not new when Chevalier wrote *Les Brevets d'Invention* (1878). Dunoyer (1870) also considered industrial inventions as resulting, not from one individual mind, but from a cumulative process. (The similarity is not surprising if we realize that Dunoyer was highly influential in Chevalier's personal intellectual development.) To illustrate the cumulative process of innovation, we can use the analogy of a path. Ideas are like hiking trails: one individual tries to find the easiest and quickest route, beating the grass and breaking some branches. Then, other hikers use this same path and make it easier and wider. Over time, it becomes more permanent. If a monopoly on the use of the path had been granted to the first hiker, the trail would never have appeared. Likewise, intellectual property hampers or destroys this cumulative process, and therefore, instead of promoting technological and scientific development, hinders it. This argument regarding the cumulative nature of innovation is the most powerful argument against intellectual monopoly even today, and has been explained in several recent studies.¹³ Hayek (1988, p. 36), for instance, sees innovation as a process and states that "it is not obvious that such forced scarcity [intellectual property] is the most effective way to stimulate the human creative process."

Because innovation is a cumulative process, it is often hard to know who the true inventor of a new technology is. Some persons can independently produce the same initial innovation. Likewise, an innovation can be the result of many little technological and scientific discoveries and might not be attributable to a single inventor. Chevalier (1878) took for an example one of the most important innovations of the nineteenth century, the Bessemer process, which enabled mass production of steel. This process, Chevalier showed, was not first discovered by Henry Bessemer, but by another British engineer. Bessemer improved the original engineer's invention and then applied for a patent on the new version. Other examples were common. In an 1862 debate at the Académie des Sciences Morales et Politiques, Chevalier considered the case of Alfred Krupp, whose steel-making process was not patented. He also spoke about Louis Daguerre, one of the inventors of photography, who likewise did not acquire a patent. According to Chevalier, the absence of patent protection led to necessary improvements of the daguerreotype and promoted its wider adoption. His conclusion was as follows:

The spirit of man proceeds only by successive trials and repeated attempts. Discoveries do not arrive with a single bound to the degree of perfection or completion, which is reserved for them; there must be renewed, persevering efforts, cut by breaks that allow,

¹³ Cf. Galasso and Schankerman (2015); Nuvolari (2004).

so to speak, discoveries to breathe... If it is true that the invention must pass through the hands of twenty people before reaching its final state, it follows that the exclusive privilege granted to the first patentee, and to each of his followers, prevents this practical result rather than facilitates it.¹⁴

In a way, Chevalier anticipated the arguments of Stephan Kinsella, since he was aware that the main difference between material goods and ideas consists in the latter being non-scarce. Indeed, as Chevalier (1869) emphasized, “an idea can belong to an unlimited number of persons; it is indeed the essence of an idea that, once published, it belongs to all the world.” Or,

for something to be property, it is necessary for it to belong to someone individually or, in the same way, jointly owned by a group whose members have, or can have, a separate part. A discovery, however, can belong to several people, each one having it entirely. It is for everyone, from the moment it has been disclosed, unless a decision, legitimate or not, from the authority assigns it to someone for some time.¹⁵

However, it is not clear what importance Chevalier gave to the problem of scarcity, and he seemed to justify property by the less-rigorous concept of *individuality*, insisting on the “great uncertainty about industrial inventions’ paternity.” (Chevalier, 1878, p.45). At the same time, he favored copyrights because art and literary works can easily be linked to a specific individual (Chevalier, 1878, pp. 46 and 50–51).

¹⁴ The French is: “L’esprit de l’homme ne procède que par des essais successifs et des tentatives répétées. Les découvertes n’arrivent pas d’un seul bond au degré de perfection ou d’achèvement qui leur est réservé ; il faut des efforts renouvelés, persévérants, coupés de pauses qui permettent pour ainsi dire de respirer.... S’il est vrai que l’invention doit passer par les mains de vingt personnes avant de parvenir à son état définitif, il s’ensuit que le privilège exclusif conféré au premier breveté, et à chacun de ceux qui le suivent, empêche d’obtenir ce résultat pratique au lieu de la faciliter” (Mignet 1863, p. 254).

¹⁵ The French is: “Pour qu’une chose soit une propriété, il est nécessaire qu’elle appartienne à quelqu’un, individuellement, ou, ce qui revient au même, qu’elle soit possédée en commun, par un groupe dont les membres en ont, ou en peuvent avoir chacun sa part distincte. Une découverte, au contraire, peut appartenir à plusieurs personnes, dont chacune l’a dans son intégrité. Elle est à tout le monde, du moment qu’elle a été divulguée, à moins qu’une décision, légitime ou non, de l’autorité ne l’ait attribuée à quelqu’un pour quelque temps” (Chevalier 1878, p. 41).

When *Les Brevets d'Invention* was published, Charles Limousin wrote an eight-page critique of Chevalier's ideas in the *Journal des Économistes*. One of his major criticisms was as follows:

A property for economists... is the product of labor owned by the creator of this product or by those to whom he has transmitted by exchange, gift, or inheritance.

The touchstone being in our hands, I will ask whether an invention is, for its author, the product of labor. It seems that it cannot be disputed. Thus, if an invention is the product of a work, it is a property.¹⁶

In reply, Chevalier first stated that the concept of property cannot be applied to ideas and that this can be demonstrated simply by the fact that patents are limited in time whereas real property, by definition, cannot be so limited. Furthermore, it must be noted that the concept of intellectual property was largely contested, even by such French economists in favor of patents as Charles Coquelin and Louis Wolowski.¹⁷ However, Chevalier, because of his vagueness, left room for criticism. Indeed, even if he were aware that ideas are not scarce, he did not fully appreciate the importance of scarcity in the concept of property rights. According to Chevalier, it is indeed labor, but not only labor, that justifies private property. Private property, he claimed, is the result of *individuality*. Labor is not enough; production has to be related to its creator for property to be claimed legitimately. Because, according to Chevalier, ideas are mainly the result of a collective effort, property cannot be applied to them.

¹⁶ The French is: "Une propriété, pour les économistes... c'est le produit d'un travail, possédé par le créateur de ce produit ou par ceux à qui il l'a transmis par l'échange, don ou héritage. Cette pierre de touche étant dans notre main, je demanderai si une invention représente, pour son auteur, le produit d'un travail. Il me semble que cela ne peut pas être contesté. Or, si une invention est le produit d'un travail, c'est une propriété" (Limousin 1878, p. 428).

¹⁷ Concerning Louis Wolowski, cf. Mignet (1863). Charles Coquelin (1853) believed ideas cannot be property since, even if they appear because of labor, they are above all discoveries. He wrote,

il n'est pas vrai que l'inventeur soit, dans le sens ordinaire du mot, propriétaire du procédé industriel qu'il découvre; il n'en est que le premier explorateur. Le droit qu'il acquière n'est pas un droit de propriété, c'est un droit de priorité, rien de plus; et ce droit a sa limite naturelle dans le droit correspondant qu'ont tous les autres industriels, ses concurrents, de marcher à leur tour dans la voie où il s'est engagé le premier.

It is true that ideas are the result of a creative process. They are also only rarely the result of one person's work. Yet this is true for most human accomplishments. The weaknesses of Chevalier's justification of property led his intellectual opponents to contest his argument almost entirely on these grounds, while ignoring his other criticisms of the patent system.

One of these criticisms has been developed more recently by Stephan Kinsella (2008); that is, the state arbitrarily and unjustly rewards the innovator, but does not reward the theoretical scientist. As Kinsella writes,

Einstein's "discovery" of the relation $E=mc^2$, once known by others, allows them to manipulate matter in a more efficient way. Without Einstein's, or the inventor's, efforts, others would have been ignorant of certain causal laws, of ways matter can be manipulated and utilized. Both the inventor and the theoretical scientist engage in creative mental effort to produce useful, new ideas. Yet one is rewarded, and the other is not. In one recent case, the inventor of a new way to calculate a number representing the shortest path between two points—an extremely useful technique—was not given patent protection because this was "merely" a mathematical algorithm. But it is arbitrary and unfair to reward more practical inventors and entertainment providers, such as the engineer and songwriter, and to leave more theoretical science and math researchers and philosophers unrewarded. The distinction is inherently vague, arbitrary, and unjust.

It is remarkable that Chevalier suggested almost exactly the same argument more than a century ago. He wrote,

Since the legislator showed so much consideration for the human mind manifested in industrial discoveries, one wonders why he refused to show its respect and sympathy for all events at least as respectable to the human spirit: scientific discoveries. The latter are to the former what the cause is to the effect. It is because scientists, surveyors, engineers, chemists, and physicists have found such and such properties in various substances, that these properties have been used in useful arts.¹⁸

¹⁸ The French is: "Puisque le législateur témoignait tant de considération pour la pensée humaine manifestée par les découvertes industrielles, on se demande pourquoi il s'est refusé de montrer son respect et sa sympathie pour des manifestations tout au moins aussi respectables de l'esprit humain, les découvertes scientifiques. Celles-ci sont à celles-là ce que la cause est à l'effet. C'est parce que des savants, géomètres, mécaniciens, chimistes, physiciens, ont constaté telles et telles propriétés dans les substances diverses, que ces propriétés ont pu être utilisées dans les arts utiles" (Chevalier 1878, p. 52).

The increasing number of patents and its negative consequences

In the nineteenth century, as today, juridical instability and uncertainty compromised the efficiency of the patent system, and economists were alert to this problem.¹⁹ Chevalier warned that the patent system would produce juridical uncertainty for firms and would lead industry back to a guild system where no entrepreneur would dare to enter the market for fear of being sued by patent holders. Chevalier (1878, p. 78) was ahead of his time in denouncing those whom we might consider the ancestors of “patent trolls,” especially patents “taken by people who have invented nothing and yet find a way to make a profit.” Indeed, Chevalier castigated such fake innovators who lived from the work of others:

The institution of patents has resulted in an interloper industry that renders no service, and that on the contrary is harmful to society because it lives from usurpations and abuses. The provisions of our legislation that allow and even require seizure and confiscation are in the hands of who wants them sometimes formidable weapons against the true inventors, sometimes against manufacturers or retailers. These smugglers are lurking like the hunter on the prowl. Once an interesting invention occurs, they vigorously strive to ensure its benefits and operation by a patent hastily put together, before the inventor is aware. If they have been outpaced and the patent has been granted, they do not consider themselves as beaten; by additions that the practice would be indicated to the least distinguished engineer, or by artfully drafted changes, they allow themselves to get a patent, to interpose as birds of prey between the patentee and the public, and to require tributes on both sides.²⁰

¹⁹ For instance, Charles Comte (1834) and Jean-Baptiste Say (1803) were already aware of the legal costs implied by the patent system. Cf. Appendix 2.

²⁰ The French is: “L’institution des brevets a donné naissance à une industrie interlope qui ne rend aucun service, qui au contraire est préjudiciable à la société, car elle vit d’usurpations et d’exactions. Les dispositions de notre législation, qui autorisent et même prescrivent la saisie et la confiscation, sont, entre les mains de qui le veut, des armes formidables tantôt contre les vrais inventeurs, tantôt contre les manufacturiers ou commerçants. Ces contrebandiers sont aux aguets comme le chasseur à l’affût. Dès qu’une invention intéressante se produit, ils y courent sus et s’efforcent de s’en assurer les avantages et l’exploitation par un brevet conçu tant bien que mal, avant que l’inventeur se soit mis en mesure. S’ils ont été devancés et que le brevet ait été accordé, ils ne se tiennent pas pour battus; par des additions que la pratique aurait indiquées à l’ingénieur le moins éminent, ou par des modifications artistiquement rédigées, ils s’autorisent à prendre un

Thus, Chevalier thought legal instability caused by patents discourages entrepreneurs from adopting new and more efficient production processes, since they do not know, for instance, whether a new machine has been patented, and therefore fear lawsuits (Mignet 1863, p. 254).

If we follow Chevalier's insights, we can say that patents disincentivize innovators because they fear their potential invention has already been invented and patented. Indeed, since, for Chevalier, innovation is a cumulative process, inventions are often found independently in different places at the same time. A patent arbitrarily rewards only one innovator and prevents all others from benefiting from their work.²¹ Chevalier found this situation unfair and ineffective (Mignet 1863, p. 240). Patent inflation reinforces this disincentive since no innovator can fully know which ideas are already patented and which are not. Thus, the work of some innovators remains unrewarded since the first to patent an invention gets all the benefits while several others, who do not know one another's work or, that of the patentee, can devise similar inventions independently.

Chevalier's attack on the usefulness of most patented inventions

According to Chevalier, not even one invention out of a hundred deserves to be patented. He wrote that, "the great majority of patented inventions are without merit and are soon abandoned by their disappointed authors."²² He explained that innovators patent untried inventions that reveal themselves to be of no commercial use because of the benefits implied by their monopoly positions. Even worse, the patent system tends to hurt innovators since it leads them to spend time and money that could have been better used in production:

How many hopes dashed, how many disappointed brave people have remorse for wasting their time and money, and again and again are filled with resentment against society for not appreciating them to the same degree they value themselves! Would we hurt them, or,

brevet eux-mêmes, pour s'interposer en oiseaux de proie entre le breveté et le public, et exiger des tributs des deux côtés" (Chevalier 1878, pp. 75–76).

²¹ This assertion has been verified by the facts and it can explain why there was so much legal uncertainty and so many mistakes in the nineteenth century. Indeed, "a detailed scrutiny of 900 patent specifications, commissioned in 1901 by the Fry Committee, found that 42 per cent had been wholly or partly anticipated by earlier patents" (MacLeod et al. 2003).

²² The French is: "La très-grande majorité des inventions brevetées sont sans mérite, et sont bientôt abandonnées par leurs auteurs, désappointés" (Chevalier 1878, p. 59).

on the contrary, would we do them a favor by the abolition of patents? A considerable number of people expressed the view that for the poor inventors, the abolition of patents would be a boon.²³

Chevalier's insights on this point are essential and are best understood if we observe that, "patents distort the type of research expenditure being conducted... Research expenditures are therefore overstimulated in the early stages before anyone has a patent, and they are unduly restricted in the period after the patent is received" (Rothbard 1962, p. 752). Thus, research for profit under a patent system increases the number of useless patented inventions and therefore reduces the reward for many small-scale innovators who waste their talents by trying to get a patent.

How should the innovator be remunerated?

Chevalier's opponents in the nineteenth-century intellectual-property debate sometimes misrepresented his arguments. For example, Renouard, a key figure, falsely accused Chevalier of claiming that the innovator does not benefit society and does not deserve to be rewarded. According to Renouard, "Mr. Chevalier said that a person, by finding something new, does not serve society," and furthermore, "does not recognize that this service is remunerable."²⁴ Yet Chevalier was careful to show not only that the patent system often hurts the innovator, but that innovators can be remunerated even without patents.

How could innovators be rewarded? At first, Chevalier proposed a government-run reward system that would compensate innovators for the services they give society. He added that there would be very few of those rewards (Chevalier 1862, Appendix 1). This solution was heavily criticized in the debates (Mignet 1863, p. 266), especially by Renouard, and Chevalier did not even mention it in *Les Brevets d'Invention*. However, in 1878, he described three other ways for innovators to earn money without patents: (1) being

²³ The French is: "Combien d'espérances déçues, que de braves gens désappointés, ayant le remords d'avoir perdu leur temps et leur argent, et maintes fois remplis de ressentiment contre la société pour n'avoir pas été appréciés à la valeur qu'ils s'attribuent eux-mêmes ! Leur nuirait-on ou au contraire leur rendrait-on service par l'abolition des brevets ? Des personnes considérables ont exprimé l'opinion que, pour les inventeurs pauvres, l'abolition des brevets serait un bienfait" (Chevalier 1878, p. 74).

²⁴ The French is: "M. Michel Chevalier dit qu'une personne en trouvant quelque chose de nouveau ne rend pas un service à la société." and "M. Michel Chevalier ne veut pas reconnaître que ce service est rémunérable" (Mignet 1863, pp. 265–266).

rewarded by a capitalist by disclosing their invention, (2) being the first mover, or (3) keeping their works secret.

His argument is not completely convincing, because the disclosure of inventions was the main argument of those in favor of the patent system. Chevalier knew this, but oddly, never addressed the issue. It is all the more strange since Chevalier participated in a debate in 1863 where Pellat, another antipatent economist, made a powerful argument against the idea that patents reduce secrecy—specifically, that innovators patent their invention, but keep some aspects of it secret (Mignet 1863, p. 280). We can only guess that Chevalier’s conception of innovation as a cumulative process led him to believe that secrecy would not be a problem in competitive markets, where inventions often appear simultaneously.

To demonstrate that patents are not as useful as many claimed, Chevalier remarked that many business owners and entrepreneurs themselves considered patents useless and harmful. He remarked, “Ask men placed the highest in the industry and they will say they do not believe in the usefulness of patents. There is more: they consider them harmful.”²⁵ This claim could be seen as a mere assertion without any empirical basis, but it is not: there was a *revealed preference* for secrecy, first-mover advantage, and other benefits of patents in the nineteenth century. As Petra Moser (2012) notes, at the 1851 World Fair, 15 percent of the British exhibits that won prizes for exceptional usefulness and quality were patented, compared with 11 percent of the average-quality exhibits. This is remarkable, especially considering that data on exhibitions are likely to miss many innovations without patents, including innovations protected by secrecy. Even patenting rates for manufacturing machinery, secrecy over which had been ineffective throughout the period during which it was exhibited at the World Fairs, 1851–1915, stayed roughly constant at around 45 percent. Therefore Chevalier was right to claim—and this was one of his major arguments—that patents were not even effective at protecting the innovator. It is likely this is still true today (Boldrin and Levine 2008, p. 82).

Chevalier’s inspirations and influence

Between 1840 and 1873, the antipatent movement was strong in Europe, although it was less powerful in France. Moreover, French

²⁵ The French is: “Interrogez les hommes les plus haut placés dans l’industrie, ils vous répondront qu’ils ne croient pas à l’utilité des brevets d’invention; il y a plus, ils les considèrent comme nuisibles” (Mignet 1863, p. 250).

protectionists were quite influential. In 1860, a free-trade agreement was enacted between France and the United Kingdom: the Cobden–Chevalier Treaty. As the name implies, Chevalier was its major architect. Because of the notoriety he earned through the treaty, in 1862, he was made responsible for leading the French delegation to the London World Fair. Chevalier was strongly influenced by the intense debate over patents in early-1960s Britain, and he corresponded with notable figures of the British antipatent movement such as Robert Andrew Macfie (cf. Appendix 1). Inspired by these discussions, he renewed the patent controversy in his report on the World Fair, stating that, “the monopoly conferred by patents should, in principle, be accused of being abusive.”²⁶

In general, the 1860s were the golden age of the antipatent movement. The boom in the number of patents at this time, as shown in Figure 1, revealed many problems with the patent system, such as juridical instability and the cost of lawsuits (Federico 1964).

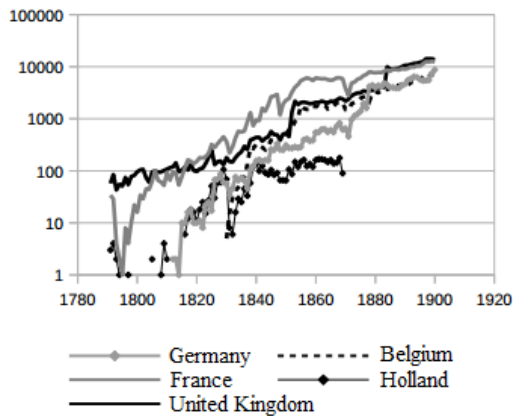


Figure 1: Number of patents from 1791 to 1900

Source : Federico P. J., « Historical Patent Statistics », loc. cit.

In 1860, before the House of Lords, Lord Granville—one of the organizers of the London World Fairs of 1851 and 1862—declared patents useful only to lawyers. In England, a commission to investigate patents was established in 1862. It delivered an ambivalent report in 1864, proposing to

²⁶ The French is: “le monopole conféré par des brevets doit, en principe, être taxé d’abusif” (Chevalier 1862, p. cxviii).

amend existing patent legislation while also suggesting in veiled terms its abolition. In 1869, Holland abolished its patent system.

However, the supporters of the patents prevailed in the end. The fateful turning point was 1873. A campaign by various lobbying groups supporting the system contributed to an atmosphere of growing protectionism. Numerous means were used to convince the public, including the creation of societies for the protection of patents, petitions distributed to the daily press, speakers, pamphlets, and articles, and prizes offered to the best article to defend the patent system. The defeat of the antipatent movement resulted in a wave of pro-patent legislation in various countries: 1874 in Great Britain, 1877 in Germany, 1885 in Japan, and 1887 in Switzerland. Therefore, in 1878, when Chevalier published his major work on the patent system, the antipatent movement was already losing the battle. A few months after the publication of *Les Brevets d'Invention*, an 1878 law reinforced intellectual privileges in Spain.

When Chevalier's *Les Brevets d'Invention* was published, the only critique was eight pages long (Limousin 1878). A few months after Chevalier's book appeared, French supporters of the patent system used the 1878 World Fair in Paris to defend intellectual property based on natural-law principles. During this World Fair the International Congress on Intellectual Property was organized, which marked the starting point of a process that culminated on March 20, 1883, with the signing of an agreement establishing an international union for the protection of intellectual property, known as the Union of Paris.

Thus, the bad timing of Chevalier's 1878 publication explains its obscurity. Even though Chevalier was recognized as the major opponent of patents, his works were for the most part ignored. This is particularly true for *Les Brevets d'Invention*. For instance, Eugène Pouillet (1909) referred to Chevalier but quoted none of his works. He mentioned that Chevalier was in favor of the government granting rewards to innovators. Yet although Chevalier affirmed in 1862 that this could be a solution, he did not make the same suggestion in his 1878 work. This shows that his 1862 writing, published during the glory days of the antipatent movement, was much more influential than his 1878 work, published when the antipatent movement was losing ground to the protectionists. In 1889, in a notice on Chevalier's life and works presented to the Société d'Économie Politique, Jules Simon (1889) described two of his publications as relatively unknown: *Biographie de Richard Cobden* and *Les Brevets d'Invention*.

Two decades after his death, Chevalier was recognized by the economics profession as a major opponent of patents. In the *Nouveau*

Dictionnaire d'économie politique (1900), the author of the article "Intellectual Property" wrote that, "the toughest opponent of patents was, in our time, Chevalier" (p. 657). After quoting Chevalier's denouncement of the precursors of modern-day patent trolls, the article concludes that,

it is understandable to find the criticisms Michel Chevalier has addressed to patents exaggerated. Common sense, in the absence of direct evidence, would be enough to demonstrate that. Is it not obvious that profits made by a person having a monopoly on the production of an object should be a priori more substantial than they would have been if he was competing with others to supply the market?²⁷

The author of the article felt no need to demonstrate that Chevalier was mistaken, considering common sense a sufficient justification of the patent system, which required no further rebuttals to demonstrate its value. Thus, Chevalier's influence on the patent debate was diminished at the end of his life, and the antipatent movement dissipated. Chevalier was in the minority among French economists even in his time, and therefore, which explains his neglect.

Chevalier: positivist or causal-realist?

The French liberal school is widely considered a precursor of the Austrian school of economics, which explains why the two groups tend to agree strongly, especially on problems of method (Rothbard 1995; Salerno 2001; Thornton 2001; Raico 2012). For Austrians, the laws of human action are discovered through deduction from axiomatic claims (Mises 1949; Rothbard 1962). Human action is purposeful, and utility is subjective and ordinal. Thus, Austrians claim that mathematics is unfit for the study of economics.

Chevalier was mainly in favor of this causal-realist method, an early form of which was defended by most French classical liberals. According to Jean-Marc Daniel, Chevalier adhered to the causal-realist approach of Nassau Senior.²⁸ Chevalier himself stated there are laws of human action true for all

²⁷ The French is: "Il est permis de trouver exagérées les critiques que Michel Chevalier vient d'adresser à la pratique des brevets. Le bon sens, à défaut de preuve directe, suffirait pour le démontrer. N'est-il pas évident que les bénéfices réalisés par une personne ayant le monopole de la fabrication d'un objet, doivent a priori être plus considérables qu'ils ne le seraient si elle était en concurrence avec d'autres pour alimenter le marché?" (Say 1900, p. 657).

²⁸ Cf. his foreword to Chevalier (2014).

times and places (2014, p. 39). However, it is difficult to determine whether French economists in the nineteenth century were positivists or praxeologists. On the one hand, French economists widely used statistics and empirical facts in their writings. On the other hand, they believed economic laws exist and are universal. This tension is particularly apparent with Chevalier, who was at first a Saint-Simonian (Walch 2002), and was strongly influenced by the industrialist movement.²⁹ Indeed, Saint-Simon himself was affiliated with the industrialists Charles Dunoyer and Charles Comte, each a precursor of positivism.³⁰

Furthermore, Chevalier never completely abandoned his Saint-Simonian ideas. In his lectures at the Collège de France, for example, he sometimes sounds like an empiricist, and quotes Bacon.³¹ Likewise, in an

²⁹ There were two schools among the industrialists: the socialists led by Saint Simon, and the liberals led by Charles Dunoyer and Charles Comte. For the industrialists, there are two classes in society: producers and looters. History is the history of conflicts between those two classes. The industrialists thought industrial progress will lead to the material, moral, and physical progress of the masses. This is exactly the idea espoused by Chevalier (1842).

³⁰ On the relations between Dunoyer, Comte, Saint-Simon, and positivism cf. Liggio (1977, pp. 153–178) and Hart (1997). Along with Jean Baptiste Say, Dunoyer and Comte were the intellectuals who had the greatest influence on the French school of political economy. Even Frédéric Bastiat, whose theories were based more on axiomatic reasoning than those of Dunoyer and Comte, recognized in a letter that he was in full agreement with Dunoyer's book, "La Liberté du Travail" [Freedom of Labor]. Dunoyer and Comte used statistics and empirical examples extensively, as did Chevalier. Chevalier (1878) used Dunoyer's expression "Liberté du travail" some fifteen times, and also quoted Comte.

³¹ He wrote, "Je serai toujours attentif à interroger l'expérience des temps anciens ou la pratique moderne. Nulle science n'a, au même degré que l'économie politique, le besoin de se guider par l'observation" (Chevalier 1842). In addition, "nous vivons dans un temps où l'on voit éclore tant de théories éphémères, tant de systèmes hasardés qui disparaissent comme des ombres, qu'il importe plus que jamais d'établir, selon le précepte de Bacon, ses assertions sur l'observation des faits" (Chevalier 1842). Many French liberals thought of themselves as inductivists, even though they were not. The approach of Michel Chevalier and the other French liberals is, in my opinion, empirical apriorism. They observed human behavior empirically and deduced some economic laws from their observations. Their method is therefore different from the praxeological method, even though the conclusions reached with both methods are similar. As Mises stated,

until the late nineteenth century political economy remained a science of the 'economic' aspects of human action, a theory of wealth and selfishness. It dealt with human action only to the extent that it is actuated by what was—very

1850 debate on free banking, he declared that banks are like national constitutions, and that a system can be good for one country but bad for another (Simon, 1889). Thus, he makes a historicist argument. Perhaps we can conclude from this that Chevalier used different and even contradictory methodological approaches, depending on the topic.

Chevalier's book *Les Brevets d'Invention*, however, can be completely assimilated into an Austrian analysis of intellectual property. First of all, Chevalier's style was completely literary. Second, his method was causal-realist, and he used empirical examples only to illustrate the theory. For instance, Chevalier believed self-interest—which he distinguished from egoism—is the driving force of human action.³² In fact, he wrote of self-interest as the essence of humanity: "It is inevitable and even necessary for it to be in the sense that the spring of personal interest is for our species the indispensable motive for useful and great actions."³³ And, like the Austrians, Chevalier and the other French economists conceived of competition as a process and not a static concept. They saw freedom of entry as the main criterion of competition and quantitative measures of competition as meaningless. Thus, Chevalier's contribution is particularly interesting for Austrian economists given the similarity between his approach to method and analysis and their own.

Conclusion

Chevalier made a strong case against patents that remains relevant today. As he put it, "I think I have said enough to show that the patent legislation has been an eccentricity of the legislator."³⁴ Chevalier considered patent laws the main obstacle to liberty of labor and economic progress. For him, patents were of the same nature as the ancien régime's corporatism and guild system, and should be abolished. In 1863, he wrote in a letter that, "all friends of industrial and social progress must work together to rescue the

unsatisfactorily—described as the profit motive, and it asserted that there is in addition other human action whose treatment is the task of other disciplines" (1949, pp. 2-3).

³² This is consistent with the ideas Chevalier expounded in his lectures at the Collège de France.

³³ The French is: "Il est inévitable et même nécessaire qu'il le soit, en ce sens que le ressort de l'intérêt personnel est pour notre espèce le mobile indispensable d'utiles et grandes actions" (Chevalier 1878, p. 27).

³⁴ The French is: "Je crois en avoir assez dit pour établir que la législation des brevets d'invention a été une aberration du législateur" (Chevalier 1878).

industry of obstacles, obsolete remains of the past,” adding that, “patents must disappear first.”³⁵ After helping to end the protectionist system through the *Cobden-Chevalier treaty* of 1860, his major concern was to end the patent system. Chevalier’s compelling arguments against the patent system have been ignored, but deserve to be rediscovered. It is rare to find economic writings with such an abundance of pertinent insights. If we can learn even one thing by reading Chevalier, it is that we should fight against patents not only to free individuals, but also to free innovation.

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³⁵ The French is: “Tous les amis du progrès industriel et social doivent unir leurs efforts pour délivrer l’industrie d’entraves, restes surannés du passé.” He added that, “les brevets doivent disparaître les premiers.” Quoted in Pouillet (1909, pp. x–xi).

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