La propriété intellectuelle et le droit de la concurrence: à la recherche de l'équilibre
Intellectual Property and Competition Law: looking for the right Balance
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Les déterminants économiques des droits de propriété intellectuelle (brevets et droits d'auteur)

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The economics of patents and licensing : an appraisal

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What is a patent ?

- patent = a TEMPORARY and EXCLUSIVE legal right to exploit an innovation

- patent = a trade-off between the incentives to innovate (EXCLUSIVE) and the diffusion of innovation (TEMPORARY) → there exists an optimal patent (in terms of duration), which solves this trade-off [Nordhaus 1968]

What is a patent ?

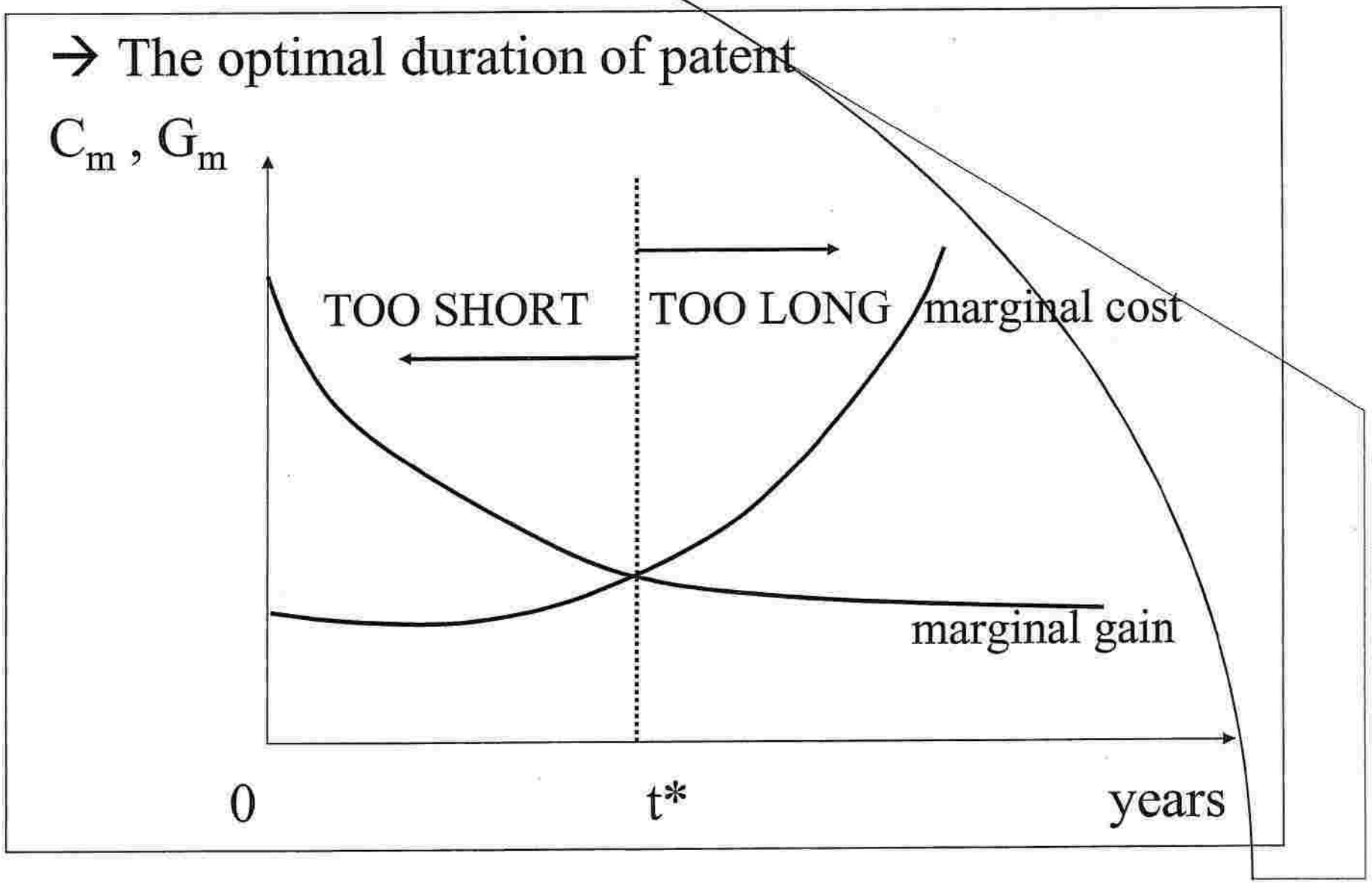
→ The optimal patent (duration)

- a « short » patent fosters diffusion but reduces the incentive to introduce «major» innovations (that is : very expensive)
- a « long » patent favours «major » innovations but limits their diffusion
- the optimal duration : for society, the marginal cost (in terms of diffusion) of an additional year of legal protection is equal to its marginal benefit (in terms of innovation)

(this optimal trade-off is not necessarily the same for …different countries ! See TRIPS controversy)

What is a patent ?

→ The optimal duration of patent



Patents and market power (1)

→ the usual view : a patent gives a MONOPOLY power to the innovator

this view is valid only if two conditions are meet :

- the innovation is DRASTIC → this is rare ! (for instance : a vaccine which replaces some drugs) ; in many cases, the patented product competes with another products (for instance : « me too drugs » in the pharmaceutical industry)
- the patent is PERFECT in protecting against imitators : all imitators are detered from entering the market → this is not realistic !

Patents and market power (2)

→ Empirical studies, such as the « Yale surveys » [Levin & alii 1987 ; Combe & Pfister 2002] pointed out that patents are imperfect against imitation :

- costs of enforcement (especially for small firms and in an international context)
- costs of registration and patent renewal (especially in Europe, compared to Japan and United States)
- opportunities for competitors to innovate « around the patent » (disclosure effect of the patent)

→ Patents only increase …the cost of imitation !

(+ 30% according to Mansfield [1985])

Patents and market power (3)

→ Patents are imperfect against imitation but innovative firms can use others tools of appropriation :

- a set of complementary IPR (trademark, portfolio of patents, models, etc) ; see the SWATCH case
- first mover advantage (such as brand image) ; see the PHILIPS case
- learning curve (in absence of spillovers)
- secrecy ; see the COCA COLA case

→ The innovator's market power does not rely exclusively on patenting !

Patents and market power (4)

→ The usual view : at patent expiry, competition reduces drastically the private value (for the innovative firm) of innovation

- this view is generally right but …in some cases, the private value of innovation exceeds the value of patent
- the special case of pharmaceutical industry : when the initial patent is over, labs use many strategies to deter (or slow down) competition from generic industry !

Patents and market power (5)

→ How to reduce competition at patent expiry ?

The case of pharmaceutical industry

[Combe & Haug 2005]

- intensive advertising in order to increase the fidelity of patients/doctors and their « *switching costs* »
- additional patents on some parts of the princeps

→ « *preemptive patenting* » ? [Gilbert & Newbery 1982]

- new patented drug at the initial patent expiry

(see : Prozac Weekly after … Prosac 1 ; Inexium after Mopral)

Patents and market power (6)

→ How to reduce competition after patent expiry ?

The case of pharmaceutical industry

[Combe & Haug 2005]

- launching of different versions of the same drug

→« *product proliferation* » ? [Schmalensee 1978]

- launching of « pseudo-generics » (or «authorized generics) by the patenting firm [Hollis 2003]

→ « *deterrence by entry* » ? [Rockett 1994]

These strategies have an anticompetitive purpose but are very difficult to qualify from a legal perspective : it is not forbidden to launch new products and to advertise !

Patents and antitrust (1)

→ The role of antitrust

- a patent can temporarily reduce competition on the market … but this « market power » effect is efficient (incentive to innovate) → a minor role for antitrust ?
- the role of antitrust :

- during the patent life : a firm can develop a portfolio of patents only to block the entry of competing firms

→ see the case of « *sleeping patents*» (Rank Xerox)

- at patent expiry : many antitrust cases … especially in the pharmaceutical industry

Patents and antitrust (2)

→ antitrust cases in the pharmaceutical industry

[Combe & Haug 2005]

- intensive use (abuse ?) of administrative procedures and legal suites (see Astra/Zeneca in Europe ; many trials in US for misuse of ANDA procedures)

- agreements between labs and generic firms to delay entry of generics on the market (see for instance FTC vs Abbott/Geneva Pharmaceuticals)

  → prohibition (per se rule) or rule of reason ?

What is a licence ?

→ The characteristics of licensing

- An innovative firm (the licensor) gives the right to another firm (one licensee) to use its patent, in exchange of a payment (generally a two parts tariff : fixed fees + royalties)

- Different kinds of licence :

- horizontal (with a competitor)/vertical
- exclusive (onr licensee)/non exclusive
- unilateral/cross licensing

Licensing and efficiency (1)

→ In general, licensing is good for…consumers :

- some firms don't have the ability (or financial resources) to produce/launch their own innovation on the market
- some firms need the access to complementary technologies (because of the division of R&D effort)
- an « old » firm can access to new products and processes (in exchange of royalties)

Licensing and efficiency (2)

→ The special case of « cross licensing » between competitors

- a tool to solve quickly (compared to the length of trial) legal disputes on IPR
- a tool to avoid the payment of royalties (and consequently the increase of marginal cost)
- a tool to overcome « blocking patents » situations [Klein 1997 ; Shapiro 2001]
- a tool to promote technological standardization between competitors (such as the DVD patent pool)

Licensing and antitrust (1)

→ The role of antitrust

- the license contributes to the voluntary (compared to imitation) diffusion of innovations + the licence consists in transfering an EXCLUSIVE legal right to another firm → a minor role for antitrust ?
- for a long time, antitrust authorities were very lenient with licensing : see the Bement (1902) et General Electric (1926) cases in USA [Hovenkamp 2000]
- more recently, a special attention on restrictive clauses : see the « Nine no-no » [Gilbert & Shapiro 1997] in *the Antitrust Guidelines for the licensing of IPR* (1995)

Licensing and antitrust (2)

→ The design of licensing contracts

- some restrictive clauses are prohibited : Resale Price Maintenance (RPM), « grant back » clauses, some restrictions imposed on the licencee (such as limitations to sell other products, to develop competing R&D projects, …)
- some structures of payments are suspicious : for instance, in the case of cross licensing, royalties could be used only to increase the price on the market (collusion) [Fershtman & Kamien 1992]

Licensing and antitrust (3)

«*Il peut également y avoir fixation des prix lorsque des parties qui vendent des produits concurrents s'accordent des licences croisées sur les technologies intégrées à ces produits. (...) Des concurrents peuvent donc utiliser les redevances pour coordonner les prix sur les marchés de produits en aval (...). La Commission traitera l'accord comme un accord de fixation de prix dans tous les cas où il n'entraîne pas une intégration poussée de technologies complémentaires* »

[Commission Européenne 2001]

Licensing and antitrust (4)

→ The case of « per processor » contracts

- OEM (IBM, HP, …) integrate Windows in their computers, through a licensing agreement with Microsoft
- before 1994, the design of licensing contracts was amazing : the royalties were based on the number of computers produced (« per processor »), no matter which OS (operating system) was really installed !
- according to FTC (1994), the purpose of Microsoft was to deter the use (and consequently the entry) of rival softwares [Stefanadis 1998]

Licensing and antitrust (5)

→ Licensing between competitors and collusion

- the license as a device to support collusion :

  a cartel agreement is stable only if members don't cheat → to avoid cheating, the cartel must be able to punish STRONGLY any deviation from the agreement
- the case of unilateral licensing [Lin 1996] : the efficient firm (with low costs of production) gives a licence to other firms (with high costs) in order to increase their level of punishment, in case of cheating !
- the case of « cross licensing » and patents pool

Licensing and antitrust (6)

→ Cross-licensing, patents poll and collusion

- two competing firms exchange their technology (through licensing or patent pool) but … don't produce the rival product ! → *«sleeping licensing »*
- the purpose of this behavior is to increase mutually the ability to PUNISH STRONGLY the rival firm (through the production of competing products) in case of deviation from the cartel agreement [Eswaran 1993] ; in military terms, it is a situation of « terror equilibrium »
- a (well-known) case : FTC/SummitTechnology VISX (1998) in the surgery eyes industry [Kwoka & White 2002]

Licensing and antitrust (7)

→ Licensing and entry deterrence

- the innovator gives licences to some (weak) firms in order to prevent the entry of strong rival firms

  → « *deterrence by entry* » [Rockett 1990], « *licensing proliferation* » [Hollis 1996]

- the innovator gives a licence to a (potential) competitor, in exchange for stopping (or slowing down) its R&D effort on competing products

  → « *deterrence of innovation* » [Gallini 1984]

- deterrence is very difficult to prove from a legal point of view

Licensing and antitrust (8)

→ A special case of deterrence : refusal of licensing

- it is the right of an innovator to refuse to licence its patent ! … but in some occasions, antitrust authorities can invoke the « essential facilities » doctrine to compel the innovator !
- some (well-known) decisions in Europe : Magill, IMS Health, …and recently, Microsoft
- this doctrine could be dangerous for innovation and must be used only in exceptional cases : see the « five conditions »

To summarize …

→ usually, patents and licenses are good news for consumers. Consequently, intervention of antitrust in the field of IPR should be the exception, not the rule !

→ in some cases, patents can be used only to block entry (sleeping patents)

→ the critical moment for anticompetitive behavior is often the patent expiry (see the pharmaceutical case)

→ antitrust authorities must focus their attention on restrictive clauses in licensing contracts (« the evil is in the details »)

→ antitrust authorities must be careful when COMPETING FIRMS commit to cross licensing or patents pool

→ The « essential facilities » doctrine must be used only if EXCEPTIONAL conditions are satisfied