UNIVERSITY OF SOUTHAMPTON

RESTRICTIONS IN PATENT LICENSING AGREEMENTS AND ARTICLE 85, TREATY OF ROME

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UNIVERSITY OF SOUTHAMPTON

ABSTRACT

FACULTY OF LAW

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RESTRICTIONS IN PATENT LICENSING AGREEMENTS AND ARTICLE 85, TREATY OF ROME

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Technological innovation is generally accepted as being in the public good. Among measures designed to stimulate the innovative process is the patent system - a system based on an unproven hypothesis that limited legal monopoly is indispensable to attaining a significant level of innovation. Yet, almost certainly the most potent stimulant to innovation is workable competition: the competition which is both fair and effective in the marketplace. Exceptionally, patents can render the competitive process unworkable. Agreements based on the existence of a patent, which itself could be invalid, can impair or distort the working of competition. Indeed, they may be designed to eliminate effective competition from the marketplace. Theoretically, the patent is a strictly limited exception to society's basic preference for free and fair competition over monopoly. This theory is reflected in the application of Article 85 to licensing agreements which distort workable interstate competition within the Common Market. That prompts several basic questions. What are, or appear to be, the primary causes of innovation ? What are the main elements of workable competition ? How is the market defined in competition law ? What is involved in the application of Article 85 to licensing agreements ? These questions are answered at considerable length before analysing EEC competition policy on restrictive licensing agreements. This policy is vigorously opposed by business interests in several Member States.

Its opponents contend that the policy attacks, or at least threatens, the very existence of the patent as a stimulant to innovation. The thesis rejects this. It also rejects as being largely fictional the non-interventionist argument that the policy will cause a substantial reduction in patent licensing on the Common Market, to the detriment of competition. Patent holders are often compelled to license their technologies by economic realities of the market environment.

The present policy is economically and intuitively sound. It is: licensing agreements prohibited by Article 85 are excusable only if they are indispensable to the attainment of economic or technical progress, the basic goal of patent policy. In practice, a restriction of competition appears to be indispensable when it either induces or compensates substantial risk-taking in respect of necessary investments or, where risk is insubstantial, permits amortization of a significant part of necessary investments which otherwise is beyond recovery. This hypothesis is fully developed in the analysis of competition policy. The mere existence of a patent does not render any licence indispensable to securing the aims of the patent system, or place any licence beyond the reach of Article 85. The inherent restriction is no longer a tenable hypothesis in Community competition law. It is not an axiom of legal logic. Indeed, it is illogical when analysed in the thesis.

GENERAL INTRODUCTION

"A single idea, if it is right,
saves us the labour of an
infinity of experiences".
(Maritain, 'Reflections
on America')

Ideas which have the quality or character of patentable invention (as defined in the patents code) can be monopolised by their inventor(s) through the legal mechanism of a patent action for infringement. Proceedings for infringement may be brought by the patent holder against unlicensed use or practise of his patented invention. The state grants a patent of invention for the disclosure of patentable invention. Yet, as granted by the state, the patent is not unquestionably valid. The validity of a patent can be questioned on various grounds in certain proceedings.

The basic aim of our patent system, and indeed its supposed effect, is to encourage the successful industrial application of inventions. In short, its aim is to encourage innovation. It has been argued, however, and not always on the basis merely of intuition or emotion, that the supposed effect is at best minimal and that in its present form the patent system does not encourage substantially more innovation than likely would be forthcoming under a regime of competition undistorted by patents. The cost of the patent system when weighed against the benefits it is believed to produce is unlikely, on the stated rationale, to yield a sufficent rate of return to the investment. For politico-economic reasons the present patent system should be abolished. But the weight of evidence supporting the contention that the patent system is not adequately beneficial in terms of innovation is not yet so great as to overwhelm the rationale behind it: that, in its present form, it is indispensable to the promotion of innovation.

Because our present patent system both rewards inventors with monopolies of their patented inventions and recognises the patentee's right to exploit his legal monopoly through licensing it for a consideration, these (together) are not adequate reason for the unquestioned acceptance at law of licensing practices which have the object or

effect of distorting legitimate and significant competition, whether between the licence parties or between one or more of them and third parties. To see adequate reason or justification for the anticompetitive effect of a licensing agreement in the mere fact of a patent, which might be invalid, is to compound the deficiency in the patent system's rationale.

It is still though for some a tenable hypothesis, yet clearly an illogical and a false one, that a partial relaxation of the patent holder's right of prohibition in his patent does not distort or restrain competition beyond what the state understood would be restricted by its grant to the patentee - but, on the contrary, enhances competition in general, since due to the partial relaxation there is limited competition where previously, due to the patent, none was possible. This false hypothesis cannot be successfully maintained against a charge that a patent licensing agreement infringes the competition rules in the Treaty of Rome.

Patent licensing agreements are not in any sense "special", and if they are they should not be so, when it comes to applying Article 85 EEC, merely because the agreements involve a partial relaxation, or limited licensing, of the patentee's right of prohibition. They may be exempted from the prohibition in the EEC Treaty of agreements which distort significant interstate competition only where they are shown necessary for contributing worthwhile objective improvements to the economic process, or promoting technical or economic progress. Thus, it is evident that both the patents system and the system for maintaining competition against harmful and unnecessary distortions share a basic objective: progress in society through technological innovation.

In a manufacturing and marketing agreement covering a patented product or a patented process, access to the licensor's unpatented technical know-how is quite often the most valuable pro-innovative element in the contract package. The licence itself may be seen simply as a mechanism for controlling the use or disposition of the confidential information after its transfer to the licensee, or perhaps

as leverage to the agreed royalty or consideration. But this controlling mechanism can only be as stable as the rights which fuel it or constitute its foundations. If the licence mechanism is rendered inoperative through the patent being declared invalid, control over the transferred know-how is a matter largely of contract.

A proper appreciation of patent licensing requires a multi-disciplinary approach. A study of the practice is apt to involve or raise matters like, on the manufacturing side of a licence, technology transference, product or process development, risk analysis and technology forecasting, product engineering, production management, and, on its marketing side, market economics, market forecasting, marketing strategy, and business techniques and ethics. The legal side of patent licensing can raise matters of patent law, property, contract and competition law. Innovation is the process of getting a new product to the market, safely, in quantity and in quality, and all the matters referred to (legal and non-legal) are comprised in the innovative process. The literature of patent licensing is as broad as those matters.

CHAPTER 1

THE PATENT RIGHT IN A LEGAL PERSPECTIVE

Patents are granted by the state not for things but for inventions. Invention lies essentially in an idea which may be for a new product, for applications of a new product, or for a new method of manufacturing or using a product. There is, however, more to patentable invention than novelty simpliciter. To qualify for the grant of a patent, the invention not only must be new but it must also involve an inventive step. An invention lacks 'inventive step' if it is obvious to a person skilled in the art to which the invention contributes. [1)]

Necessity is the well-known mother of invention, though by no means its only source. The need to solve a problem, whether it be old or new, may breed patentable solutions. Thus, the major source of invention may be said to lie with the problems for which solutions are being sought. The inventive step may lie more in identifying the problem than in its solution - in what might be called the 'new problem' context. If the problem to be solved is 'old', inventive step may lie in a new solution. A new discovery may be a source of invention. Useful and patentable lasers followed the discovery of the physical laws for motion, excitation and control of electrons.

But the patentability of ideas, whether in general or in particular, or the procedure which surrounds the granting of patents for invention, is beyond the field into which this thesis enquires. The field here is almost wholly that of patent licensing and of the impact of anti-monopoly laws on that practice. Licensing patents is a way of exploiting them, yet it is only one of three main ways of doing so. Also open to the patent holder is either the outright sale of his patent or the manufacture of, or according to, his invention to the total exclusion of others. The patent holder could also manufacture and market the invention himself and license others to do likewise.

The outright sale of his patent presumes the patent holder's inability to manufacture and market the invention (or its product) himself, whether for want of capital

resources or manufacturing or marketing facilities. Yet finding a buyer is no simple matter these days, particularly when the invention involves breaking virgin ground. There is, moreover, in the particular case, the difficult problem of valuing the invention before its development and test-marketing. In other cases, it may be possible to estimate roughly what the invention will contribute to the buyer's profits and to base its sale price on its estimated contribution. Exclusive manufacture and marketing by the patent holder may be simply an invitation to other interested manufacturers to defy his patent, thus forcing the patentee into costly defences of his patent or weakening his bargaining hand should he choose instead of a court battle to the bitter end to 'talk licences' with the infringers.

The licensing of patents is encouraged by anti-monopoly laws, because it both helps to disseminate the protected technology, including information not disclosed in the patent specification, and introduces an element of competition. To whatever extent the patent is also an economic monopoly, the introduction of licensed competition, even if it should be limited or restricted by the licensing agreement, can benefit consumers. On the other hand, of course, some patent licensing may harm competition to a greater degree than does the patent itself, without benefitting the public in any real way. Licensing has its negative face. Both positive and negative aspects of patent licensing are dealt with thoroughly elsewhere in the thesis. For the present, it is aimed in this chapter merely to introduce ideas that are met in later chapters and to determine some points of reference regarding exploitation of the national patent in domestic law and under the Treaty of Rome. Yet, before tackling that two-fold objective, something needs saying about the nature of our national patent.

Part 1

NATURE OF THE PATENT

Speaking in the US Supreme Court, Mr. Justice Jackson once described a patent as [2)]

> "property carried to the highest degree of abstraction - a right in rem to exclude, without a physical object or content".

Put far less philosophically, the patent is a statutory right against an indeterminate number of persons exercisable for a definite term.[3] The legal object of the patent right is the invention. In legal theory, the essence of property is generally seen to lie in a right to exclude others from an object, whether the object be material or immaterial.[4] In line with that theory, our domestic courts have long interpreted Letters Patent to confer on the patentee not the right to make, use or vend the invention (for that is a common law right he already has) but the right to exclude others from making, using or vending the invention.[5] And, as though to eliminate any doubts about the patent's status, the Patents Act 1977, in section 30, declares that [6]

> "Any patent or application for a patent is personal property (without being a thing in action)".

Like other species of property, the patent may be licensed (section 30(4)). A patent licence is, however, in general recognised to have more of the nature of a lease than of a conventional licence. Indeed, section 30(4)(b) of the 1977 Act states that any patent licence or sub-licence

> "shall vest by operation of law in the same way as any other personal property"

Yet, unlike other species of property in the conventional mould, the patent is a right to prevent or enjoin asexual reproductions of the object claimed by the inventor. No similar such right is given in traditional forms of property. [7]

The ability of the patentee to prevent others reproducing the object described in his patent is what can give rise to monopoly in the economic sense. In this sense, monopoly is true or real. In the nature of property, the patent is a legal monopoly. But any similarity that might be based on the term 'monopoly' ends there. Whether or not legal monopolisation of the object also gives rise to an economic monopoly is a matter essentially of commerce and good marketing.

Commercialisation of the invention and good market strategy may bring the patent to economic fruition. The fruits are reaped in marketing the product of the invention. Thus, it is the market that rewards the patentee for his invention. The patent system is not, at least not dir-

ectly, concerned with rewarding inventors. It is a demand for his invention that puts the patentee in a position to extract reward for his contribution to social and economic prosperity or well-being.

Part 2

THE PATENT IN PERSPECTIVE

1 THE NATIONAL PATENT IN DOMESTIC LAW

As already stated, the object of the right of exclusion in Letters Patent is the 'invention' - an appropriable idea and not something tangible.[8] Those skilled in the art to which it contributes should be able to apply the idea claimed in the patent to an industrial end. Abstract scientific principles are not patentable. Others can be excluded only from what is actually claimed in the patent's specification, and not from an idea that might have been claimed had the claimant been better advised.[9] Our legal system knows no property in ideas generally. The invention is a legal object and must therefore be finite. Others skilled in the art to which it contributes come to know or appreciate the invention as a legally appropriated object from its description in the patent. To infringe the patent is in general to make, use or market what is claimed therein in the United Kingdom.

The patent, a right in an appropriable idea, is not some thing in the here and now. Rather, it is an opportunity; and those are afforded the opportunity held out by patent law to 'profit' from an invention who disclose their ideas to the domain of public knowledge, who add a particular type of information to the sum of public knowledge. Thus, ideas that are public already cannot be patented. Indeed, on the contrary, it is fundamental to the purpose of patent law that ideas which already form part of the common stock should be freely available to all who want to use them.

The patent's legal content is, then, the right to exclude others from manufacturing according to, and/or marketing the results of, the invention as claimed. But that is not to say the patent will have an 'economic' content. The economic content of a patent can only lie in what others are prepared to pay for it, or for its waiver. What real content the patent has is measured by the circumstances of others, by how highly they rate the

conduct from which they are excluded by the grant of a patent monopoly. It is, of course, conceivable that some patents are not worth their upkeep, there being no one other than the patent holder interested in manufacturing or marketing what he has claimed.

Finally, the patent is a 'privilege', as distinct from an 'absolute' right. Its exploitation, or want thereof, is a matter for public concern.[11] Thus, the patent is always held subject to its being exercised in the "public interest". And while the patentee is not bound in any event to make, use or vend the invention,[12] he cannot, on the other hand, simply rest on his laurels and make no attempt to create a situation where his patent could reasonably be expected to take on a market significance. Opportunities for commercialising the invention must be sought out and taken up. Indeed, if others are able to sound out or discern a commercially viable market for the invention, the patent holder must in some cases exploit his patent their agency.[13]

It is consistent with this kingdom's patent policy that a patentee be required to take reasonable risks in order to commercialise his invention within the kingdom. Patent policy wants <u>viable</u> industries to be established at home - a policy which would quite obviously be thwarted were a home market for the invention to be supplied from abroad and the national patent so exercised by its holder as to secure a foreign industry.[14] Thus, where there are viable home, or export, markets for products manufactured according to a United Kingdom patented invention, its holder must exploit the opportunities at home. That it is more profitable for the patent holder to supply the home market from abroad [15] or that the skills or experience needed for an efficient manufacture cannot easily be found within the kingdom will not excuse the patentee's failure to exploit his UK patent in a way which is consistent with our patent policy.

2 THE NATIONAL PATENT UNDER THE EEC TREATY

The Court of Justice of the European Communities is the final authority on interpretations of the Rome Treaty. Consistently, it has ruled, with respect to the patent of invention and like rights, that the Treaty of Rome controls the <u>exercise</u> but not the <u>existence</u> of such

rights. Its ruling in the DGG/Metro Case (1971) makes that distinction in a statement that

> "although the Treaty does not affect the existence of industrial and commercial property rights recognised by the law of a Member State, nevertheless the exercise of these rights may be caught by prohibitions in the Treaty".

The principles to be taken into consideration in deciding whether an exercise of rights is prohibited or not by the Rome Treaty

> "are those which, with a view to creating a single market between the Member States, are laid down in Part Two of the Treaty (Foundations of the Community) in respect of free movement of goods, and in Article 3(f) of the Treaty, which provides for the institution of a system ensuring competition in the common market is not distorted". (Emphasis added)

What cannot be too strongly, or indeed too often, stressed is the objective of the principles in the Rome Treaty. It is with that objective in view that an exercise of the patent must be assessed. If an exercise of the patent is unlikely to inhibit or to thwart the realisation of that objective, the exercise falls beyond the field of application of prohibitions in the Rome Treaty.

2.1 Article 36 EEC: Free Movement Of Goods

Along with "commercial" property, "industrial" property is exempted by Article 36 from a prohibition in Articles 30-34 of quantitative restrictions on imports, exports, and on all measures having equivalent effect on trade between Member States of the Common Market. Within most definitions of 'industrial' property comes the patent of invention. And for reasons relating to the protection of industrial property, restrictions may be imposed by Member States on exports, imports and goods in transit provided the restrictions do not constitute "a means of arbitrary discrimination or a disguised restriction on trade between Member States". Under Article 36, however, restrictions may not be imposed on importation or exportation of patented goods after the goods have been placed on the market by the patentee or by another with his consent. It is, therefore, a general rule within the sphere of application of EEC trade law that a first proper mark-

eting of patented goods by the patent holder or his licensee "exhausts" the patent with respect to those goods.

2.2 Article 86 EEC: Abuse Of Dominant Position

This particular Article prohibits the abuse by one or more undertakings or enterprises of a dominant position on the common market, in so far only as it may affect trade between Member States. Thus, Article 86 requires a combination of three elements: the existence of a dominant position, an abuse of that position, and the possibility, more usually a reasonable probability, that trade between Member States will be affected. The patent by itself is without doubt capable of contributing to a dominant position. Yet, mere proof that there is a legal monopoly is, of itself, insufficient for attributing market dominance to its holder. "Dominant position" is an economic concept which calls for an evaluation of an undertaking's market position and of what contributes to or comprises that position.

Accepting there is a dominant position, what must be established next is its abuse. And not merely an abuse, but one which is likely to affect interstate trade. An exercise of the patent is, of course, capable of being abusive of a dominant position. But not when the exercise takesthe form of infringement proceedings against improperly marketed products subject to that patent. Such exercise could be seen as quite 'normal'. Thus, an exercise of the patent to restrict or exclude importation of patented products from a Member State where patent protection is not available for the products might not be seen as 'abnormal', provided they were not marketed there by the patent holder or his agent. Again, an exercise of the patent in support of price differences justified by costs or quality would be 'normal' when directed at lower-priced imports improperly marketed in another Member State. Yet, no less normal would be the exercise of a patent to maintain unjustifiably high prices against a threat from lower-priced imports improperly marketed elsewhere in the Community. Article 86 could be used to attack a price structure which is abusive of a dominant position, not a normal exercise of the patent which indirectly helps to maintain that structure.

2.3 Article 85 EEC: Agreements In Restraint Of International Competition

It is with this Article that this thesis is almost wholly concerned. Article 85 is the companion to Article 86. It prohibits when they are incompatible with the Common Market, agreements, decisions or concerted actions which may affect trade between Member States and which have the object or effect of restricting, preventing or distorting competition within that market. The purpose of Article 85 is to maintain competition not at the national level but at the international level, in the interest of an economic system based on the market concept. It is a fundamental objective of the Rome Treaty to establish a single, unified market throughout the Member States of the European Community. As a necessary means towards realising that objective, competition within the Common Market must be ensured against distortions (Article 3 EEC). Yet competition at the international level is something more than merely a unifying force. It is generally to be preferred over monopoly at all economic levels not only because it is an economically useful instrument that forces efficiency in the production and marketing of goods but also because it is compatible with political and social aspirations in a free society.

The view should not invariably be taken that patents are economic monopolies, for they represent economic power in private hands only to the extent of inventions being superior over their alternatives in the market place. It is, of course, true that patents are sought out of a belief that they will facilitate monopoly. But a legal monopoly by itself is not evidence of market dominance, let alone of market power. As counsel for the plaintiff put it to the Court of Justice in Parke, Davis v Probel (1968)

> "it is only when a specific sector of the economy would have to confine itself either totally or mainly to the patented products that the exclusive rights of the patentee could also create a dominant position. There can be no question of a dominant economic position where there are other products on the market besides the patented product that have the same effect or the same destination and therefore compete with the patented product, or where licences are given to various licensees

> that compete with each other in the patented product, or where a product manufactured according to a patented process can also be manufactured according to one or more other processes".

Indeed, it is conceivable, said the Advocate-General in the same case, "that there are patents that cannot be utilised commercially, in which case the patent holder has no influence on the market". Similar products or processes may well compete with the patented invention to a point where economic power in the patent is imperceptible on the wider Community market(s). Thus, patents of invention are not incompatible with the imperfect forms of competition to which Article 85 refers. But besides that, the mere existence of a patent also fails to satisfy one of the basic conditions for an application of Article 85(1). As the Court of Justice pointed out in Parke, Davis:

> "A patent of invention viewed by itself and apart from any agreement of which it might be the subject does not belong in any of [the] categories [of agreements between enterprises, decisions of associations of enterprises and concerted actions], but results from a legal status granted by a State for products meeting certain criteria, and thus avoids the elements of contract or concert required by Article 85, paragraph 1".

When exercised through agreements, including arrangements, a patent of invention could very well restrain or distort competition in a way which satisfies the conditions for an application of Article 85(1). And every restraint of competition implies an existence of monopoly power. But monopoly power arising through agreements which may affect trade between Member States of the Common Market may be excused under the Treaty if that power is shown as being likely to contribute to improving the economic process or to promoting technical or economic progress, and also as being necessary to the attainment of those objectives. Thus, if monopoly is likely to be more progressive than competition, without of course eliminating the latter, the agreement or decision through which the monopoly arises may, under Article 85(3), be exempted from the ban imposed on it by Article 85(1). Progressive monopoly that meets certain conditions is excusable. And by allowing firms contractual protection against short-run competitive pressures, investments may

be sunk by them in risky and expensive commercial and industrial ventures, to the ultimate enhancement of economic performance.

But, reverting to where the patent stands apart from agreements, what if it permits the patentee to dominate the market ? How can that restraint of competition be reconciled with what seems to be a public preference for relatively unfettered competition in most spheres of commerce and industry ? The answer here lies in the end being sought by the different means. The patent system is prepared to exclude others from competing with the patent holder on the basis of, or through, his invention, in the belief that their exclusion will contribute to promoting technical and economic progress through, inter alia, investment in innovation and the means of production. On the other hand, competition policy strives to ensure or maintain competition from harmful restraints, in the belief that that will contribute to promoting technical or economic progress through an optimum allocation of resources. Yet, innovation and improvements in production and distribution occasioned through the patent system will optimise the allocation of resources. Perhaps, after all, the dog has been chasing his tail. Whether or not the patent system is worth its keep is a matter that lies beyond the scope of this thesis.

Fortunately, for a policy devoted to the maintenance of imperfect competition, the vast majority of patents divide between those which, while commercially useful, are relatively insignificant and those which, while relatively significant, do not in themselves impair the overall working of imperfectly competitive markets. So, the worth of a patent system aside, the patents it grants do not in general impair noticeably competition on their relevant markets. It is within or against an <u>actual</u> market that the impact or weight of a patent must be assessed. The market effects of a patent may either be not noticeable, or be just barely so, or be quite significant to a point short of dominant. Hence, in competition law much as regards the real effects of a patent, or a group of patents, will depend on the identification or definition of the market. The definition of markets in competition and monopoly laws is covered in a later chapter.

Part 3

CORRELATION OF THE PROHIBITIONS IN THE TREATY OF ROME

The way in which the pieces of the patent anti-trust "jigsaw" in the Rome Treaty fit together is worth outlining at this point in the thesis. To begin with, there are the prohibitions in Articles 30-34 EEC. These are applicable to the unilateral actions of private enterprises. Unlike Article 85 EEC which deals with efforts by private enterprises to partition the national markets of the EEC by means of agreements, Articles 30-34 recognise that partitioning can be brought about without the aid of agreements, for instance, by an exercise of the patent which is neither the object, the means nor the consequence of agreements between enterprises. In the event an exercise of the patent is caught by the prohibitions in Articles 30-34, it remains only for the national court applying the Articles to decide whether the exercise in question can or cannot be excused under Article 36 EEC. If it be inexcusable under Article 36, the exercise of rights could not be upheld by the domestic court, for such judicial act would itself infringe the Rome Treaty.

The abuse of a dominant position affecting trade between Member States could be manifested in agreements between enterprises, or in the unilateral exercise of a patent. Whereas Article 86 EEC prohibits measures which amount to the 'abuse of a dominant position', Articles 30-34 prohibit only those measures having effects on trade equivalent to quantitative restrictions on imports and exports. Dominant economic position, reflecting as it does a relevant market share, may be due to agreements about market conduct. Alternatively, it may be due to a market's structure. Yet, again, it may be due to the existence of a patent monopoly.

Restricting market conduct through agreements can either be abusive of a dominant position or be restrictive of competition that Article 85(1) seeks to maintain against distortions. Clearly, competition that is restricted due to the very structure of a market cannot in any real sense be restricted or distorted by agreements that control the conduct of private enterprises.

So far as Article 86 is concerned, a dominant

position per se is not inherently bad and therefore something which is prohibited. On the contrary, the very existence of a dominant position is capable of creating a favourable climate for technical or economic progress. It is not, of course, the theory of the patent system that limited monopoly causes technical progress. Rather, it is that the expectation of achieving a limited monopoly does so. Thus, a dominant position may cause, while a patent monopoly may be caused by, economic or technical progress. These causal relationships are discussed in the chapter that follows.

Notes

1 Sections 1(1) and 3, Patents Act 1977

2 Mercoid Corp. v Mid-Continent Investment (1944) USSC 320 US 661, quoting Mr. Justice Holmes.

3 Kocourek ascribed to the term "in rem" the meaning that 'the essential investitive facts of the right do not serve to identify the person who owes the duty': "Jural Relations", 20 Columbia L.Rev. 384 (1920); also "Tabulae Minores Jurisprudentiae", 30 Yale L.Jo. 215 (1921); and Hohfeld on "Fundamental Legal Conceptions", 1923 edition, at page 79.

4 An "immaterial" object is an object that behaves in law and economics much as though it were a physical object. Among immaterial objects are debts, patents, ideas that can be appropriated and protected (like "invention").

5 Steers v Rogers (1893) 10 RPC 245, at 251. And Paton on Jurisprudence has the following to say on rights in rem: "Most rights in rem are negative; it is difficult to conceive of a positive claim against persons generally since the persons on whom the active duty would fall would be so numerous" (1951 edition, at page 235). Also: Crown Die & Tool Co. v Nye Tool & Machine Works (1922) USSC 261 US 24, at 36 (per Mr. Chief Justice Taft).

6 "Though the most intangible form of property, it still, in many characteristics, is closer in analogy to real than to personal estate. Unlike personal property, it cannot be lost or found; it is not liable to casualty or destruction; it cannot pass by manual delivery. Like real property, it may be disposed of, territorially, by metes or bounds; it has its system of conveyancing by deed and registration; estates may be created in it, such as for years and in remainder; and the statutory action for infringement bears a much closer relation to an action in trespass than to an action in trover and replevin. It has, too, what the law of real property has, a system of user by licence": Solomons v US (1886) US Court of Claims, 21 Ct.Cl. 479, at 483 (per Justice Nott).

7 On the differences between patents for land and patents of invention: US v American Bell Telephone Co. (1897) USSC 167 US 224, at 238.

8 J.E.R. Hayes on "The Nature of Patentable Invention", 1945 edition, page 13, defines invention as a "mental concept of a new and useful result inclusive of the mode of its physical attainment characterised by an idea or ideas that are new, original and creative, and add to the sum of knowledge in the art to which the concept pertains".

9 "The function of the claims is to define clearly and with precision the monopoly claimed, so that others may know the exact boundaries of the area within which they will be trespassers. Their primary aim is to limit and not to extend the monopoly. What is not claimed is disclaimed": EMI Ltd. v Lissen Ltd. (1938) 56 RPC 23 (per Lord Russell). It is settled law, however, that a person infringes a patent if he takes the substance of the invention claimed, even if her avoids textual infringement. Invention may be "pirated by a theft in a disguised or mutilated form": Van der Lely v Bamfords (1963) RPC 61 (per Lord Reid).

10 The conception of a right "is not that of a field. It is that of a fence. Strictly, there is no content to it. It is a system of protections, not a thing protected. Within the protections, there may exist no value, no benefit, no enjoyment": Noyes on the "Institution of Property", page 430; "The patentee gets nothing from the law which he did not have before, and...the only effect of his patent is to restrain others from manufacturing, using or selling that which he has invented": Motion Picture Patents Co. v Universal Film Mfg. Co. (1916) USSC 243 US 502 (per Mr. Justice Clark). However, as M.R. Cohen observes, when criticising the view of property as simply a system of protections: "...to the extent that these things are necessary to the life of my neighbour, the law thus confers on me a power, limited but real, to make him do what I want", on "Law & Social Order", page 45 ('Property & Sovereignty).

11 Consider: section 48, Patents Act 1977.

12 E.g., Boult's Patent (1909) 26 RPC 383.

13 Boult's Patent, at 387; Kent's Patent (1909) 26 RPC 666, at 670.

14 E.g., section 48(3)(b)(ii), Patents Act 1977.

15 Hatschek's Patent (1909) 26 RPC 228, at 243.

16 Johnston's Patent (1909) 26 RPC 52.

CHAPTER 2

COMPETITION, MONOPOLY AND TECHNICAL INNOVATION

By apparent general agreement, this kingdom is one of the world's most important shopkeeper's. Unfortunately, for the shopkeeper, although our rate of invention is fairly high for a relatively small nation, our rate of innovation is fairly low. And in the market places of the world, it is really innovation that counts. What, then, is innovation ? Technological innovation is a process, and not a thing. This process usually starts where invention leaves off. Brown's definition of "innovation" runs as follows:

> "Most simply, invention is getting the idea; innovation is overcoming all the hurdles to its economic use. Inventions become patents but few are developed into practical applications. Innovation is the word we use to connote utilization. It's the total complex process by which the idea is brought to commercial reality for the first time. It's the successful introduction of the product or service to the market". 1)

Assuming that, as a nation, we want to stay in business on the world's highly competitive markets, our need to innovate on a more rapid and more intensive scale than we have seen here in the past two decades is largely incontrovertable. Whether we choose to admit it or not, the evidence indicates that our general standard of material living owes a lot to our manufacturers and traders being to stay in business abroad. To stand still, let alone advance, on world markets we are required to innovate.

Technological innovation can be a very risky business. Indeed, considerable risk is more often present than not with innovation. As aptly quoted in the 1976 Canadian "Working Paper On Patent Law Revision":

> "We need also to bear in mind that the path between an invention (or idea) and the market place is a hazardous venture, replete with obstacles and substantial risks. It is ordinarily a very costly, time consuming, and difficult task that the innovator faces". 2)

Thus, economic conditions in the home market must be such as to encourage the taking of risks with a view to doing more foreign trade, or at least to maintain present shares.

It has already been implied that competition encourages businessmen to take risks simply to stay in business. It is a force behind innovation. Moreover, for ideological reasons, competition is preferable to monopoly. On the other hand, as Schumpeter's thesis well argues, monopoly appears to be indispensable to risk-taking. It encourages, or may be seen to encourage, innovation by providing a measure of protection from the short-term pressures of a perfectly competitive market: the ideal market of economic theory. [3] The validity of Schumpeter's thesis has been borne out in empirical studies. One such study by Scherer, into monopoly power, concentration and innovation, led to his concluding that:

> - a little bit of monopoly power, in the form of structural concentration, is conducive to invention and innovation, particularly when advances in the relevant knowledge base occur slowly;
> - very high concentration has a favourable effect only in rare cases, and more often it is apt to retard progress by restricting the number of independent sources of initiative and by dampening firms' incentives to gain market position through accelerated research and development;
> - it is vital that barriers to new entry be kept at modest levels, and that established industry members be exposed continually to the threat of entry by technically audacious newcomers;
> - what is needed for rapid technical progress is a subtle blend of competition and monopoly, with more emphasis in general on the former than the latter, and with the role of monopolistic elements diminishing when rich technological opportunities exist. [4]

It is relevant to mention here that Article 85(1) is seen by the EEC Commission as not being intended for the control of structural concentrations. [5]

In order to appreciate the thrust of Schumpeter's argument, one needs first to appreciate what perfect competition is or implies.

1 PERFECTIONISTS UNDER ATTACK

To use the words of Professor Hoppmann, perfect competition is

> "an analytical model stripped of all monopoly elements, so that the individual participant in the market is practically powerless and has no influence on the mar-

ket process". 6)

What is attributed by the perfectionists to their concept of a market has been put as follows, by Asch:

> "A perfectly competitive market allocates resources in a uniquely efficient way. It drives competitors to their best efforts, assuring production at minimum average cost. By precluding any form of exploitation (simply because no market unit possesses the power to exploit), the competitive market acts as an accurate mirror of society's desires, as manifested in demand forces. It is in this sense preferable to <u>any</u> market which deviates from competitive conditions". 7)

Alas, if indeed it ever existed, perfect competition is, nowadays, generally regarded as being quite impossible. Schumpeter goes further:

> "What we have got to accept is that [the large-scale establishment or unit of control] has come to be the most powerful engine of [economic] progress and in particular of the long-run expansion of total output not only in spite of, but to a considerable extent through, this strategy which looks so restrictive when viewed in the individual case and from the individual point of time. In this respect, perfect competition is not only impossible but inferior, and has no title to being set up as a model of ideal efficiency. It is hence a mistake to base the theory of government regulation of industry on the principle that big business should be made to work as the respective industry would work in perfect competition". 8)

Thus, although perhaps not so beautiful as small, bigness is necessary for efficiency of output in our present consumer society.

Perfect competition is, then, unworkable in modern industrial societies that have an ideological preference for the market concept. To be workable therein, competition must acknowledge imperfections both in the structure of markets and in the conduct on them. The ideal of a very large number of insignificantly small yet wholly independently acting traders and unhindered freedom of entry to a market would not, in practice, encourage or support large-scale risk-taking.

> "But perfectly free entry into a <u>new</u> field may make it impossible to enter it at all. The introduction of new methods of product-

> ion and new commodities is hardly conceivable with perfect - and perfectly prompt - competition from the start. And this means that the bulk of what we call economic progress is incompatible with it. As a matter of fact, perfect competition is and always has been temporarily suspended whenever anything new is being introduced - automatically or by measures devised for the purpose - even in otherwise perfectly competitive conditions".
> (Schumpeter) 9)

Since perfect competition is, nowadays at least, an impossible, probably even an undesirable, target for the policy of public regulation of industry, something short of perfection has to be the aim of that regulation. That something can be <u>workable</u> competition. It lies between polar opposites: between perfect competition and absolute monopoly. The latter, like its opposite, is generally regarded never to have existed.

> "Monopolist means Single Seller. Literally therefore anyone is a monopolist who sells anything that is not in every respect, wrapping and location and service included, exactly like what other people sell: every grocer, or every haberdasher, or every seller of "Good Humours" on a road that is not simply lined with sellers of the same brand of ice cream. This however is not what we mean when talking about monopolists. We mean only those single sellers whose markets are not open to the intrusion of would-be producers of the same commodity and of actual producers of similar ones or, speaking slightly more technically, only those single sellers who face a given demand schedule that is severely independent of their own action as well as of any reactions to their action by other concerns".
> (Schumpeter) 10)

2 THE PATENT MONOPOLY AND INNOVATION

Absolute monopoly could obtain only where there are <u>no</u> substitutes for a commodity: where the seller is the only source of that commodity and prospective purchasers must meet his terms or go without. That commodity would, moreover, have to be indispensable. Fortunately, these conditions are not met in the real world, thanks, in part, to science and invention which increase the possibility of competition and substitution. Thus, monopoly is always partial, limited and temporary. 11)

Into that category of monopoly there falls the patent of invention: a <u>legal</u> monopoly, though not necessarily

an economic monopoly.

> "New methods of production or new commodities, especially the latter, do not per se confer monopoly, even if used or produced by a single firm. The product of the new method has to compete with the products of the old ones and the new commodity has to be introduced, i.e., its demand schedule has to be built up. As a rule neither patents nor monopolistic practices avail against that. But they may in cases of spectacular superiority of the new device, particularly if it can be leased like shoe machinery; or in cases of new commodities, the permanent demand schedule for which has been established before the patent has expired".
>
> (Schumpeter) 12)

To an enterprise, a patent of invention is valuable, in general, not so much for affording an opportunity to behave temporarily according to the monopolist schema as for, to quote Schumpeter,

> "the protection it affords against temporary disorganisation of the market and the space it secures for long-range planning".

Patents are valuable, then, as a means of securing the base for innovation. In that role, they may also be seen as indispensable to innovation. Witness, for instance, the views of the Banks Committee on "The British Patent System" (1970):

> "But the basic aim of a patent system, and indeed its effect, is to encourage the successful industrial application of inventions. The man with the resources can normally be expected to put those resources to industrial use without special assistance in established fields, where he can be reasonably assured that his factory will work technically and where demand for his product is already known to exist. If, however, resources are to be put at risk to develop a new process or product, which has yet to be tested, then he will hesitate lest the expense of the development may prove to be irrecoverable while his competitors can wait and, without equivalent expense, pick up and use the successful results. It is the knowledge that a patent monopoly will enable him to hold off competition for a period which encourages him to take the risk and use those resources to develop new industrial inventions". 13)

Indeed, the resources for innovation may itself have come from the profitable exploitation of monopoly power. And

that power over the market may itself, in turn, reside in patent rights, monopolistic practices (which include agreements that restrict competition), or simple 'bigness'.

The camp is, however, by no means united on the issue of whether or not the patent system is indispensable to the promotion of innovation. There are valid doubts as to whether the system secures substantially more innovation than would be forthcoming were patent protection not available. To be sure, the patent system is useful as an additional string to the bow. But that does not imply the indispensability of the system. As the 1976 Canadian Working Paper puts it:

> "Businessmen may like to have patents available, because once they have a patent which covers their product line, it is likely to fend off or deflect competitors, contributes a reassuring sense of security and does in fact provide some degree of protection. It is understandable that businessmen may support an instrument which may tend to reduce potentially disruptive factors. But such a preference does not establish that the patent system is indispensable to support decisions to attempt to innovate, or even that it will have any substantive effect on such decisions". 14)

Discounting what might be said by patent attorneys against ridding ourselves of the patent system in its present form - one should not expect turkeys to look forward to Christmas - there is objectively little to be said for the view that innovation is induced by the availability of patent protection. The system is seen by far more than a few industrialists as being no better than a "protection racket" which, in the main, keeps patent lawyers and patent agents in a comfortable living. 15)

3 MONOPOLISTIC MARKET CONDUCT AND INNOVATION

Among the market practices or conduct which can alter competition in a way and to a degree that could hinder realisation of the objectives of the Treaty of Rome are agreements which:

(a) directly or indirectly fix purchase or selling prices or any other trading conditions;
(b) limit or control production, markets, technical development, or investment;
(c) share market sources or sources of supply;

> (d) apply dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage;
> (e) make the conclusion of contracts subject to acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of such contracts.
>
> (Article 85(1) EEC)

Where such, and other, agreements between economically independent enterprises meet all the conditions for an application of Article 85(1), said agreements are prohibited and declared void by the Treaty. The indirect exploitation of patents may give rise to one or more of the prohibited agreements described above. When it does, the agreement(s) may be exempted under Article 85(3) if the competition that otherwise would be present on the relevant market would be unlikely to secure as good an economic performance as the prohibited agreement(s). Among the ways in which licensing agreements could promote a better economic performance than competition is by inducing risky innovation in the field of technology.[16] But a licensing agreement having the aim solely of enhancing the patent right(s) is not, for that reason alone, excusable under Article 85(3). As the EEC Commission asserted before the Court of Justice in the famous Parke, Davis case:

> "Community competition law permits a restriction of freedom of competition where, on the one hand, it is <u>necessary</u> for the realisation of the <u>particular purpose</u> of patent law, and, on the other hand, it does not interfere with the ultimate purpose of the Treaty, which is the establishment of a free and common market between the Member States".
>
> (Emphasis added)

Both the patent system and Community competition law share a common goal: the promotion of technological innovation. How necessary the patent system is to the attainment of that goal is quite a separate issue.

CONCLUSION

Schumpeter's argument that monopoly power is indispensable to innovation or economic progress is a rejection of perfect competition as a guide for regulating the struct-

ure of industry. A less perfect, more realistic guide is to be found in the concept of workable competition. It is debatable, however, if this far less perfect ideal is capable of tolerating the high degree of market imperfection that, arguably, is necessary for the health of much of today's innovation, involving as it often does very high investments. In a recently published paper on international trade and investment, the director of the highly respected PEP, calling for stronger action by the European Community, writes:

> "Does the Community's mix of industrial policy and anti-trust legislation help to provide the conditions for adequate prices and investment ? The present health and profitability of Community industry indicate that they do not. Does the Community's import policy contribute to the same purpose ? Only, it seems, in a few sectors and after long delays. The Community needs more suitable policies and stronger instruments with which to apply them if our industries are to have the framework in which they can make their proper contribution".

Present antitrust and import policies, according to the same writer, fail to achieve their objectives

> "because they embody ideas that reflected the simpler economy of one or even two centuries ago. These and other policies will have to be reformed to suit the nature of the modern economy: capital intensive, skill intensive, specialised and interdependent. And, because of this interdependence, the competition and independence of firms, which remain essential to the system, must be supplemented by co-operation both among firms and between industry and the public authorities. This may go against the grain of the classical economic philosophy in which many of us have been educated. But there is no alternative if the crisis of the 1970s is to be overcome". 17)

Workable competition, as apparently understood and generally applied by the EEC Commission, relies to a considerable extent on the conventional theory of price. Exceptionally, though, the Commission is prepared to so flex the antitrust rules as to tolerate market situations that fall barely short, if indeed that, of the elimination of workable competition within the Common Market, albeit under

the Commission's supervision and in the interests of economic or technical progress. As the legal correspondent for a financial newspaper wrote in 1977:

> "Competition is fast being replaced by regulation by which the bureaucracies of government, big companies and trade unions seek to avoid the consequences of the recession. .... The swing away from competition and towards regulation is..evident in the European Community which...has introduced a minimum price for steel bars used for reinforcing concrete. The crisis of the European steel industry has prompted the Commission to move towards a quota and price cartel, extending thus the principle of regulation so far reserved for agriculture into the area of industry. There is little doubt that this seemed to lawyers a blatant infringement of Article 65 of the Treaty of Paris in the same way as similar measures proposed and partly enacted for the European oil industry cannot be reconciled with the often cited spirit of the Treaty of Rome. The concept of regulation, or dirigisme, with which France entered the Community seems to be getting the upper hand over the essentially American concept of enforced competition on which Germany banked when taking part in the European venture". 18)

These new "shapes" into which "competition" is being flexed need new antitrust theories to explain them. Moreover, they might be seen to pale into insignificance the issue of whether the present patent system is indispensable or not to economic progress. Perhaps, the real worth of the present international patent system to the developed nations lies in the disruptive effect it can have on the competition of the developing nations: something which the latter have long and bitterly complained of. 19)

Notes

1 "Invention and innovation - who and how ?", CHEMTECH, December 1973, page 709. Other useful business articles on innovation are: Arcand on "Bureaucratic innovation", CHEMTECH, December 1975, page 710; Bradbury on "Constraints to innovation", CHEMTECH, January 1977, page 23; Abend on "The Innovationeer", CHEMTECH, July 1977, page 400; Landau on "Industrial innovation: yesterday and today", Chemistry & Industry, February 2, 1974, page 96; Waller on "Innovation in industrial chemistry", Chemistry & Industry, December 3, 1977, page 938; Atterton, et al. on "How To Innovate Profitably", Management Today, June 1976, page 72; "The innovative threat that faces Europe", Financial Times, 1/2/78. Other than the latter, these articles refer to other writings on innovation.

2 Published by the Canadian Department of Consumer and Corporate Affairs, at page 25.

3 Schumpeter on "Capitalism, Socialism & Democracy", 1976 edition, chapter 8, pages 87 to 106.

4 F.M. Scherer on "Industrial Market Structure and Economic Performance", 1970 edition, pages 377-8.

5 E.g., "Memorandum on the Concentration of Enterprises in the Common Market", issued in 1965 by the EEC Commission; Re. SHV-Chevron (1975) 1 CMLR D68, commentary by Korah, JBL, 1975, page 243; Kay on "Company Mergers and the EEC", JBL, April 1975, page 88; Ritter & Overbury on "An Attempt at a Practical Approach to Joint Ventures under the EEC Rules on Competition", 14 CML Rev. 601 (1977).

6 "Workable Competition", 13 The Antitrust Bulletin 61, at 63 (1968).

7 "Economic Theory & Antitrust Policy", 12 The Antitrust Bulletin 865, at 866 (1971).

8 Page 106.

9 Pages 104-5.

10 Pages 98-9.

11 E.g., C. Wilcox on "Competition & Monopoly in American Industry", 1940 edition, TNEC Monograph (No. 21), page 9.

12 Page 102.

13 Cmnd. 4407 (1970), chapter titled "The Value of Patents"; for a comprehensive review of the economic and social costs of the patent system, see Scherer, note 4 supra, page 379 et seq.; the Canadian Report, note 2 supra.

14 Page 57. On the basis of his own experiences as a development engineer, contracts negotiator, and works manager, the writer of this thesis can add that corporate decisions to innovate in the small to medium-sized firms where he was employed never took a great deal of notice of patent protection. Indeed, it was quite usual, being regarded as far safer, to completely discount such protection when it arose. Firms with which the writer is presently involved are not influenced by the availability of patent protection when reaching decisions to innovate.

15 E.g., Knox on "Patents:An International Protection Racket", Electrical Review, Vol. 198, 27/2/76, page 16. The article itself is of little academic merit. See the views of Viscount Eccles in the House of Lords debates on the Bill for the Patents Act 1977, Hansard, 24/1/77, Col. 276.

16 See, further, in chapter 7, this thesis. A useful paper here is Jacquemin on "The Criterion of Economic Performance in the Antitrust Policies of the US and the EEC", 7 CML Rev. 205 (1970). See criticism of "performance"

testing of restrictive agreements in Hoppmann's paper, note 6, supra, where the writer concludes: "From the viewpoint of the goals of competition policy, workability, therefore, has to be understood in the neoclassical sense, as a market structure and market conduct definition. Then, of course, the concept says only negatively that the competition we want is not the 'perfect' competition of the static model. Expressed positively, the declaration of workable competition as an economic norm means only that freedom of competition is not to be restrained by 'artificial' obstacles. A closer characterisation of the norm by the attributive word, 'workable', is superfluous, unless one intends to get rid of or thwart the public policy of competition. Besides this, such an attribute is dangerous, since it is misleading". To Hoppmann, definitions of workable competition that include performance norms are only "a cover for anticompetitive policy".

17 Pinder on "The future of international trade and investment", Chemistry & Industry, November 19, 1977, page 893, at 895-6.

18 Financial Times, 11/5/77, Hermann on "Competition bows out to regulation in the EEC".

19 See, e.g., Viscount Eccles, note 15 supra, col. 275; Canadian Report, note 2 supra, pages 62 and 82.

CHAPTER 3

WORKABLE COMPETITION

In the natural world, the contest or struggle for the prize of life is carried on at and between all levels. That contest is the ultimate in natural competition between the living species. It is often seen as necessary for breeding good stock: only the fittest of the species survive to (re)produce. Undoubtedly, it is precisely the survival of the most efficient units of production that economic competition aims to secure. The less fit, or less efficient, producers are driven from the market-place by the efficient producers. Thus, in economics, the term "competition" always implies a specific market in a definite commodity with at least two sellers and at least two buyers, each acting independently, on the sellers' side, of every other seller and, on the buyers' side, of every other buyer. [1] The market is the sphere or arena in which traders vie and struggle for the prize of the consumer's limited purchasing power.

But beyond that general implication lie different types of competition. Perhaps not so much different types of competition as different ways in which competition is practised. Anyway, there is perfect competition, pure competition, imperfect competition, monopolistic competition, cutthroat competition, nonprice competition, oligopolistic competition, predatory competition, discriminatory competition, fair and unfair competition, potential competition, and workable or effective competition. As stated, some of those are more different ways of competing than different types of competition. Yet, to which of them does the word "competition" in Article 85 EEC refer ?

In at least one case that came before it, the Court of Justice spoke of the "guarantee of 'fair competition'" in the context of Article 85: Italy v EEC Council & EEC Commission (1966). At various other times, both the EEC Commission and the Court of Justice have referred consistently to "effective competition" in the same context. It is, therefore, not theoretical competition but the competition that in practice is fair and workable that the EEC Treaty seeks to maintain against harmful distortions, not as an end in itself but as a means to an

end.

If, as just stated, Article 85 aims to ensure fair and workable competition within the Common Market against distortion through agreements, decisions or concerted actions which may affect trade between Member States, then it cannot be but worthwhile to outline what that competition is or implies. [2] With that knowledge, one is better equipped to assess and appreciate how agreements between enterprises could distort the competition protected by Article 85.

Professor Wilcox, writing in 1940, saw workable or effective competition, "though less definite", to be generally "more useful than perfect competition. It fulfils, in part, at least, many of the conditions requisite to perfection. It includes all the area of pure competition and much of that of imperfect, monopolistic and non-price competition. It requires the preservation of the threat of potential competition. It may even exist under conditions of oligopoly or oligopsony. It may be difficult to distinguish from cutthroat or destructive competition, but it is inconsistent, in general, with those forms of competition that may properly be defined as cutthroat, destructive, or predatory, and with many of the competitive practices that have usually been condemned as unfair. In brief, competition may be said to be effective or workable when it operates over time to afford buyers substantial protection against exploitation at the hands of sellers and affords sellers similar protection against exploitation by buyers. For this is the social function which competition is supposed to perform". [3]

Countless, and some quite complex, definitions of workable competition can be found in the literature of antitrust economics. Indeed, their abundance led E.S. Mason to remark in 1953 that there were as many definitions of workable or effective competition as there were working or effective economists. [4] Fortunately, to adopt the view of two American economists, nearly all modern definitions of workable competition turn "on the same crucial elements - the capacity of buyers to take advantage of rivalry among sellers, the inability of sellers to exercise appreciable control over the price at which they sell, and the absence of cost or other barriers to the entry of new firms". [5]

Part 1

ELEMENTS OF WORKABLE COMPETITION AND MODES OF COMPETING

1 RIVALRY AMONG SELLERS

Numbers and size distribution influence the quality of market conduct. The more sellers there are in the market-place, the better for competition. Allowing always that it needs only two to have a good, hard fight, it is, nevertheless, generally true that the fewer in number the rivals the less likely they are to compete. While if one large, efficient firm dwarfs the market in which there are other sellers, effective rivalry among sellers is hard to envisage.

> "The presence in any market of a unit much stronger than the others is a factor to be closely examined for its bearing on the workably competitive character of that market, and on the issue of whether any firm exists only by sufferance, but by itself is not indicative of the absence of workable competition".
>
> (US A-G's Antitrust Committee)

Care should always be taken not to read monopoly in the presence of a single actual seller on the market.

> "The hypothesis that the number of competitors is a criterion for the extent of market power holds only under certain conditions. It is valid when the dynamic process of competition is restrained by substantial barriers to entry. Then it happens that a single supplier has a monopoly. But if the competitive process is free and unhibited, then even a single supplier has no dominant market power. Hence the market is competitively organised not only when the number of competitors is large, but also if competition is free. Competition, however, can be free even when there is a small number of competitors or only a single supplier".
>
> (Hoppmann)

Thus, potential competition must be taken into account when assessing the workability of competition in a single supplier situation.

2 POTENTIAL COMPETITION

Competition may be workable precisely because of the beneficial influence of potential competition on the conduct of existing sellers. A potential competitor should pose a threat to the supplier who would behave like a monopolist. The theory of potential competition suggests,

according to one opinion,[6]

> "that established firms will take account of potential competitors in choosing a pricing policy. The mere existence of potential entrants has a procompetitive effect on the market to the extent that established firms opt for a limit price policy. /The/ theory of potential competition does not imply, much less require, that actual entry need occur to influence the conduct of established firms".

Now, by "limit price" is generally meant the highest common price that the sellers believe they can charge without inducing the potential entrants to enter. Important, if not indeed vital, to decisions of actual sellers to opt for the limit price will undoubtedly be the level at which the barriers to market-entry are perceived to be. Conversely, entry barrier height affects the workability of competition. The height of entry-barriers will, therefore, determine the extent to which prices can be raised above the competitive level without inducing entry. Thus, a direct relationship can be discerned between limit price and entry-barrier height. Among the major barriers to entry are, by general agreement, product differentiation (including patents and trademarks), absolute cost advantages, scale economies, tied distribution outlets, private agreements, any or all of which can reduce, if not eliminate outright, the threat of potential competition.

Mention may be made here of some typical agreements which are capable of distorting potential competition. Exclusive patent licences are capable of doing so; as are agreements (or clauses) which have the object or effect of impairing the incentive to inventiveness, or to use the words of Article 85(1)(b) which limit or control technical development, or investment. Science, invention and technological innovation constantly operate to break down entry-barriers to markets and so keep alive the threat of potential competition. Both non-existent sellers and producers with spare manufacturing capacity could, along with existing sellers confined, say, by transport costs to a particular region, qualify as potential competitors. Were it likely that a manufacturer with excess capacity, or for this matter a manufacturer making the relevant product for his own consumption, would, in the event the limit price

were exceeded, be able to utilise that excess effectively, or forego all or a part of his present consumption and supply the market at a profit, surely that manufacturer has to be counted among the competitors and his potential share allowed for. In a sense, each of those manufacturers, or at least the one presently producing for his own consumption, has a present share of the market.

3 BARRIERS TO ENTRY

A market surrounded by "impractically high" barriers to the entry of new firms ought not, therefore, to be seen to be workably competitive, even though present traders on the market in fact compete vigorously.

> "Reasonable opportunity for entry is needed if there is to be assurance of a sufficient number of sellers to maintain effective competition and thus prevent markets from evolving gradually into a state of monopolistic stability. The exclusion of new rivals may be a major impairment of competition in itself, and the power to exclude rivals is usually associated with the power to eliminate rivalry between those already in the industry".
>
> (US A-G's Antitrust Committee)

Barriers to entry can be divided roughly between natural and artificial barriers. Distance from the source of a vital raw material or from the market itself may be regarded as a natural barrier; or in the case of, say, fruit, the ripening period could be seen as a natural barrier. Artificial barriers inhere in fiscal measures, technical standards, or in exclusivity clauses in licensing agreements. For instance, an agreement by a patent licensee to confine his production to a certain factory could impede his entry to a market. 7)

4 FEWNESS OF SELLERS: OLIGOPOLY

Under conditions of oligopoly, sellers are few in number and their fewness is, to some, indicative of their likely behaviour. Price stability tends in general to be associated with oligopoly markets. In an oligopoly market -

> "one in which there is a smaller number of dominant sellers, each with a large market share - each must consider the effect of his output on the total market and the probable reactions of other sellers to his decisions; the results of their combined decisions may approximate the profit-maximising decisions of a monopolist.

> Not only does the small number of sellers facilitate agreement, but agreement in the ordinary sense may be unnecessary. In general it may be said that the smaller the number of firms in an industry - at least where that number is very small or where a very small number is responsible for the overwhelming share of the industry's output - the greater the likelihood that the behaviour of the industry will depart from the competitive norm".
>
> (White House Antitrust Task Force Report) 8)

Genuine independence of suppliers is a 'must' so far as workable competition is concerned. Absent a fair sign of independence, the market should not be regarded as workably competitive. Could an oligopoly market really satisfy that 'must' ? Might not fewness of traders lead to a state of mutual interdependence ? That self-interested independent rivalry which is likely to be characteristic of a market where a large number of sellers contest the available business is, on the contrary, likely to be absent from most narrowly-structured markets. Those markets would indeed warrant very close scrutiny of the incentives to, and the quality and character of, competitive moves before they could sensibly be judged as workably competitive.

> "Where these competitive moves are not promptly matched and offset, therefore, or where uncertainty exists as to the pattern of rival responses, an influence exists which, other things being equal, provides inducements to effective competitive rivalry. Where uncertainty prevails - perhaps because of the presence of a company which refuses to follow prevailing patterns - sellers may be more likely to conclude that they have a chance to make a gain from a competitive innovation, than if the system of market responses has been securely built up by past habits, agreements, or experience. The mere existence and quick dissemination of information on price changes is not of itself evidence either way. But cooperative efforts by an industry to eliminate uncertainty and promote instant knowledge for everybody of everybody's price may be a device to curb price cutting. Thus, a conviction that rivals will respond immediately may discourage any independent competitive action".
>
> (US A-G's Antitrust Committee)

5 CAPACITY OF BUYERS

Rivalry among sellers will be ineffective when, for whatever reason, buyers are unable to shift their purchases

between different sellers. Their inability to do so stems, not infrequently, from ignorance. They may be ignorant of the necessary principles for appraising the relevant technical merits of functionally similar and largely identical products. This does not mean, of course, that goods on offer in the market-place have to be homogeneous. Competition may work, and work well, in respect not only of identical products but also of substantially similar products. It remains, however, that by being able to shift their purchasers between independent sellers the buyers work the competitive process and can in consequence expect to get better service, higher quality, and lower prices from sellers.

6 PRICE COMPETITION

It is through the price medium that the working or effectiveness of competition is most readily appreciated. Hence, the unremitting efforts of sellers to control, often to the point of eliminating, price competition. With competition eliminated, suppliers can usually afford to relax into indifference about quality or service, inefficiency and general laziness. Markets rapidly expand under the influence of price competition, that expansion possibly threatening neighbouring markets. Hence, industry-wide price-fixing may be sought by producers. The indifferent, inefficient and lazy normally survive where price rivalry has been effectively curbed. And, as Thomas Jefferson once said, 'there is nothing like the prospect of elimination for concentrating the mind wonderfully'. When faced with the prospect of elimination from the market, producers and suppliers have concentrated their minds wonderfully on how best to please buyers.

Price discrimination, including multipart pricing, can speak either way as to the workability of competition. [9] And may indeed speak in favour of there being workable competition even where the differences in price are unrelated to differences in cost - for in narrowly-structured markets price discrimination may disrupt an otherwise effective system of monopoly pricing. It is, however, quite often difficult to delineate discriminatory pricing from predatory pricing. The latter practice is in general inconsistent with the norm of fair and workable competition.

Most simply put, predation can be said to involve one seller who cuts his price for the sole purpose of elim-

inating another. In discrimination, the seller confines the price-cut to a portion of his sales that competes with the sales of another. It is characteristic, moreover, of predatory price-cutting for the cut to be temporary. When the rival has been either eliminated or coerced into following a pricing or other policy, prices are usually raised. Predation turns essentially on intent. It must be distinguished from vigorous competition.

> "Only by examining the facts, including the market, is it possible to answer these important questions, among others: whether the low prices or other alleged predatory acts were temporary and for the purpose of destroying or coercing rivals; or whether they were undertaken to meet competition, or to increase profits under high level production at low cost, or for some equally proper competitive purpose; whether the profit-seeking interests of the company under attack would have been served by predatory or oppressive tactics; and so forth. These facts bear not on the justification for predatory conduct - there is none - but on the issue of whether such conduct exists".
>
> (US A-G's Antitrust Committee)

Destructive price-cutting, in general seen as being at odds with workable competition, stems, it is said, from the existence of idle capacity and the pressure of fixed charges. [10] This leads sellers successively to cut prices to a point where no one of them can recover his costs and earn a fair return on his investment. Yet, as Professor Wilcox warns:

> "It cannot be said with certainty that a series of price cuts is destructive unless someone has made an impartial analysis of the costs of the price cutters, determined what rate of return it is fair for them to receive, and discovered that the cut prices will not cover the legitimate costs plus the fair return. The terms cut-throat and destructive, however, are frequently applied, in the absence of any such investigation, to ordinary competition in price. Thus employed, they can have no more weight than any other epithet".

7 MONOPOLISTIC COMPETITION

This results from, or is carried on through, product differentiation. [11] Functionally identical products may be individualised through style, get-up, brand names, patents, mode of application of a product, and so forth,

any or all of which may protect, albeit not absolutely, a portion of the seller's output from price competition. Relatively mild differentiation is itself never indicative of the existence of workable competition, but merely of its intensiveness. On the other hand, extreme product differentiation may succeed in individualising a product to the point where consumers do not readily interchange it with its functional substitutes. Differentiation to that degree would eliminate the competition of substitutes and foster monopoly. [12)]

8 FAIR & UNFAIR COMPETITION

Perhaps a matter more of law and ethics than of economics, fair/unfair competition covers a wide field of business practices. Its somewhat uncertain content is largely a reflection of social moods at a given time. Thus, what is fair game today may be forbidden meat tomorrow. Not only is its content rather fluid in domestic law but on the international level what is fair and unfair varies greatly between states, even between those within the Common Market. What may be unfair, or abusive of our domestic business ethics is not necessarily so of business ethics on export markets. The likes of what we call 'bribery', others term introduction fees, consultancy fees, and so forth. Such bribery is widely regarded as an accepted part of business life in certain areas of the European Community. One does not have to travel to under-developed or less-developed regions of the world to find bribery entrenched in commerce and business life generally.

That bribery is regarded as perhaps a 'fair' way of competing, if not on the Common Market then certainly on third-country markets, might be gauged from the reactions of our Community partners to the recently circulated draft of an international code of conduct which bans the giving or seeking of "bribes", "kick-backs", extortion and secret "slush funds", and lays down strict principles concerning agents and political payments, along with a council to administer the code.

> "Continental businessmen are taking a more sceptical view of the effectiveness of the proposed code, and question the appropriateness of the adjudicatory role planned for the council. In France, West Germany and Holland particularly there is a desire to

> replace the draft code with an inevitably softer statement of guidelines. Lord Shawcross, who is also chairman of the City Takeover Panel and the Press Council, is believed to feel so strongly about the need for an effective code of conduct that he would in the last resort resign rather than be associated with a substantially watered down version of the draft 'Shawcross Code' ".
>
> (Financial Times) [13]

Would bribery, seen generally in this country as an unfair way of competition, be incompatible with competition within the Common Market ? Indeed, it would appear to be a 'fair' way of competing at present. How is fair competition to be distinguished from unfair competition within the context of the Rome Treaty ? Would inducing the breach of a supply contract indicate perhaps that competition is working well and therefore fairly ?

Unfair competition is likely also to be unworkable. Yet, beyond a given national context, it will be quite difficult to separate those practices that are fair from those that are unfair. Moreover, accepting the unfairness of a certain practice, resort to it on the international level will not involve its practitioner(s) in the breach of Treaty obligations unless it would be likely also to have a noticeable affect on trade between Member States.

Part 2

FURTHER REFLECTIONS ON THE CONCEPT OF WORKABLE COMPETITION

> "Workable competition supplies no formula which can substitute for judgment. It suggests leads to data of significance, and a means of organising that data bearing on the question whether a given market of itself is sufficiently competitive in its structure and behaviour to be classified as workably competitive. And it provides some bench-marks or criteria, representing somewhat different points of vantage, for the process of making that judgment".
>
> (US A-G's Antitrust Committee)

Thus, workable competition has no objective criteria. One person's view of the market may differ radically with another's. What to one may be a sign that competition is working, and working well, to another may signify the exact opposite. Decisions about markets, whether about their definition or about the working of competition on

them will always be open to controversy and dissent.

> "The hope that it is possible to find objective by which to settle issues in antitrust policy is a persistent one; but the hope may be based, in part, on a delusion. In some situations there is a consensus on certain objective criteria; but in many of the disputed situations, there is no consensus about what criteria to apply. The supposedly objective criteria that are most frequently used are derived from economic data called the structure of industry or industrial organisation. While data on an industry's structure may seem to be objective, there are two unresolved difficulties. First, there is a question about the adequacy of conventional data on structure for showing all the effects on competition. Second, there is the question about the logic by which conclusions are drawn from the data. In drawing conclusions, the assumptions need to be carefully examined. One set of assumptions yields certain conclusions; another set of assumptions yields different conclusions". 14)
>
> (Bernhard)

The elements that dictate market conduct in the real world of business include price. Market conduct is not, however, dictated by price alone. Indeed, in the real business world, price is often a secondary consideration. Yet, in the structure of industry concept, conventional price theory is the logical basis. Anthropological, psychological and sociological elements, often the paramount dictates of real market conduct, cannot be accomodated in conventional price theory. Thus, conclusions that are promoted or suggested by conventional price theory are likely to be defective in any assessment of real-world competition. In that world, the likely market conduct of firms will owe a great deal to the quality of managerial direction, management policies on manpower, finance and investment, morale at shop-floor level, trade union influences and inter-union cooperation, balance sheets, business reputation, and company history.

Unfortunately, as yet there is no antitrust theory capable of accomodating even a fraction of those diverse elements. Only in management game theory could they be accomodated. It is true, of course, that workable competition in its modern forms has traces of game theory about it. Moreover, similar traces can occasionally be detected in decisions of the EEC Commission. For compet-

ition is, in the final analysis, but a game. Yet, conventional price theory still dominates the Commission's anti-trust decisions - which is hardly surprising since it is far easier to reason with. Were an attempt made to incorporate in legal reasoning the diverse elements mentioned above, it would probably be seen as an invitation to expensive controversy before the Court of Justice, from which the Commission would be likely to emerge as loser.

Notes

1 From the viewpoint of perfect competition, a market with only two sellers would be duopolistic; and from the viewpoint of absolute monopoly, it would be competitive. On the buyer's side, monopsony, duopsony, and oligopsony are of far less frequent occurrence than are the equivalent conditions on the seller's side of the market.

2 Where there is not, in fact or in probability, competition to distort through private agreements between enterprises, competition within the meaning of Article 85(1) cannot be distorted: Re. Cement Maker's Agreement (1969) CMLR D15.

3 "Competition & Monopoly in American Industry", 1940 edition, TNEC Monograph (No. 21), pages 1 to 9. Statements hereafter which are attributed to "US A-G's Antitrust Committee" come from the Report of the US Attorney-General's Committee to Study the Antitrust Laws (1955), section C2, 315-342 ("Economic Indicia of Competition & Monopoly").

4 Hoppmann on "Workable Competition", 13 The Antitrust Bulletin 61 (1968) distinguishes from among the definitions of workable competition two pure types and a mixed type of definition: "either the concept is solely defined by market situation norms, i.e. by norms of market structure and conduct, or it is defined by performance norms only. In the first case, the workability test necessitates the application of structure-conduct criteria, in the second, those of performance. One can also demand that both tests be applied cumulatively. Both types of definition are then combined. This creates a mixed type". Reconsider Hoppmann's attitude at note 16, page 28, this thesis.

5 Rostow and Sachs on "Entry into the Oil Refining Business", 61 Yale L.Jo. 856, at 860 (1952).

6 Rhodes and Yeats on "An Evaluation of Recent Evidence advanced in support of the Potential Competition Doctrine", 19 The Antitrust Bulletin 543, at 545 (1974). The doctrine of potential competition is particularly relevant to joint venture antitrust law. See, further, J.-F. Bellis on "Potential Competition and Concentration Policy: Relevance to EEC Antitrust", 10 Jo. of World Trade Law 23 (1976).

7 E.g., Tilgham's Patent Sand Blast Co. Case (1883) 25 Ch. D. 1; Heap v Hartley (1888) 5 RPC 603; Mouchel v Cubitt & Co. (1907) 24 RPC 194; Bown v Humber & Co. (1899) 6 RPC 9; Westinghouse Elect. Mfg. Co. v Tri-City Radio Electric Supply Co. (1927) USCC 23 F.2d 628; Cassidy v Evan L. Reed Mfg. Co. (1923) USDC 293 F. 797.

8 July 5, 1968 (released May 21, 1969): CCH Trade Regulation Reporter.

9 US A-G's Antitrust Committee: "Price discrimination, in the economic sense, occurs whenever and to the extent that there are price differences for the same product or service sold by a single seller, and not accounted for by cost differences or by changes in the level of demand; or when two or more buyers of the same goods and services are charged the same price despite differences in the cost of serving them. In order to know when there is or is not price discrimination, in the economic sense, between two or more buyers, it is necessary to know not only the price but also the total cost applicable to each class of trans-

action under comparison". On price discrimination under the patent monopoly, see Baxter on "Legal Restrictions on Exploitation of the Patent Monopoly", 76 Yale L.Jo. 267, at 280 (1966).

10 The existence of idle capacity may, in the company of other facts, indicate the presence of either effective monopoly or effective competition. A high-price/limited-output policy would create idle capacity. On the other hand, moderate and temporary excess capacity could be the result of expansion, cyclical demand patterns, or increases in market shares due to competition. Idle capacity could, moreover, represent potential competition.

11 For a useful article, see Onah, J.O. on "The Concept of Product Differentiation Revisited", Quarterly Review of Marketing, Summer 1977, page 10.

12 Agreements which prevent or restrain licensees from using their own marks or trade names could inhibit monopolistic competition; see, further: Article 3(12) of the EEC Commission's draft regulation on patent licensing agreements, 1 CMLR D25 (1977).

13 "Differences over international rules against business bribery", Financial Times, 26/9/77. See also: "Anti-bribery and corruption plan" and "CBI may back code to fight bribery", Financial Times, 17/11/77; "Shawcross hits out at European business morality", Financial Times, 20/12/77; "Council proposed for supervising ethics code to end corruption", The Times, 3/11/77; "Change to bribe laws might hit trade, warning", Financial Times, 24/1/78.

14 "Divergent Concepts of Competition in Antitrust Cases", 15 The Antitrust Bulletin 43, at 51 (1970).

CHAPTER 4

MARKET DEFINITION IN COMPETITION AND MONOPOLY CASES

Probably long before anyone ever used the word "economics" there were markets. Put simply, markets are wherever commodities are traded. The market is the arena for commodity transactions, the word "commodity" being given here to include services and incorporeal rights. [1)] In the application of Articles 85 and 86 EEC, the market is always defined; though not always to the satisfaction of the Court of Justice if its past judgments be examined. The process by which markets are defined is not at all obvious in the decisions of the EEC Commission, and the definitions themselves never incontrovertable. Market definition is a process of factual analysis. The process has two steps. The first involves delineation of the product market; the second step that of the geographic market. It is the succeesful negotiation of those steps in turn that leads the enquiry to the market that is relevant to the particular case. Once defined, the market serves as the focal point in the debate as to whether or not an agreement is likely to restrict or distort competition within the Common Market. Thus, knowledge or appreciation as to how markets are defined in economic law will be most useful throughout this thesis. On an assumption that the reader is not familiar with market definition, this chapter will outline the process.

Part 1

DEFINITION OF THE PRODUCT MARKET

This is the step that ought, logically, to be taken first when defining the relevant market. There are two sub-steps to product market definition; and, again, there is a logical way of negotiating them. The first sub-step is to assess functional interchangeability with, or of, given goods; while the second sub-step involves what might be called "subjective" interchangeability. To begin, then, with functional interchangeability.

1 FUNCTIONAL INTERCHANGEABILITY

Every product has a 'use', or a range of uses, which can be determined, usually with ease and in a fairly objective way. Thus, 'use' has been described by one court as 'the

controlling factor in product market definition'. [2] Not only does use identify purchasers of a product (for convenience, let it be X), but it should also help in identifying other products, likewise other producers, that prima facie share the same market as product X, or its manufacturer or distributor. Similar products, if available on the same market, defined by product and geography, will, while obviously competing with all other products for the consumer's limited pocket, give the prospective purchaser a choice when he has decided to buy something. It is the essence of competition that there be alternatives for a given good, rather than merely alternative ways of spending what one earns.

Although many products are often superficially different or differently described, those which substantially meet a given scale of usefulness may be classed as functionally interchangeable. In other words, if product Y can be put to substantially the same uses as product X (the 'contract' or 'reference' product), the latter can be substituted for the former and vice versa, so far at least as use or function is the decisive element in the decision to purchase. Ignore, for the moment, price, quality and the like.

But functional interchangeability is a question not only of degree but also of fundamental purpose. Products designed for fundamentally different ends may often be interchangeable - yet, of itself, that would not be enough to place the products in the same product market. On that basis, practically all products are interchangeable. No doubt brandy glasses, beer glasses, tea cups, jam jars, plastic cups, tins, bottles could all be used for drinking tea from. But when a decision has been made to buy tea cups, jam jars or tin cans are unacceptable in their stead. On the defined market, products are always readily interchangeable.

To decide whether product X is functionally interchangeable with another product Y, or with other products (Y,Z...), the use(s) of X must first be listed. That done, the use(s) of product Y must next be listed. Y is X's apparent alternative in use(s). To share the same product market as product X, Y must be substantially interchangeable on the basis of use with the contract product. If

X were, say, to serve ten uses and Y to serve one or two of that ten, the two products could not properly be said to be substantially interchangeable in terms of function.

A good example of functional classification of products with a view to assessing competitiveness is to be found in what is often called the 'Roche Case'. [3] As part of its enquiry in 1972 into the supply of two drugs, chlordiazepoxide and diazepam (the reference drugs), the UK Monopolies Commission asked Roche Products

> "to indicate the nature and extent of competition with the reference products, including products which, although not themselves reference products, were considered to be therapeutically similar". [4]

In evidence before the Commission, Roche Products, as a first step,

> "identified the therapeutic uses (25 in all) to which the reference products had been put by doctors. The next stage was to identify other groups of drugs (38 in all) which are also put to one or more of the foregoing 25 therapeutic uses by doctors. Lastly, the company attempted to identify all the drugs falling within the 38 drug groups. As a result of this process over 600 products were found and listed. The company produced a chart to show which of the 38 drug groups may be used for each of the 25 therapeutic uses". [5]

Several drugs other than, but in the same drug group as, the reference drugs were said by Roche to exhibit all of the 25 therapeutic uses exhibited by the reference drugs. On that basis, those drugs were functionally interchangeable with the reference drugs. Drugs exhibiting but a few of the 25 therapeutic uses of the reference products would clearly not have been substantially interchangeable with the latter on the basis of use.

Although function is an objective characteristic and relatively easy in most cases to determine, patented products and processes that are unusually novel may pose problems when it comes to functional classification.

> "For example, it can be difficult to gauge the commercial potential of a new invention. Sometimes it will be obvious that you have a winner; but in some cases the invention may clearly be a brilliant solution, but to an unidentified problem. I believe that is how somebody originally characterized the laser, which now has a variety of uses". [6]

While the foregoing statement - written, incidentally, by an official of the EEC Competition Directorate some years ago - is not grappling with the problem of market definition, it still well illustrates the difficulties that may arise over the functional classification of unusually novel inventions. If the potential uses of an invention cannot be listed because they remain to be discovered, then, clearly, that invention is in a market to itself.

Price, quality and other factors - grouped for discussion below under 'Subjective' Interchangeability - are quite obviously incapable of rendering products any more or less functionally interchangeable than they already are. Products that are substantially interchangeable on the basis of use will remain so, regardless of their price or quality. Thus, evidence relating to functional interchangeability should be dealt with before subjective interchangeability is considered.

2 SUBJECTIVE INTERCHANGEABILITY

Given that X and Y are functionally interchangeable to a substantial degree, the affect of price, quality and the like on purchasers has to be considered. Although the two products are functionally interchangeable, any one of a large number of things may lead the generality of prospective purchasers to react against Y and so render it non-interchangeable with X. Like its functional relative, subjective interchangeability is a matter of degree. There will always be the few that ignore fashion, or safety, for instance. But what is needed here is evidence of substantial interchangeability if X and Y are to be seen as, say, price interchangeables or quality interchangeables.

Price plays a leading role in most decisions to purchase a particular product or not. So, by analysing buyers' reactions in the past to price changes, predictions about present competition may be possible. The economic concept of "cross-elasticity" can be used to test price interchangeability of functional interchangeables. [7] It must, however, be used with great care, and preferably by a trained economist. The concept itself refers to the extent to which a change in the price of, say, X, would be likely to affect sales of Y. If a decrease in the price of X would be likely to bring about a decrease in the sales

of Y, cross-elasticity is said to be positive. On the basis of price, X and Y are interchangeable. Disregard quality and other influences for the moment.

If a given percentage change in the price of X would be likely to cause a relatively large change (up or down) in sales of Y, cross-elasticity of price demand is high. Proof, necessarily based on how the market has reacted in the past to price changes, of high cross-elasticity could mean that X and Y are in the same market. Obviously, information that would permit an assessment of present cross-elasticity of demand would not be released by companies: to release it would be an act of commercial suicide. Such information is a closely guarded secret.

What is said here about the concept of cross-elasticity is merely scratching at the surface of that concept. Indeed, it hardly amounts to the bare bones; and leaves important caveats out of account. One general caveat, though, is worth a mention: it is that, in untrained hands, use of cross-elasticity can as easily mislead as aid a market definition.

Price may not, of course, be operative in some purchasing decisions. Where, for instance, control over that decision rests with one who does not have to foot the bill for the purchase, price may be largely inoperative. Thus, the Monopolies Commission stated in Roche that

> "it is characteristic of the market in prescription medicines everywhere that the creation and maintenance of the demand for prescription medicines depends largely on the prescribing doctors who do not themselves pay for the medicine. In the United Kingdom it is further characteristic of the market that under the NHS neither does the patient (except, in most cases, a small flat rate prescription charge)". 8)

Aesthetic preferences may affect the interchangeability of price and quality interchangeables. An example here comes from the field of sound records. Pop records and classical records normally compare well in terms of price and quality (or fidelity). Yet, aesthetic preferences usually rule out a possibility of competition between pop records and classical records.[9] Two identically priced cars, one sports and the other family, are not normally interchangeable either, for aesthetic reasons.[10]

Especially where medicines are concerned, safety

and side-effects may have to be taken into account. Thus, in the Roche Case, the company submitted in its evidence that barbiturate sedatives, as a drug group, were functionally interchangeable with the reference drugs, members of the benzodiazepine group. Barbiturate sedatives could, said the company, be put to 24 of the 25 therapeutic reference uses. But side-effects had to be reckoned with when assessing the competition between barbiturates and the reference drugs, for

> "barbiturates are now responsible, through suicide or accident, for a large number of deaths. By comparison, /Roche/ says the reference drugs are virtually free from risk". 11)

Interchangeability may be ruled out between products through the inability of prospective buyers to appraise the merits of goods on offer. This would be particularly true of technical products, like radios, tape recorders, cameras, where purchasers from retailers generally know little about the way in which the products are made. The more-expensive better-looking is not necessarily the best technical buy. However, products that are not readily interchangeable on the retail outlet level may be so on the next level up in the economic chain. As the Advocate-General submitted to the Court of Justice in the Grundig-Consten Case (1966),

> "a genuine and noticeable competition is very well possible also as regards highly specialised appliances such as radio sets which are sold under a special brand and which differ in external and technical characteristics. An objection based on the contention that the purchasers lack sufficient knowledge in this case and hence have no real possibilities to appraise and compare the products must be rejected in the instant case for the reason that the competition must be judged here at the wholesale stage which has its dealings with retailers who have technical knowledge". 12)

Like quality marks, advertising and other forms of promotion of goods is likely to influence the ordinary consumer more than the knowledgeable trade buyer. Alone, advertising is most unlikely to create non-interchangeables. Conversely, promotion would be unlikely to make interchangeable what for another reason, say, safety, are not

readily interchanged. Roche Products admitted to the Monopolies Commission that

> "the counter-promotion policy of the DHSS had not yet affected the company's sales of reference products, but it expected that as soon as a 'copy' of its reference product became generally available the Department's 'promotion of it at public expense would be as decisive as it has proved to be in the case of other selling drugs' ". 13)

Because of their alleged reputation, counter-promotion of the barbiturate sedatives would probably have made little impact on the position of the reference drugs.

3 SUMMARY

Every product has a name or classification. For example, washing powder, wrapping paper, diazepam. Often, the name of a product readily describes its function. Increasingly, though, the names on products mean little or nothing to the ordinary consumer. For example, the term "solid state" describing a radio, taperecorder, or watch. Size or quantity may help to characterise products on the market; for instance, "2mg diazepam tablets". Cement, for instance, is sold by quantity, often the sack measure. And washing powder is sold by quantity nowadays in 'small', 'economy', and 'jumbo' packets.

When the reference or contract product has been properly identified, functional classification can be commenced. This is an enquiry into the use(s) to which the contract product and functionally similar products are put by buyers/consumers. Function must not be, though in fact it often is, confused with source or destination. Products described as being for "home use", "commercial use", "hospital use", "catering use", etc., are not being described in terms of function but in terms of the intended customer. Such description(s) may be found in 'customer control' clauses in patent licensing agreements, and in the context of such agreements the clauses are often confused with "field-of-use" restrictions.

If they are to share the same market as the contract product, functionally similar products must exhibit a substantial degree of functional similarity with the contract product. Given that degree of functional interchangeability, unless the reactive influence of price, quality, safety and the like is unfavourable the functional interchangeables

may be seen to share the same product market.

Part 2

DEFINITION OF THE GEOGRAPHIC MARKET

If a product is not substantially interchangeable with its functional alternatives, no one seller has a monopoly when there are other sellers of that product on the same geographic market. Conversely, the seller has a monopoly position on the product market when the contract product and its substitutes are not readily available through independent suppliers on that market when it has been limited geographically.

Definition of the geographic market is the step following definition of the product market. The limits to a seller's geographic market in the contract product are set by the habits of the normal, not the eccentric, buyer. The buyer does not have to buy for his own personal consumption. He can, instead, purchase with a view to processing, or intermediate trading. The geographic market may be local, regional, national or international. Its limits will vary with mobility of the average buyer. The degree to which a commodity is essential to a buyer's needs should also be reflected in geographic market definition. [14)]

Mobility may involve transport costs; and such costs are usually considerable when the purchase involves heavy capital equipment. But, then, in the case of expensive capital equipment, the geographic market is quite often international. The chance to make a considerable saving on the purchase by travelling abroad for the goods may, however, outweigh the cost of transporting them home. Moreover, expensive products, like colour televisions, that are relatively light and have uniform packing dimensions can usually be transported fairly cheaply.[15)] Yet, when the cost of transport would figure substantially in the total cost of the product to a buyer, price interchangeability of functional substitutes can be restricted. Indeed, the affect on interchangeability may be such as to place a functional substitute beyond the reference product market, there to compete potentially, though not for that any less effectively, with the reference product.

The influence that a potential competitor has on the market conduct of existing firms varies inversely with

the height of the entry-barriers to the relevant market. Barriers to entry on the geographic market might include, apart from the cost of transport, patents and exclusive rights in them, language, technical standards (which at the present time are undergoing harmonisation within the Common Market),[16] the availability of labour of the right calibre and experience. Where a potential competitor is likely to have a noticeable impact on the geographic market, his potential share should be counted along with the present market shares.[17]

Part 3

CONCLUSION

In economic law, the relevant market is the sphere within which, or against which, an economic analysis is made of the likely impact of agreements or unilateral actions on the effectiveness of competition, given that the relevant market is effectively competitive in the first place or would be likely to be so absent the agreement(s). The more narrowly defined the relevant market is, the less likely it is to be effectively competitive, not because of agreements but due to its structure. On the relevant market will be found at least one buyer and at least one seller of the reference product and, if any, its functional substitutes. The relevant market should always reflect a particular position in the economic chain that stretches from the manufacturer to the retail outlet.

In terms of structure, then, if it is not to be characterised as monopolistic, the relevant market must reveal more than one seller and more than one buyer. The words "market conduct" refer to the buying and selling. It is distinct from market structure which involves a head count of buyers and sellers. Of course, conduct is often an indicator of the way in which a market is structured - competitively, or monopolistically. The buyer is apt to behave in a manner that his position on the market permits. The same is true for the seller's side. If a seller behaves like a monopolist, prima facie his behaviour is evidence of monopoly.[18] That monopoly could, however, on enquiry turn out to be legal (e.g., a patent monopoly).

The relevant market is almost always a balance of contentious factors, some highly contentious indeed.[19]

But that very flexibility is what can permit justice to be done in cases where parties to a contract are trying to avoid the consequences of their poor commercial judgment.[20] By a factor more or less, the size and constitution of the market can often be tailored to an equitable end. Indeed, mathematical gymnastics are not uncommonly undertaken to get the 'right' size of market for particular conclusions. As a Sunday Times Business News commentary on an enquiry by the (UK) Monopolies Commission into the supply of frozen foodstuffs put it,

> "it took the Commission a great deal of mathematical ingenuity to establish that the group has more than 30% of the trade which constitutes even a technical monopoly. And even then, it found remarkably little to criticise". 21)

Notes

1 "The market is an economic relationship among sellers and buyers, whose boundaries are not necessarily defined by geographical area alone, nor by conventional product classification": US A-G's Antitrust Committee (1955).

2 The Cellophane Case (1956) USSC 351 US 377.

3 Report on the Supply of Chlordiazepoxide & Diazepam (Roskill Report) 197, April 1973; for comment on this Report see W.R. Cornish, JBL, July 1973, page 254; see, further, appendices to this thesis, page 227.

4 Page 27, paragraph 102.

5 Page 28, paragraph 103.

6 S. Freedman in a paper on the "Effect of the EEC Rules of Competition upon the Transfer of Technology", delivered London, 25/3/76.

7 E.g., the Cellophane case, note 2 supra; see, on the concept of demand cross-elasticity, e.g.: J.S. Bain on "Price Theory", 1952 edition, page 50.

8 Page 6, paragraph 17.

9 Re. WEA-Filipacchi Music (1973) CMLR D43.

10 Re. Bayerische Motoren (1975) OJ L29/1,

11 Page 28, paragraph 106.

12 CMLR 418.

13 Page 33, paragraph 120.

14 The buyer will usually travel a greater distance to buy essential foodstuffs and drugs than to buy non-essentials.

15 Consider: Re. Burroughs (1972) CMLR D67 and D72.

16 See, e.g., on the harmonisation of technical standards under Article 100 EEC, the quarterly checklist in Trade & Industry (published by the UK Department of Trade); "A fresh approach to harmonisation", Financial Times, 15/2/78.

17 Consider: Re. Kabelmetal-Luchaire (1975) 2 CMLR D40.

18 Consider: Roche Report, note 3 supra, pages 57 to 60, paragraphs 196 to 205.

19 E.g., Kali & Salz v EEC Commission (1975) CMLR 163; for comment on this case see V. Korah, JBL, October 1975, page 310.

20 For an excellent example of geographic market manipulation in the interests of equity, see Tampa Electric Co. v Nashville Coal Co. (1961)USSC 365 US 320.

21 "Fish Fingers In Every Pie": see appendices to this thesis, page 230.

CHAPTER 5

CONDITIONS FOR THE APPLICATION OF ARTICLE 85(1) TO PATENT LICENSING AGREEMENTS

There are two conditions that must be satisfied before an agreement between enterprises is prohibited under Article 85. The first condition is that the agreement must have the object or effect of distorting competition within the Common Market. And competition within the Common Market can be "distorted" by an agreement between enterprises which limits, prevents or restricts it. [1] The second condition is that the agreement must have the possibility of affecting trade between Member States. In practice, however, more than than the mere possibility of an affect on interstate trade is required to meet the condition in Article 85(1). There must be a "sufficient degree of probability" that the agreement will have that affect.[2] There must, moreover, be a causal relationship between the distortion of competition found in the agreement and the probable affect on interstate trade within the Common Market. Thus, where other factors (e.g., tariff or technical barriers) would be likely to so interpose themselves on the market as to eliminate any real likelihood of there being trade between Member States to affect by the distortion of competition which is the object or effect of the agreement, the second condition for the application of Article 85(1) cannot be satisfied, save in a theoretical way.

It is with the two conditions stated above that the rest of this chapter is concerned. In Part 1, the chapter examines the first condition, dealing with distortions of competition. In Part 2, the second condition is examined. In examining each condition, the legal position pertaining to agreements in general will be given and that law then examined further in the context of patent licensing agreements and in its application to those agreements.

But before commencing the tasks allocated to this chapter, an important point must be emphasized. It is: that unless the distortion of competition (which is the object or effect of an agreement) would be likely to affect trade

between Member States, the agreement under enquiry is not caught by Article 85(1). This Article should not be read as proclaiming a charter of economic freedom throughout the Member States of the Common Market, in the way the Sherman Act does throughout the United States of America.[3] The EEC Treaty, at least in the present regard, must be construed rather more narrowly, so that the national sovereignty of Member States is preserved. Thus, the prohibition in Article 85 is operative only to the extent that a want of economic freedom, due to the object or effect of an agreement between enterprises, prejudices, or would be likely to prejudice, realization of the overtly political objectives of the establishment of a common market, described in Article 2 EEC. As the EEC Commission itself stated in STM v Maschinenbau Ulm (1966),

> "the prohibition set forth in Article 85, paragraph 1, is not designed to protect the freedom of action of individual businessmen; its purpose is rather to maintain competition at the international level, in the interest of an economic system based on the market concept".

Part 1

AGREEMENTS WHICH DISTORT COMPETITION WITHIN THE COMMON MARKET

1 OBJECT OF AN AGREEMENT

To be caught by Article 85, the agreement between enterprises must, to quote the Court of Justice,

> "be designed to prevent, restrict or distort competition within the Common Market, or have that effect". [4]

This implies that, in practice, agreements must be examined, clause by clause, for theoretical restrictions of competition. An agreement may have clauses that, for instance, fix the price at which goods are to be sold; prohibit sales in a named territory or to a third party; or impose quotas on production, thereby restricting price indirectly. Such clauses would restrict competition, at least theoretical competition. Again, the Court of Justice in STM v Maschinenbau Ulm (1966):

> "The alterations of competition referred to in Article 85, paragraph 1, must result from all or some of the clauses of

> the agreement itself. If, however, the analysis of these clauses does not reveal a sufficient degree of injury to competition, then the effects of the agreement must be examined".

The Court also said that, when considering the actual purpose of the agreement, account had to be taken of the economic context within which the agreement is being, or is to be, applied. That is not, however, required under what is sometimes called 'the pure object test'. In other words, the pure object test does not require account to be taken of the concrete effects of agreements the object or purpose of which is to distort competition by restricting or limiting the market conduct of the parties. The object or purpose of the agreement can be decisive.

In Grundig & Consten v EEC Commission (1966), the Court gave its backing to the pure object test by writing that,

> "for the purposes of applying Article 85, paragraph 1, it is not necessary to take into consideration the actual effects of an agreement where its purpose is to prevent, restrict or distort competition".

The statement came as something of a surprise since, only a few weeks earlier, in STM v Maschinenbau Ulm the same Court had stated that it was not enough to observe the purpose of an agreement in isolation from the real market. It had to be observed within an economic context. Moreover, the competition under consideration had to be understood

> "as that which would actually exist without the agreement in issue".

Which is another way of saying that the market in concreto has to be examined.

In Volk v Vervaecke (1969) the Advocate-General sought to limit the test advocated in Grundig-Consten by submitting to the Court that

> "the significance of the /above/ statement would seem to be limited to the facts on which that decision was based, since according to the /STM v MBU/ decision the actual purpose of the agreement should be considered 'viewed in its economic context', and that such examination must reveal a 'sufficient degree of injury' to competition before Article 85, paragraph 1, can be applied. In the final analysis, this means that the alteration may not be

> purely theoretical but must have reached a certain degree. This is not too far from the 'perceptible' restriction required in the same decision where it is no longer the purpose, but the effects of the agreement that are considered".

The Court of Justice accepted the Advocate-General's viewpoint and, reverting to the position adopted in STM v Maschinenbau Ulm, declared that the condition requiring that competition within the Common Market be restricted or distorted

> "should be understood by reference to the actual context in which the agreement exists".

This in no way means that the pure object test is dead; it is merely dormant. [5)]

2 EFFECT OF AN AGREEMENT

Other than by design, an agreement between enterprises can, by virtue of its operation, distort competition. For convenience, effects within the ambit of Article 85(1) can be seperated into predictable and wholly fortuitous. The requisite effect of an agreement on competition within the Common Market is often predictable, on the basis of probability. Arguably, predictable effects come within the very object of the agreement. They are implicit in the agreement's design. And if they are so implicit, does the agreement itself have to be viewed within its economic context ? Does one have to go beyond the intention expressed by the parties in their agreement and consider or examine the market in concreto ? STM v Maschinenbau Ulm tells us that the effect of an agreement may not be purely theoretical; that it must be 'perceptible'. And in practice it appears that predictable effects must be perceptible or noticeable.

On the other hand, there is the Grundig case which supports the pure object test of agreements, albeit in limited circumstances. But under that test there is no need to enquire into whether effects are perceptible or not. And requiring, when it is the object of an agreement, that a distortion of competition be noticeable visits the penalty in Article 85 on those who succeed without trying, while those who try to distort competition but in fact fail to do so manage to avoid that penalty. In other words,

attempts are not punished under Article 85. Hardly what might be called 'fair' treatment ? Fortunately, there is practicality in the approach of not punishing attempts - the Community wants to promote co-operation between small and medium-sized firms within its boundaries. That co-operation could be difficult to secure were wholly theoretical distortions of competition within the field of application of Article 85(1).

Ways in which agreements not having as their object (stricto sensu) the distortion of competition can nevertheless have that for their effect are not hard to find in the caselaw to Article 85. Take, for instance, the formation of joint venture enterprises.[6] Although a joint venture may not be designed to distort competition, that at least can be its predictable effect. For, assuming that the parents of the joint venture remain at least potential competitors after its formation, they are most unlikely to compete with their progeny and its business is likely to be frozen to lines of commerce that will not bring it into competition with them. Instances from patent antitrust law of the ways in which patent licensing agreements can have the effect described in Article 85(1) are given below.

3 THE CONCEPT OF PERCEPTIBILITY

Market effects can be classified as being either noticeable (or perceptible) or insignificant (or imperceptible). Where it is required that an agreement reveal the likelihood of a "sufficient degree" of injury to competition, or a perceptible distortion of competition, the market effects of the agreement under enquiry have to be weighed. Thus, in its Béguelin judgment the Court of Justice wrote that

> "the agreement must affect noticeably trade between Member States and competition";

in Volk v Vervaecke it wrote that

> "an agreement escapes the prohibition of Article 85 when it only affects the market insignificantly, account being taken of the weak position held by the parties on the market in the products in question";

and in STM v Maschinenbau Ulm, the Advocate-General submitted that

> "for the application of Article 85(1) a noticeable interference with the condition

> of competition must be required, whether it exists in reality or the concrete facts indicate that it will occur"

The nature or characteristics of contract products or contractual subject matter will bear importantly on definition of the relevant market, and consequently upon the perceptibility of the effects the agreement in issue is likely to have on that market. It is that importance the Advocate-General is referring to in the Béguelin case where he submitted:

> "The second difficulty is very serious. This is the question of whether the contract in issue is not one of those agreements the minor importance of which makes it incapable of both affecting trade between the Member States and of having noticeable effects on competition within the Common Market. The problem is very delicate here. On the one hand, the relatively low level of the transactions, the medium or even small scale of the undertakings involved, at least as compared with those of the Community, could lead to the thought, if the market characteristics were ignored, that the agreements in question are in fact agreements of minor importance. But, on the other hand, the very special characteristics of the lighter market in the Community is such that one might wonder whether contracts which, on other markets, would be of very minor importance do not take on an entirely different character on the European market in lighters".

Behavioural elements in the market context, in particular agreements which are similar to the contract under enquiry, should be accounted for when the degree to which effects are likely to be perceived is being examined. This particular point was emphasized in Brasserie de Haecht v Wilkin & Janssen (1968). First, by the Advocate-General who concluded that the terms in Article 85(1)

> "permit an objective evaluation and do not preclude consideration of factors other than the agreements in issue, including other similar agreements. The requirement of a causal connection between the agreement and the effects defined in Article 85 likewise does not preclude taking other factors into consideration, since the individual agreement obviously does not lack causality even when the necessary effect under Article 85 is produced only in conjunction with other agreements".

The Court accepted those submissions and itself wrote that agreements must be observed in the economic context in which they occur,

> "that is, in the economic context in which /they/ are to be found, or where they might, together with others, amount to a cumulative effect on competition. It would be futile to consider the agreement,....as regards its effects if the latter could be separated from the market in which they appear, and could only be examined detatched from the bundle of effects, convergent or not, in the midst of which they are produced".

Estimating the degree to which market effects are likely to be perceived sounds a lot easier than in practice it often turns out to be. But an indication as to how firms should set about determining the market effects of their agreements is given in the Commission's Notice on Minor Agreements (1970). It is important, states the Notice, [7]

> "to promote cooperation between undertakings in so far as it is economically desirable and does not raise any objections in respect of the policy of competition".

The Commission desires, so the Notice continues,

> "in particular, to facilitate cooperation between small and medium-sized undertakings".

The Notice is, however, merely a guide to the Commission's likely attitude in this area. It does not amount to a legal instrument with which to bind its author.

In general, what the Notice tries to do is to establish a point or level below which market effects are to be seen as minor or imperceptible. Quite obviously, though, as the criteria in the agreements moves upwards to the threshold which is quantitatively defined in the Notice, the market effects will shade into the perceptible. The defined threshold does not, however, have an absolute value - as the Notice itself makes clear:

> "it is quite possible that, in particular cases, agreements reached by undertakings which exceed the limits indicated only affect competition and trade between Member States to an insignificant degree and consequently do not fall within the scope of Article 85, paragraph 1".

Conversely, agreements which do not reach the limits in the Notice may possibly fall within the scope of Article 85(1). In cases of doubt, the Commission's advice should be sought.

4 EFFECTS WITHIN THE COMMON MARKET

Competition within the Common Market must be distorted before agreements between enterprises could come within the scope of Article 85(1). The competition involved is that which would be likely to exist without the agreements under enquiry. Thus, although it may be designed to operate beyond the limits of the European Community, an agreement which would be likely in effect to distort competition perceptibly within the Common Market meets the first condition for the application of Article 85(1). Take, for instance, the Commission's decision in Rieckerman-AEG/Elotherm.[8)]

There, two enterprises, A and B, both situated in the same Member State, entered an agreement under which A undertook to promote at his own risk and on his own account the sale on the Japanese market of products manufactured by B. A also agreed not to sell the contract products outside Japan; and to purchase from B alone for sale in Japan products as described in the agreement. B, for his part, undertook to sell the contract products solely through B; and to ensure that they were not sold to Japan by its other purchasers.

The decision, taking account of the nature and characteristics of the contracts, describes them as not of the mass-produced type but in general made to individual specification, being adapted to the technical requirements of the customer. For various technical reasons, exchange of the contract products between customers was most unlikely. Turning to the market itself, there was, apart from B, a fairly large number of firms manufacturing products of the type covered by the contract under enquiry in the Common Market. While A itself was in competition with numerous other firms that exported to Japan. As a rule, moreover, A neither sold on the Common Market nor was it equipped to do so.

On analysis, the agreement between A and B had the following restrictions:

- a prohibition on the sale by A of contract products within the Common Market, implied in the prohibition on sales outside Japan;
- a prohibition on A selling in Japan products that competed with the contract products;

- a prohibition on B exporting directly or indirectly to Japan; and, by deduction, the probable existence of a prohibition on B's customers reselling to the Japanese market.

The prohibition on A selling the contract products was, by itself, in theory, capable of restricting the competition which A could offer by selling, or being in a position to sell, those products on the Common Market. But, for reasons which have already been stated, it was most unlikely that A would contemplate selling the contract products on that market. The prohibition was, therefore, unlikely to have any real effect on the competition there undoubtedly was within the Common Market.

Prohibiting B from exporting the contract products to Japan was highly likely to affect competition, but not likely to do so on the Common Market. The same held also for the prohibition on B's customers reselling to the Japanese market: the effect of that ban was confined to the Japanese market. Also the customers were unlikely, for various technical reasons, to be in a position to resell the contract products. The ban on A handling competing products was unlikely to distort competition noticeably within the Common Market, since numerous other exporters competed with A.

5 SUMMARY

According to the Grundig-Consten judgment, account need not be taken of the concrete effects of an agreement between enterprises once it appears to have the object of distorting competition within the Common Market.

In general, however, the distortion of competition may not be wholly theoretical. The agreement must, in fact or in probability, perceptibly distort competition within the Common Market. Thus, the market must be observed in concreto, so as to determine what impact the agreement has, or would be likely to have, thereon.

An agreement which would be likely to distort competition only to an imperceptible degree, in general, is beyond the field of application of the prohibition in Article 85.

6 APPLYING ARTICLE 85 PRINCIPLES TO PATENT LICENSING AGREEMENTS

Here, the principles stated above will be applied to exclusivity clauses in patent licensing agreement. In a later chapter these clauses are discussed in greater detail. To begin with, there are two basic types of patent licence: the exclusive licence and the non-exclusive licence. There is a hybrid form of licence too, and this is known as the 'sole' licence. By its nature, an exclusive licence ties the hands of the licensor in two respects: it prohibits him from exploiting the invention himself, and from exploiting it indirectly by issuing further licences to others. This prohibition extends to the field or territory defined in the agreement, and to patents falling within the scope of the exclusivity clause. But by prohibiting others from being licensed by the patent holder, the exclusivity clause restricts or distorts potential competition. An exclusivity clause increases the height of barriers to entry on the relevant market. At the very least, then, the exclusivity clause has the object of distorting competition.

Under the pure object test, it is enough that agreements have the object of distorting competition. Arguably, too, where parties to an agreement believe there is competition in existence which would be harmful to their interests and therefore needs restraining, that by itself, as evidenced in a clause of the agreement, ought to be enough to meet the conditions in Article 85(1). Why bother confirming what those party to the agreement are already quite convinced of - that, from their viewpoint, there is appreciable competition in existence. Moreover, if the agreement were likely to be largely ineffective in restricting competition, would the parties to it, as businessmen, have concluded it. [9)] Are they not perhaps better judges of the competition they face and how best to restrict it through agreements than civil servants who, in the main, lack business experience ? In the wider context of common market business, it seems they are not.

In general, the application of Article 85(1) requires that the relevant market be observed in order to say whether an agreement has, or would be likely to have, a noticeable impact on the competition there would have been, or likely

would be, absent the agreement. There must, therefore, be an objective evaluation of the market, and of the context in which the agreement finds itself, or would be likely to find itself. As a first step with patent licences, the significance of the patent(s) with respect to which competition is foreclosed by an exclusivity clause in the agreement must be assessed objectively. And to assess the patent's significance, the market must be defined.

Relatively insignificant patents were involved in, for instance, the agreement between Burroughs and Delplanque, with respect to which the Commission gave its decision in 1972. The pertinent facts are that B licensed D, a French firm, to manufacture 'carbon papers recovered with a layer of synthetic resin containing in its structure a liquid colouring agent' (the contract products) on an exclusive basis, and to sell and distribute those products on a non-exclusive basis. Plasticised carbon paper, like the contract products, accounted, in the early 1970s, for around 10% of all the multi-use carbon paper consumed in France. Thus, products in the nature of the contract products were not unique enough to have a market to themselves: they were merely part of the wider market in multi-use carbon paper.

Although plasticised carbon paper had 10% of the available business in multi-use carbon papers, in fact, D, as a producer of plasticised carbon paper under the agreement with Burroughs, had but a "slight" share of the relevant trade. In short, D was relatively insignificant on the relevant market. Other firms, some situated within the Common Market, produced plasticised carbon paper - yet with means or processes that were entirely independent of the Burroughs patents. And, in 1972, the relevant carbon paper was being imported into the French market from Germany and Italy, and from other countries beyond the Market. It sold at a higher price than traditional multi-use carbon paper. These market observations led the Commission to conclude that only insignificant competition would be distorted by the exclusivity clause. The clause was, therefore, seen not to be caught by Article 85(1).

Relatively significant patents had competition foreclosed from them by the agreement that was the subject

of a Commission decision in 1975. The agreement had been concluded between a German firm and a French firm (Luchaire). The German firm (alias Kabelmetal) licensed L exclusively for manufacture in France according to certain patents covering a metal cold-extrusion process. The process was, and presumably still is, applicable to the manufacture of rough metal parts, "with particularly awkward dimensions and shapes". But quite exactly the market that was relevant for the Commission's decision is far from clear in the decision itself. It could have been the market in rough metal parts, or somewhat more specifically the market in such parts with particularly awkward dimensions and shapes.

Anyway, information available to the Commission suggested, so the decision says, that in 1974 L accounted "for about 20% of the production of such parts in France. The other 80% was manufactured by competitors and by users themselves (mainly the large car manufacturers or their subcontractors)". L was then the only EEC firm licensed to use K's patented techniques. L's competitors, including six firms established in France, manufactured the rough metal parts using different cold-extrusion techniques, or else deep-drawing techniques. The number both of competing and comparable processes and of manufacturers using such processes was, however, fairly small.

It may be presumed, since the decision does not say, that L's 20% of the relevant production had been won by using the licensed techniques. On that presumption, the licensed techniques were "important" and L's share of the relevant EEC market "substantial", a share that was, to the Commission's mind, probably greater by the fact that the 80% remaining was not produced exclusively by L's competitors. Users produced part of that 80% for their own needs and consumption. For its part, K had a considerable turnover in Germany and was supplying direct to Italy, Belgium, Holland and the U.K. Given the apparent significance of the licensed patents, the competition foreclosed by the exclusivity clause could hardly have been any less significant. Other firms, notably the six French firms, that might have wanted to apply P's techniques had had their positions significantly affected or altered by K's obligation to L.

What must, of course, be believed is that the other

firms mentioned in the decision would have been able, had L not been granted an exclusive licence, to accomodate K's techniques to their existing facilities and marketing arrangements. No evidence is offered in the decision that they, prior to L's licence, had themselves sought licences from K or had indeed shown any interest in K's techniques. Thus, the decision is short on evidence as to how the positions of the six French firms had really been altered by the exclusivity clause.

Although not openly seeking to distort competition, licence clauses can have that effect. Take, for instance, the 'grant-back' arrangement in the Kabelmetal-Luchaire licensing agreement. Under that arrangement, L was obliged to grant K, and through K other possible licensees, non-exclusive licences for such improvements to the licensed techniques as L itself might make. Now, there is nothing designedly anti-competitive about that obligation. But consider its likely effect, in theory. Were L to think of or consider investing in a scheme to improve K's techniques, any improvements it might make to the techniques would have fallen into the hands of its competitors with licences from K. Put another way, L would realise that its competitors could ride freely on its investment in an improvements scheme. That surely would tend to discourage L from trying to improve on K's techniques.

Disincentives to inventive effort can distort competition, by lessening the threat of potential competition. Fortunately, here, the effect of the arrangement between K and L would be largely theoretical, if not wholly so. For L was the only EEC licensee and it was unlikely that another who could compete effectively with L would be licensed under K's patents before the licensing agreement between L and K expired, taking with it the grant-back arrangement. The arrangement was, therefore, unlikely to have a real effect on competition.

Part 2

AGREEMENTS WHICH MAY AFFECT TRADE BETWEEN MEMBER STATES

1 PURPOSE AND MEANING OF THIS CONDITION

An agreement must reveal the possibility of trade between Member States being affected through its object or effect. Well enough, but why does the Treaty have this condition in Article 85(1) ? In short, what purpose does the condition serve ? Is it solely a criterion of competence or jurisdiction as the Commission argued in the Grundig-Consten case ? Or is there something more to it than that ? Does the word "affect" imply anything special into the condition under discussion ? These are the questions with which this section deals.

To appreciate the condition that requires a possible affect on trade between Member States regard should first be had to the purpose of the rules of competition. Their purpose, said the Commission in Grundig-Consten,

> "is not to bring about an increase in the trade in goods between the Member States - this is achieved through the gradual removal of the customs duties and quantitative restrictions - but to protect the liberalised trade in goods against all distortions of competition. If one were to attribute decisive importance to the quantitative increase of trade, the result would be that export and specialisation cartels between enterprises established in different Member States - cartels whose effect is to increase trade - would escape the cartel policy of the Community. Furthermore, the prohibition against dumping practices and State aids proves the inconsistency of the opposite interpretation".

Implicit in that statement is, of course, an admission that affects on interstate may be due to other than agreements between enterprises which have the object or effect of distorting competition within the Common Market. The affect may be due to quantitative restrictions, or their equivalent, say, an exercise of the patent that escapes the elements of contract or concert defined in Article 85(1). Not that such exercise of the patent would escape all Treaty prohibitions: to assume that would be to reckon without Articles 30-36 EEC.

The rules of competition seek, then, to protect the liberalised trade in goods against all distortions of competition. But what part does the condition under discussion play in this system ? Does it serve solely

> "to define, in the field of competition law, the scope of the Community rules and the

jurisdiction of the national authorities",

as the Commission contended vigorously in its defence in the Grundig-Consten case ? To begin to find an answer to that question, one must first consider whether the word "affect" is meant to turn the condition into something more than a criterion of competence.

The word "affect" was handled by Advocate-General Lagrange in Bosch v de Geus (1962) thus:

> "Article 85 then is intended to protect the free play of competition. This principle is violated or (and this is sufficient for the purposes of Article 85) endangered when a restriction of competition within the meaning of Article 85(1) leads to a diversion of trade from its normal and natural routes, since an increase of trade by one route must inevitably lead to an unfavourable change in respect of another route. For this reason, every factor which affects trade, even though to no great extent, constitutes and obstacle in the sense of Article 85(1). ...Whether every restriction on competition, affecting the economic relations of member-States - however small - amounts to an obstacle to interstate commerce, or whether there is only an obstacle when the restriction attains certain proportions, is a matter of controversy. However, it seems that there must be a quantitative element".

There is, therefore, the possibility of an affect on interstate trade whenever that trade is diverted from the route(s) along which undistorted competition would be likely to drive it. But had there to be a quantitative element in the affect ?

Some four years after Bosch, in Italy v EEC Council & EEC Commission, Advocate-General Roemer submitted that it was not possible

> "to claim that it is sufficient for an agreement restrictive of competition to exercise some <u>influence</u> on the trade between Member States, that - to use the Commission's expression - it should develop differently as a consequence of the agreement. The German, Italian and Dutch texts of the Treaty clearly show the contrary, when they speak of an unfavourable, prejudicial influence, thus forcing us to conclude that in this case the French term 'affecter', which in itself often has a neutral meaning, but sometimes also a negative sense, should be interpreted in this manner".

In Grundig-Consten (the judgment here being of even date with that in Italy v EEC Council & EEC Commission), Mr.

Roemer returned to the fray, attacking the Commission's view that following an agreement restricting competition it sufficed when trade between Member States developed in other ways than it would have done without the agreement. The Commission, he said, saw the condition as not having any other role than as a criterion of competence -

> "which means that as soon as it is found that agreements in the field of competition concern several member-States, their legality should be judged according to Community law".

In his view, the agreement on competition should not merely have some influence on trade - it should have an unfavourable influence thereon.

> "So it is not enough, as the Commission thinks, starting from its erroneous starting-point, to find that there exists a regulation of the trade between member-States, an artificial influence on commercial movements, and to renounce bringing particularly into the light the fact that trade between member-States is affected. To judge that criterion too, account must be taken of the possible repercussions which it is reasonable to expect on the market (and this is so even though the Commission must be held correct in declaring that proof of an increase in international trade is not enough in itself to show that trade has not been affected). ...Consequently, as regards the second criterion of Article 85(1) the Commission should also be reproached for insufficient appreciation of the economic situation".

The Court did not, however, in its judgment issue any such reproach. And as regards the interstate-trade condition, the Court said the condition

> "aims at determining, as regards the regulation of agreements, the pre-eminence of Community law over that of the States. It is to the extent to which the agreement may affect trade between Member States that the alteration of competition provoked by the agreement relates to the prohibitions in Community law of Article 85, whereas in the contrary it escapes. In this respect, it is necessary in particular to know whether the agreement is capable of endangering, either directly or indirectly, in fact or potentially, freedom of trade between member-States. So the fact that an agreement favours an increase, even a large one, in the volume of trade between States is not sufficient to exclude the ability of the agreement to 'affect' the trade in the above-mentioned direction".

Thus, a mere change in the direction of trade will prejudicially affect interstate trade. No quantitative element is involved with this formulation.

But treating solely as a criterion of competence the condition that calls for a possible affect on interstate trade to be established gives rise to difficulties when it comes to applying the prohibition in Article 85. For, clearly, the cause of such possible affect must lie within agreements which distort competition within the Common Market. Were that cause to lie beyond such agreements, Article 85(1) could not be applied to them. In practice, as distinct from a matter of linguistics, the two conditions in Article 85(1) are far from easy to apply separately. Indeed, in applying Article 85(1) to agreements, the Commission almost invariably assesses whether an agreement is likely to distort competition in a way and to a degree that would, as a matter of probability, affect noticeably trade between Member States. Absent any likelihood of the agreement noticeably distorting competition, the second condition is not even mentioned. [10] Moreover, factors in support of the conclusion that competition is likely to be distorted noticeably always underpin the views as to likely interstate-trade affects. So, any appraisal of affects on interstate trade will involve a quantitative element.

2 SUMMARY

According to the Grundig-Consten judgment, trade between Member States may be affected prejudicially if deflected from its normal pattern(s) by agreements which have the object of distorting competition within the Common Market. The market in concreto does not have to be observed when assessing the possible affect.

As a general rule, however, according to the Court's judgment in Béguelin, an agreement "must affect noticeably the trade between Member States and competition". What this implies is a need to observe the actual market, so that the perceptibility of an affect may be assessed. Thus, the interstate-trade condition is something more than a mere criterion of competence, the extra being implied through use of the term "affect".

An agreement which is unlikely to distort noticeably competition within the Common Market will have no measurable prejudicial

affect on trade between Member States.

The distortion of competition which is the object or effect of agreements between enterprises must be the cause of the affect on trade between Member States.

3 APPLYING ARTICLE 85 PRINCIPLES TO PATENT LICENSING AGREEMENTS

In its decision on the licensing agreement between Burroughs and Delplanque, the Commission found that the exclusivity clause, the object or effect of which was to distort competition, was unlikely to have a noticeable impact on the competition that existed within the Common Market. The clause in question did not, therefore, fall within the scope of the condition in Article 85(1) concerning the distortion of competition. Since it was unlikely to distort competition noticeably, it would have no prejudicial affect on trade between Member States.

When the Commission finds that an agreement is likely to distort competition to a noticeable degree, it can then proceed with applying the condition relating to affects on interstate trade. The prohibition in Article 85 is concerned only with those distortions of competition which are likely to affect trade noticeably. Thus, having found the exclusivity clause in the Kabelmetal-Luchaire licensing agreement was likely to distort competition noticeably, it remained only for the Commission to show how said distortion would be likely to affect trade between Member States. This is what the Commission had to say about interstate-trade affects:

> "The exclusive manufacturing licence for France granted by Kabelmetal to the licensee prevents Kabelmetal from granting further licences to other firms which would enable them to use its patented inventions and know-how on French territory and, consequently, put them in a position to export from France to other parts of the Common Market. This restriction [of competition] must therefore be regarded as liable to affect trade between Member States since it is likely to endanger, directly or indirectly, freedom of trade between member-States in such a way as to hamper attainment of the objectives of a single international market".

Because the contract products were being traded across frontiers on the Common Market, mainly at the time of the decision by Kabelmetal itself, there was in fact an inter-

state market susceptible of being affected by the indirect affect of the exclusivity clause on exports.

Part 3

CONCLUSION

Agreements between enterprises, decisions of associations of enterprises, and concerted practices falling within the field of application of Article 85(1) are prohibited under the Treaty of Rome, no prior decision to that effect being required by Community law. [11] The prohibition in Article 85 takes immediate effect as of the moment when the probable, as distinct from the actual, effect of an agreement is a perceptible distortion of competition within the Common Market which may affect trade between Member States. [12] The primary objective of Article 85(1) is to avert monopoly power through agreements between enterprises - to, as it were, close the door before the horse bolts from his stable. Agreements, including patent licensing agreements, that are caught by Article 85(1) may qualify for exemption under Article 85(3).

It is solely within the Commission's powers to exempt agreements from the prohibition in Article 85. To qualify for exemption, an agreement must be notified to the Commission. There are, however, certain types of agreement exempted 'en bloc' through Commission regulations. [13] This exemption is automatic, though only in respect of agreements that fulfil the conditions set down in the exempting regulations.

Some agreements, though obviously not those which can be exempted en bloc, must be notified to the Commission. If notified agreements fulfil the conditions for exemption under Article 85(3), the Commission may issue them individual exemptions. Agreements of a 'minor' nature do not have to be notified, though in cases of doubt they should be notified. A notifiable agreement which is not notified to the Commission will be denied the advantages attending notification, particularly protection from fines which the Commission may impose upon parties to the defaulting agreement. [14] The obligation to notify agreements to the Commission is set out in Regulation 17/1962.

A notified agreement which does not fulfil the conditions in Article 85(1) may be negatively cleared by the

Commission. It is a pre-condition for Article 85(3) exemption that the agreement(s) must fall within the field of application in Article 85(1). That an agreement falls beyond the category of notifiable agreements, or beyond the categories of agreements which are exempted en bloc, emphatically does not mean such agreements are beyond the scope of the prohibition in Article 85. [15)]

Agreements prohibited by Article 85(1) and not exempted under Article 85(3) are automatically void by virtue of Article 85(2). It is the duty of national courts in the member states to declare void agreements that fall within the conditions set out in Article 85(1), and have not been exempted, whether individually or en bloc, under Article 85(3). This jurisdiction in the national courts is wholly declaratory. They lack the competence for granting exemptions under Article 85(3) - although those courts can exempt wholly unilateral exercises of patent rights under Article 36 EEC, where the rights have not been exhausted under Community law. It is, however, within the competence of the national courts to say whether agreements fulfil the terms set down in regulations which exempt en bloc certain categories of agreements. This competence is always subject to the rule that interpretations of the Treaty that may arise when applying a category exemption are a matter for the Court of Justice, to whom reference can be made under the terms in Article 177 EEC.

Before exercising its declaratory power under the Treaty, at present a national court should refer so-called "old" agreements to the Commission, in order that the latter's views may be known. The general security of contracts demands, in the view of the Court of Justice,

> "particularly where the agreement has been registered in accordance with the provisions of Regulation 17, /that/ the court declare it void only after the Commission has taken a decision on the basis of that regulation". [16)]

Notes

1 Grundig & Consten v EEC Commission (1966) CMLR 418.
2 STM v Maschinenbau Ulm (1966) CMLR 357.
3 See, for a comparison of the two legal systems, R.T. Jones on "Droit Antitrust Américain et Droit Européen De La Concurrence: Étude Comparative", Revue du Marché Commun (181), Janvier 1975, page 20.
4 STM case, note 2 supra.
5 Consider, e.g., the Commission's attitude towards the conditional export restriction in Re. AOIP-Beyrard (1976) 1 CMLR D14, discussed in chapter 8, this thesis, page 105.
6 E.g., Re. GEC-WEIR Sodium Circulators (1977), OJ L327/31, 20/12/77; Re. Vacuum Interrupters (1977) 1 CMLR D67, commented upon by V.Korah, JBL, July 1977, page 284; Re. De Laval-Stork (1977), OJ L215/11, 23/8/77.
7 (1970) CMLR D15.
8 (1968) CMLR D78.
9 But consider now the A-G's submission in the STM case, note 2 supra: "On the other hand, the Commission's viewpoint appears too narrow, because in finding that competition has been affected to a 'perceptible' extent it is content with presumptions or declarations made by the parties in the course of proceedings before the internal courts, without requiring the national judge to appraise in concreto the situation of the market".
10 E.g., Re. Burroughs (1972) CMLR D67 and D72.
11 Council Regulation 17/1962, Article 1.
12 E.g., Re. WEA-Filipacchi Music (1973) CMLR D43.
13 E.g., Commission Regulation 67/1967, which implements, in part, Council Regulation 19/1965.
14 Regulation 17/1962, Article 15, in particular subsections 2(a) and 5.
15 Preamble to Regulation 17/1962.
16 Brasserie de Haecht v Wilkin & Janssen (No.2)(1973) CMLR 81.

CHAPTER 6

RESTRAINTS ON THE PATENT HOLDER'S RIGHT TO LICENSE HIS PATENTS

It has long been the patentee's right under our law to license his patents, or to refuse licences under them. The continued existence of that right is affirmed in section 30(4), Patents Act 1977. In the public interest, exercise of the right is hedged about by conditions. And in certain circumstances it may be abusive of the patent monopoly to refuse licences for working inventions. [1] On the other hand, the patent holder's right not to license his patents is not of itself incompatible with competition policy. His refusal of a licence would probably be seen as quite reasonable where the applicant had a record of poor distribution, poor after-sales service, or an unimaginative approach to marketing. Again, there is unlikely to be anything unreasonable about his refusal of a licence for patents he can adequately exploit himself to the exclusion of competitors. But if he should license his patents, there may be nothing unreasonable, or for this matter anti-competitive, in the patent holder restricting the licensee's from issuing sub-licences, or assigning his licence rights. [2]

The imposition of restrictions on the right to license patents may be done indirectly through, for instance, what is known as a 'most-favoured-licensee' clause in the licensing agreement. A grant of exclusivity in respect of licences usually involves an express prohibition on the issue of further licences by the licensor. [3] Restrictions on the right to license patents can infringe Article 85(1); and it is with that possibility that this chapter deals. The exemption of clauses which impose restrictions on the patent holder's right to license his patent(s) is covered in Chapter 7. To begin with, then, the legal position of restraints on the licensor's right will be discussed fully. Thereafter, and only somewhat briefly, the legal position of restrictions on the grant of licences by licensees will be looked at.

1 RESTRAINTS IMPOSED ON THE LICENSOR

1.1 Through The Grant Of Exclusive And Sole Licences

Exclusivity in respect of a licence prevents the licensor from exploiting, directly or indirectly, the patent(s), or any 'aspect' thereof, subject to the exclusivity clause. All, including the licensor, are excluded under such clause from the domain to which the licence rights pertain. Whoever enters upon the licence domain without the grantee's permit is an infringer or trespasser, at the personal suit of the exclusive licence holder. The 'domain' for which the licence is exclusive can be defined, say, geographically by area, functionally by class of customer, or technically by type of product. Provided what is 'carved', so to speak, from the patent monopoly does not constitute an illegal grant, parties to licence negotiations may carve from the legal monopoly the licence rights best suited to their respective plans for its exploitation. It is possible, and legal also, to carve more than one exclusive licence from the same patent(s).

Because it prohibits the issue of further licences for the exclusive domain defined in the licence, the exclusivity clause restrains competition on the market in the product(s) of the licensed invention(s). [4] The Commission put that position as follows in its decision on the agreement between Kabelmetal and Luchaire:

> "If the patent holder undertakes to restrict the use of his inventions to a single firm in a specific territory, he is no longer able to make agreements with other applicants for licences; such an undertaking on the part of the holder is not of the essence of the patent; such an exclusive licence covering industrial property rights may be a restriction of competition and therefore prohibited by Article 85(1)".

In general, however, the exclusivity clause only infringes Article 85(1) when it affects noticeably trade between Member States and distorts competition.

Under a sole licence, the licensor can compete with his licensee but is restrained in respect of the right to issue further licences for the licence domain. A sole licence is analogous to a market-sharing agreement. The sole licensee is shielded by the restraint from third-party competition - perhaps the only really effective competition he faces. A licence which is expressed to be sole can be rendered exclusive through the predictable effect of other conditions in the licensing agreement. This was the finding

of a U.S. district court in the case of Pfotzer v Aqua Systems Inc. (1947). [5] There, a 'sole' licence was issued for building and installing hydraulic pumping systems in certain western states of the USA. The licensing agreement obliged the licensor, should he operate on the licence domain, to share evenly the resulting profits with his licensee. It being seen as most unlikely that the licensor would want to share his profits with his licensee, the circuit court condemned the obligation as a "per se" violation of the antitrust laws because it restricted the licensor's freedom to compete with his licensee: a restriction that fell beyond the protective scope of the patent in antitrust law.

The view has been expressed by at least one writer [6] that, where, in a licence subject to Community law, the licensee is allowed to license inventions within the domain of his licence rights, that ought to be enough to put the exclusivity clause beyond the scope of the prohibition in Article 85(1). But this ignores the point that the exclusivity clause distorts the competition there would have been had exclusivity not been granted. It is not too far from saying that Article 85(1) does not apply whenever there is effective competition on the market notwithstanding the presence of the agreement: something which would be relevant in the application of Article 85(3)(b).

1.2 Indirectly, Through Other Obligations

Restraints imposed on the patent holder's right to license his inventions may be seen as direct when the restraints result from an exclusivity clause, or a sole licence clause. But there are other ways - here, indirect - of restricting that right. One such way is through what is termed a "most-favoured-licensee" clause. This clause would provide that, should he later grant another licence or other licences to a third-party on terms more favourable than those in the licence being issued, the licensor will immediately extend the more favourable terms to his most-favoured licensee. In the agreement between Kabelmetal and Luchaire there was a most-favoured-licensee clause but the Commission decided that this clause did not infringe Article 85(1). It did not, said the Commission, in general dissuade the licensor from granting further licences to third parties.

On the other hand,

> "particularly where the market situation was such that the only way to find other licensees was to grant them more favourable terms than those granted to the first licensee",

a most-favoured-licensee clause could distort competition appreciably. Indeed, if the licensor were unwilling to prejudice his income from the initial licence, that would in effect render that licence exclusive or sole in respect of the domain for which other licences might have been granted. An obligation on the licensor to differentiate in the matter of royalties in favour of the initial licensee would fall within the observations on most-favoured-licensee clauses.

Another clause or obligation that could be caught by Article 85(1) is one under which the licensor is required to consult with his licensee(s) before issuing further licences. That could effectively place power to license the inventions in the hands of his licensee(s), a power given by the law to the patentee. An applicant would, moreover, sometimes be faced with conflicting interests to satisfy before he could obtain a licence. For the interests of the patentee in maximum royalties through competition is unlikely to be shared by his licensee(s). Something short of ceding the power to issue licences to his licensee(s), and perhaps for that somewhat reasonable and less likely to infringe Article 85(1), would be the custom of a patentee to consult with his licensee before issuing another licence for the same licence domain. To follow such custom may be no more than to observe good business manners, a point that was taken in U.S. v Parker Rust-Proof Co. (1945). It might, moreover, be unfair not to permit a licensee to show that he can handle whatever extra business a proposed licence is intended to cover. [7)]

In several American cases, prior consent to license and prior consultation clauses have been found to infringe the antitrust laws. [8)] Such clauses may also infringe Article 85(1), as the Commission's decision on the Heidemaatschappij agreement evidences. In that decision, the Commission also refused to exempt a prior consent clause under Article 85(3). There was no justification for the restriction on the licensor's freedom to license its invention,

> "even where the licensees have gone to the trouble and expense of improving the invention".

In some such cases, said the Commission, there might be some justification for differences in royalties.

2 RESTRAINTS IMPOSED ON THE LICENSEE

Because, to quote the Commission,

> "the holder of a patent is the only one able to permit utilization of his right in the invention",

clauses which prohibit the granting of licences - that is, sub-licensing - by a licensee will in general escape the prohibition in Article 85(1), at least so far as the Commission appears concerned. Indeed, in its decision on the Davidson Rubber Company licensing agreements, the Commission went as far as to say such clauses would be covered by the exclusive right of the licensor. In Davidson, though, the clause under discussion permitted sub-licensing only with the licensor's prior consent. The Commission's view as to patent coverage of the clauses would appear to be consistent with the Court's judgment in Parke, Davis (1968), where the essence of the patent right under EEC competition law was defined. But quite aside from patent coverage of the clause in Davidson, it would in the event have been justified on the basis of the licensor's interest in not having its know-how divulged without its prior knowledge and agreement.

The Burroughs agreements, also decided upon by the Commission in 1972, had a clause which permitted sub-licensing only to a wholly-owned subsidiary of a licensee. And, finally, the Commission passed over without comment a clause in the AOIP-Beyrard licensing agreement which required Beyrard's prior approval for his inventions to be licensed by AOIP; though that approval could not be withheld if half of the royalty or share offered to Beyrard was at least as great as the rate of royalty agreed on in AOIP's licence from Beyrard. In neither of these decisions were the restrictions on sub-licensing seen by the Commission to be capable of infringing Article 85(1).

On the contrary, an unlimited permission to license inventions could conceivably infringe that Article. It could be so under a grant-back arrangement, where unlimited permission to license or sub-license such future interests as

might be licensed-back could act as a disincentive to inventiveness.[9)]

3 CONCLUSION

The restriction of a licensor's right to license his invention is not, in general, caught by the prohibition in Article 85 unless it would be likely to affect trade between Member States noticeably and distort competition. The magnitude of a distortion of competition should be in direct proportion to the market significance of the patent(s) with respect to which the licensor's right is restricted; and in inverse proportion to the number of firms which effectively exploit the patent(s).

Restricting or prohibiting a licensee from transferring the invention(s) to another, whether through sub-licensing or through assigning, is a restraint which would appear to fall within the coverage of the patent in Community competition law. Save, perhaps, in the case of an exclusive licence, wherein there might be implied, due to the largely proprietory nature of the grant, a right to sub-licence. A restriction of that implied right might be seen to constitute an infringement of Article 85(1) - though so far such a view has not been taken by the Commission. What should be noted, however, is that the Commission's decisions to date have been concerned with restrictions on licensees transferring manufacturing rights to third parties. It must be seen as most unlikely that the Commission would regard restrictions on the transfer of marketing rights - the so-called 'customer control' clause - as falling within the protective coverage of the patent.

Notes

1 On 'abuse of monopoly', see section 48, Patents Act 1977. Also Re. Cooperative Union's Appln. (1933) 50 RPC 161.

2 Consider: section 30(4), Patents Act 1977.

3 Sections 67 and 130, Patents Act 1977.

4 See, e.g., Gibbons on "Domestic Territorial Restrictions in Patent Transactions and the Antitrust Laws", 30 Geo. Wash.L.Rev. 89 (1966); Alexander on "La Licence Exclusive et Les Regles de Concurrence de la CEE", Cahiers de Droit Européen (No.1), 1973; A.Dashwood on "Exclusive Licences in the Common Market", JBL, July 1973, page 205.

5 162 F.2d 779; consider the licensing agreement in Re. Heidemaatschappij-Bronbemaling (1975) 2 CMLR D67.

6 B. Cawthra on "Patent Licence Agreements in the EC - two New Decisions of the Commission", 6 IIC 418 (1975); same on "Exclusive, Sole & Non-exclusive Rights in Patent Licence Agreements", 8 IIC 430 (1977); but now see V. Korah on "Patents & Competition Law", 1 ELR 184, at 188 (1976).

7 61 F.Supp. 805.

8 E.g., US v Krasnov (1956) USDC 143 F.Supp. 184; US v Besser Mfg. Co. (1951) USDC 96 F.Supp. 304.

9 E.g., Re. Kabelmetal-Luchaire (1975) 2 CMLR D40, on grant-back clauses.

CHAPTER 7

THE EXEMPTION OF EXCLUSIVITY CLAUSES UNDER ARTICLE 85(3)

The policy adopted by the Commission towards exclusivity clauses in patent licensing agreements has, since it began to emerge in the late 1960s and early 1970s, evoked a great deal of comment in legal journals. A lot of the comment has been critical, sometimes harshly so. It has attacked what it sees as the Commission's virtual 'per se' prohibition of exclusivity in patent licensing agreements, contending on occasions that without the power to license on an exclusive basis patentees will often be unable to license their patents at all. If, by law, patent licences had to be unconditional, save in an obligation on the licensee to pay royalties for using the invention(s) comprised therein, those who needed to license so as to realize whatever potential their patents had might find manufacturers who could exploit the inventions unwilling to do so under a mere royalty licence. It was, and seems still to be, contended by the Commission's critics that the power to license patents exclusively is so crucial to the objectives of the patent system, more particularly, as a stimulant to technical progress, that it should be regarded as being of the patent's essence under Community competition law - as part and parcel of what is granted by the state to inventors. It would attend the Commission adopting the views of its critics that exclusivity clauses would be insulated from the prohibition in Article 85. At present, however, it seems little inclined to take the view that exclusivity clauses should be seen to fall within the scope of the patent monopoly. The Commission takes a more pragmatic approach to exclusivity of licences: it is neither 'per se' legal nor 'per se'illegal under Article 85(1). Its legality is governed by the effects on competition and trade that would be likely to flow from it. If the market effects should be imperceptible, the exclusivity clause does not infringe the prohibition in Article 85.

A clause which is caught by Article 85(1) may be exempted under Article 85(3). Thereunder, it is solely within the Commission's powers to declare Article 85(1) inapplicable to any agreement, or any clause thereof, which

on an objective evaluation is likely to contribute to improving the economic process or to promoting technical or economic progress, while allowing consumers a fair share of the resulting benefit, provided the rest of the agreement, or other clause thereof, does not have restrictions which are not indispensable to the attainment of those objectives and does not allow the parties a possibility of eliminating competition in respect of a substantial part of the relevant products. On balance, the benefits which are attributed to the agreement, or clause, being exempted must outweigh the disadvantages accompanying the distortion of competition.

Patent licensing, as a general rule, contributes to the objectives described in Article 85(3). Indeed, no or substantially less widespread licensing of valuable patents would hamper the dissemination of useful information and ideas; and that could, probably would, close off avenues to scientific advancement and further invention. Both the patent system and competition policy should, and does, favour extensive licensing of patents. Although, in some market situations, competition policy is ready to question unlimited licensing out of an interest which the patent system would be likely to share.

Yet, in saying that the licensing of patents is likely in general to contribute to the worthwhile objectives in Article 85(3), it is not meant to imply here that any particular clause or agreement is indispensable to the attainment of those objectives. An exclusivity clause is not, in abstracto, indispensable to the attainment of Article 85(3) objectives. Quite clearly, where a licence is compelled upon an applicant by extraneous factors, exclusivity of that licence is not indispensable to the attainment of the stated objectives. The licence applicant does not have to be tempted into taking a licence with the 'bait' of exclusivity. Only where exclusivity is needed, from an objective viewpoint, to secure acceptance of the licence on offer, could an exclusivity clause be said to be 'indispensable'. In what circumstances, then, might an exclusivity clause be necessary to the attainment of Article 85(3) objectives ? Conceivably, it might be so where <u>either</u> the <u>risk</u> facing a prospective licensee is likely to be <u>substantial</u> or, absent risk to

investments, special costs and investments are likely to be unrecoverable. Even where risk is insubstantial, to get a licence venture off the ground it may be necessary to incur certain costs; and, without exclusivity of licence, a prospective licensee may be unwilling to incur such costs. These circumstances wherein it has been conceived that an exclusivity clause might be indispensable are suggested, as indicated below, by Community law itself. The alternative concepts for indispensability may, of course, have their pitfalls - as indeed existing concepts in patent antitrust law almost all have. But with the caution of an old African proverb that "one does not have to learn how to fall into a pit, all it takes is the first step, the others take care of themselves", a first cautious step - around the pit, hopefully - can be taken in an enquiry into the second of the alternatives: exclusivity as indispensable to the amortization of special costs and investments.

1 AMORTIZATION OF SPECIAL COSTS AND INVESTMENTS

Throughout what follows, the assumption is that risk, or at least substantial risk, is absent from the market context in which the exclusivity clause is being considered. Rarely, however, is risk absent from an attractive commercial venture. Yet, it would appear to have been absent from the circumstances that surrounded the exclusivity agreement in Grundig-Consten, going on the judgment of the Court of Justice. It is, though, the submissions of the Advocate-General in that case which provide a hint of a ground upon which the indispensable nature of an exclusivity clause might be advanced. He observed:

> "Concerning the obligation of Consten to undertake and finance the publicity .... there is no doubt that the interest of a sole concessionaire to carry out effective publicity will decrease when it sees that its efforts are also profiting parallel importers without the latter bearing special costs".
>
> (Emphasis added)

Thus, where an initial licensee is required by a licence to incur special costs which are capable of redounding to the benefit of subsequent licensees, he may well refuse a licence unless given an opportunity to recover those costs through monopoly pricing of the licence products, or unless the licensor is himself willing to bear those costs.

Were he willing to fund that cost himself, the licensor could recover it through royalties on all licences. He might, considering the risk is negligible, be willing, in the alternative, to bear part of the special costs - the part that could not be recovered in the event further licences should be granted - and, again, recover that cost through the royalty mechanism. But what costs and investments could be classed as 'unrecoverable' and, therefore, require some inducement, perhaps exclusivity of licence, in order for the initial licensee to bear them ?

First, it is possible to envisage developmental investment as being very difficult to recover in certain industries that experience a free flow of information through staff changing their jobs between companies. Also, where the final product can be 'back-engineered' to reveal the process of its manufacture and the stages of its development, licence applicants may be unwilling to accept an initial licence without a reasonable opportunity for amortising the necessary investments. It is common practice in, for instance, the electronic instrumentation industry for manufacturers to purchase competing equipment and 'back-engineer' it for trade secrets. The Japanese are well known for back-engineering. Where that practice is certain to reveal the development of the invention, a competitive advantage is lost. An exclusive licence is one way of inducing acceptance of a commitment to undertake development of an invention, in circumstances where risk is insubstantial but the developmental investment could not, otherwise, be adequately amortised.

Second, the costs involved in publicising a product and surveying the market, often on a continuous basis, may not be undertaken without some inducement. By publicising a product in order to create, maintain, or enhance a particular demand, other manufacturers or dealers will be encouraged to seek licences under the patent - something they will be discouraged from doing if the initial licence is exclusive. For the licensor will lack the power to issue further licences. The benefits of promotional investment will be very difficult to individualise; subsequent manufacturers or traders would be almost certain to benefit from that investment. Yet, once it has been adequately

amortised, the initial licensee will lose his claim to special protection, or special treatment.

It could well have been the absence of risk - upon which a claim for exclusivity or for sole rights as necessary to the attainment of Article 85(3) objectives could have been founded - that led the Commission to refuse an exemption for the Heidemaatschappij agreement. Certainly, the facts to the decision are consistent with there not having been any substantial risk involved in accepting the licences from H. What the Commission found objectionable in the licensing agreement between H. and its former opponents was an undertaking by the former not to 'grant identical or similar licences to other firms in Holland without the consent of a majority of the parties to the licensing agreement and the other legal persons named in its preamble'. This undertaking resulted from a compromise, wherein H. in consideration of a withdrawl of opposition to its application for a patent for certain drainage processes agreed to grant licences to the opponents, the agreement restricting H.'s right to issue further licences for his inventions. Two applications for licences were rejected under the prior consent clause.

According to the Commission, for some time prior to the issue of their licences, those who opposed H.'s application for a patent on the drainage processes had been using the processes. Moreover, one of those opponents was in fact manufacturing special equipment for the processes. Their opposition to the grant of a patent was, therefore, only to be expected. But more important here, what had the restraint on licensing achieved in terms of Article 85(3) objectives ? Nothing, it appears, that had not been already secured. Whatever risk there might have been to investments had already been undertaken before the licences were issued, or the compromise reached. The decision has no evidence which could suggest that those granted the licences had agreed to undertake further costly development or costly promotion under conditions of appreciable risk mainly because of the restriction of further licensing.

In the absence of appreciable risk, the indispensable character of a restriction can be argued on the 'unrecoverable-cost' ground. This was not done by the parties to the

Heidemaatschappij licensing arrangement, possibly because the Commission could easily have countered that the parties would have been unlikely to undertake costs and sink investments had a substantial element of such costs and investments been impossible to recover under the conditions that existed prior to the restraint on licensing. Clearly, the parties felt confident of adequately amortising or recovering the costs and investments necessary for the success of their ventures without special protection, or special treatment. So, what had the restraint on H. secured that had not already been accounted for ? Again, there is no evidence in the Commission's decision that the parties to the licensing agreement had agreed to undertake <u>further</u> costly promotion or costly development, part of which could not be recovered without special protection, or special treatment. Thus, it would appear that the restraint on H. granting a further licence was not indispensable to attaining Article 85(3) objectives. Nor was it indispensable to the compromise either, for the plans of the opponents could not have been prejudiced by non-exclusive licences. Their respective financial burdens had already been shouldered and non-exclusive licences would allow those burdens to be carried along no more onerously than must have been envisaged when they were first shouldered.

In its decision on the Heidemaatschappij agreement, the Commission stated that differential royalties might be justifiable

> "where licensees have gone to the trouble and expense of improving the invention".

But surely if they <u>have gone</u> to that trouble, the objectives of both the patent system and competition policy have already been achieved without special treatment. Differential royalties would make sense where the parties are being asked to undertake in their licences costly improvement of the invention, part of which cost could not be recovered without the special treatment of differential royalties. But to assess the likely 'unrecoverable' nature of a cost, the time advantage accruing to the initial licensee through being first on the market with the invention should be brought into the account. That advantage may be

sufficient to allow for reasonable amortisation of the cost or investment element that, were the entry on the market of subsequent licensees to be instantaneous, would fall beyond the initial licensee's power of recovery. The next item which should be set against the alleged 'unrecoverable' nature of a cost or investment is the experience accruing to the initial licensee. Along with the time advantage, the advantage of experience may permit the 'unrecoverable' element to be adequately amortised. This should come about through reduced cost of total output, itself the result of experience in manufacturing under the patent. [1] The last main item which should be set in the manner just stated is a likelihood that some of the experience the initial licensee will acquire through using the invention will be patentable, or protectable in some other legal way. Moreover, investment in promoting an invention may also qualify for legal protection. Patentable or protectable experience is a contribution to recovery of initial costs and investments, if it can be traced back to the initial licence. Thus, after balancing these diverse benefits that are likely to accrue to an initial licensee against the alleged 'unrecoverable' nature of costs or investments, one could well reach the conclusion that only an insubstantial element might be as alleged and hardly sufficient to merit special protection, or special treatment.

2 THE NEED TO INDUCE ACCEPTANCE OF SUBSTANTIAL RISK

Where acceptance of a licence will involve the licensee in committing large investments to high-risk ventures, it may be necessary to induce acceptance by granting exclusivity of licence to the initial licensee. Put another way, exclusivity may be needed to compensate the initial licensee for the risk he is prepared to undertake. And the greater the risk, the more he will need compensating. Tailoring the compensation to the risk can be done through the scope of the exclusivity. Short of exclusivity are other ways of compensating risk, among them the differential royalty device.

Considerable risk may be involved in developing an invention: the risk that no marketable commodity will

flow from investment in developmental effort. Good project management may, however, help to contain and minimise risk. Apart from developmental risk, there are risks that a developed product may be rejected by the consumer on its arrival in the market; that new and better products, or cheaper processes, may render obsolete the licensed inventions only after considerable investments have been committed to them; that manufacturing capacity to be created under the licence will not be fully utilised. [2)]

The development of inventions in the field of pharmaceutical products is a notoriously risky business. One might cite here the anti-ulcer drug 'Tagamet' that took some 12 years to develop and test. Within 2 months of its being reported "a commercial success" (in August, 1977), Tagamet began to encounter opposition from doctors who, it was said, were in serious doubt about its usefulness and its freedom from side effects. [3)] Perhaps, ultimately, that doubt may overwhelm the product's usefulness, spelling twelve wasted years and little return to what may have been considerable investment in developing the drug. Further opinion on the high risk to which development in the field of pharmacy is subjected is to hand in the Monopolies Commission report on Roche Products, where it is stated:

> "According to /Roche Products/, estimates in the industry suggest that on average only one compound out of 5000 synthesised in the research departments of pharmaceutical companies reaches the market and that even this one product may have little commercial success". [4)]

Developing a marketable product is only part of the innovative process. When developed the product must be actually marketed - this presupposing the product can be delivered in quantity, on time and where the demand is greatest. To try to attain that objective, a licensee may be obliged to invest heavily in plant and equipment, transport and storage facilities, training of personnel, and promotion. Where final demand for the contract products is uncertain, this may be enough to place those investments at risk. The licensee may end up with twice the capacity he actually needs. Estimates of the likely demand may have been too optimistic. Exclusivity of the licence on offer may be both reasonable and necessary compensation for the risk he is prepared to take to make a commercial success of the licence.

As reasonable and necessary compensation for agreeing to place investments in capital equipment and promotion at substantial risk, exclusivity clauses in patent licensing agreements have been exempted by the Commission in several cases. In, for instance, its decision on the Kabelmetal-Luchaire licensing agreement, the Commission saw the exclusivity clause as likely to contribute to economic progress

> "since it made possible the licensing agreement in question by guaranteeing Luchaire a sufficient return on its investments by virtue of the territorial advantages it derives from the exclusion of any other firm which might be interested in manufacturing on the basis of the licensor's techniques within the territory for which the licence is valid".

So, the exclusive licence contributed, or was likely to contribute, to economic progress through securing investment in manufacturing capacity, as well as in the promotion necessary for backing up that capacity. Through monopoly pricing of the contract products, Luchaire would get a sufficient return on those investments. But might that progress have been secured by measures which would have been less costly in terms of distortion of competition ? In terms of cost to competition-benefit from monopoly, did the benefit to the public interest (the creation of a new industry) outweigh the cost (higher prices than otherwise) ?

Could Luchaire have been induced by less than exclusivity, say, by a differential royalty agreement in its favour, to take the risks to investments which acceptance of the licence on offer required ? The Commission decided not.

> "Given the investments required to apply the Kabelmetal techniques and to promote sales of products manufactured by the extrusion processes, which when the agreement came into force were not as yet widely used and had to compete with many other processes to which users were already accustomed, Kabelmetal would have been unable to get any interested firm in the EEC to apply the techniques it possessed at the time, or indeed any other development involving fresh investment, had it not given an undertaking that other firms would be unable to compete with it directly by manufacturing the products in question using

> the same protected or secret techniques in the territory covered by the licensing agreement. The protection which this territorial advantage gives against the risk of insufficient use of production capacity that has had to be created could not be attained by measures which would restrict competition to a lesser degree".
>
> (Emphasis added)

Thus, the Kabelmetal techniques were relatively unknown. To invest fairly large amounts in relatively unknown techniques is a risky business. But, in a sense, the risk was greater by virtue of having to get customers to switch from techniques which presumably met their needs in a satisfactory manner to relatively unknown techniques in fresh hands. This would involve risk for the customers persuaded to put business in Luchaire's hands.

The magnitude of the risk facing Luchaire's investments, substantial though they probably were, is hard to gauge from the decision. The licensee will almost always argue that he faces a substantial risk in accepting the licence. But the risk needs to be assessed objectively: on the basis of how the market stands, and is likely in the future to develop. Moreover, the risk of inadequate demand would be tempered in degree by a sound technical or commercial reputation. If the Commission is going to continue using the degree of risk as a basis for deciding whether exclusivity is indispensable or not, an analysis of the risk should appear in its decisions.

In analysing the size of the risk, the nature of the invention should figure prominently. With a new product, the risk is often considerably more than with a new process. In both cases, however, the size of the risk is likely to be over-stated by the parties to the licensing agreement. And what should not be over-looked either is that, "while having to carry not negligible risks" (Grundig-Consten judgment), manufacturers and traders quite often invest substantial amounts without any special treatment, or special protection. Thus, the risk should assess to something above the "not negligible" before an exclusivity clause could be seen as being 'indispensable'.

Given that the risk is substantial, what should be examined next is the scope of the exclusivity clause. Ideally, the limits of the exclusive domain would be

coterminous with those of the estimated risk. But the licensee will always ask more exclusivity than the risk he is expected to take is really worth; and the licensor will invariably be prepared to grant it, particularly where he has no manufacturing or marketing facilities of his own. As guardian of the public interest, it is the Commission's job to limit the price being exacted from competition to a bare indispensable minimum. In other words, not to leave too much cream on what the licence parties can milk from the market.

The scope of an exclusivity clause may reflect the nature of contract products. Where, for instance, the contract products are relatively light and easy to transport, a marketing submonopoly might be needed to induce acceptance of a high-risk manufacturing licence. Conversely, however, where the cost of transporting the contract products would be high, the holder of a territorially exclusive manufacturing licence is likely to have a marketing submonopoly in his territory, given obviously that he is at least as efficient as another manufacturer of the contract products faced with the transport cost. When the license holder has a submonopoly in fact, granting him exclusivity in support of that fact would be a prescription for inefficiency or for unfair exploitation of the consumer. Thus, the need for an additional submonopoly of marketing rights over the contract products will vary inversely with the height of the natural barriers to imported competition.

But quite <u>how much</u> exclusivity of licence rights would be acceptable to the Commission cannot be stated in the abstract, at least so far as patent licensing agreements are concerned. An attempt at defining an acceptable 'quantum' of exclusivity - acceptable, that is, to the Commission - in the Commission's proposal for a draft regulation on patent licensing agreement has come under heavy attack from representatives of industry in the Member States, particularly the U.K. The view appears to be that what is acceptable to the Commission is <u>too little</u> to satisfy industry. In March 1976, during a speech delivered in the U.S., the Director-General for EEC Competition stated that exclusivity of marketing might be justified under Article 85(3) as long as it does not "exceed the period

for a new product to penetrate a new market". How that formula could be applied in practice is anybody's guess. A guess here is that the life of the basic patent should be acceptable; and that so, as a general rule.[5)]

3 CONCLUSION

Exclusivity of licence might be exempted by the EEC Commission as being indispensable to the attainment of Article 85(3) objectives where

either

> risk to investments that must be sunk in the licence venture is likely to be substantial;

or

> investments which must be sunk in the licence venture are capable of benefitting subsequent licensees before the initial licensee has had a reasonable chance to amortise them.

Either of those grounds upon which indispensability is arguable can, of course, be advanced for restrictions that fall short of exclusivity of licence. Field-of-use restraints, price restrictions, grant-back obligations, and other obligations that often appear in patent licensing agreements.

Different types of risk-taking will warrant separate treatment. Developmental risk will arise only once. In respect of an invention which has been successfully developed, mere modification to suit, say, a regional characteristic or preference, would be likely to involve only negligible risk: the risk that is inherent in all commercial activity. The risk to investment in manufacturing plant and machinery, transport and storage facilities, is a risk that can arise more than once. It may be necessary to issue several exclusive licences in order to realize fully the potential of a patent for a developed invention. Demand forecast may vary considerably from one Member State to the next. Each initial licensee in a territory may have to promote the invention out of his own pocket, provide after-sales servicing and the like. This may entail putting considerable investments at substantial risk.

When risk is insubstantial, the indispensable nature of an exclusivity clause could be argued on the alternative ground stated above. That ground could be advan-

ced only in respect of a certain type of cost or investment - not a cost which is 'irrecoverable' (for this implies that it could not be recovered under any conditions) but a cost which can only be recovered or amortised (principal plus interest) under certain conditions. This latter cost will always be part of a total, the remainder of which will benefit the initial licensee only. Only when that 'unrecoverable' part is substantial, or likely to be so, would there be a worthwhile case on the alternative ground.

Notes

1 E.g., "In an industry whose product /the integrated (microelectronic) circuit/ declines in price by 25% a year the motivation for doing research and development is clearly high. A year's advantage in introducing a new product or new process can give a company a 25% cost advantage over competing companies; conversely, a year's lag puts a company at a significant disadvantage with respect to its competitors. Product development is a critical part of company strategy and product obsolescence is a fact of life. The return on successful investment in research and development is great; and so is the penalty of failure": R.N. Noyce on "Microelectronics", 237 Scientific American 63 (September 1977). This article by Noyce is by way of introduction to this particular SA issue on the 'microelectronic revolution'.

2 "Then there is the problem of the product's technology, which is completely up to date at the beginning of the project, being unexpectedly superseded by the rapid pace of further breakthroughs. Again the transmission of high-density telephone conversations provides a useful illustration. One can envisage the level of sales that, in the mid-1960s, were being forecast for circular-waveguide systems by the 1980s, and the amount of R & D effort that must have been committed based on these forecasts. Yet by the mid-1970s optical fibres were already threatening to make the circular waveguide obsolete even before the first fully operational system was installed": Hailes on "Marketing High Technology Products", Electronics & Power, August 1977, page 641, at 644. Non-technical pieces on the British Post Office's use of optical fibres can be found in the Financial Times, 30/6/77 ("A light wave revolution") and in the Sunday Times, 3/7/77 ("Post Office places a £1 billon call with the speed of light").
A useful paper on technological forecasting is that by A.T. Olenzak on "How useful is technological forecasting?", International Hydrocarbon Processing, May 1974, page 157.

3 Sunday Times Business News, 21/8/77 and 2/10/77.

4 UK Monopolies Commission Report: 197, 11/3/73, page 14, paragraph 46; for comment upon this Report see W.R. Cornish, JBL, July 1973, page 254.

5 See chapter 8, this thesis, page 104.

CHAPTER 8

EXPORT RESTRICTIONS IN PATENT LICENSING AGREEMENTS

Restrictions on the export of products to another Member State, or to the Community itself from a non-member State, are particularly apt to have a prejudicial influence on trade between Member States and to distort competition within the Common Market. And when an export restriction falls within the concept of 'agreements between enterprises', it is caught by Article 85(1) if, in fact or in probability, it noticeably affects interstate trade and competition. Rather less likely to be caught by the Article 85 prohibition are agreements which restrict or prohibit exports from the Common Market.

A direct restriction on exports is usually expressed through clauses which oblige the licensor to refrain from selling, and/or to impose a contractual prohibition on other enterprises against selling, the patented products or products manufactured by the patented process within the licensed territory; or which oblige the licensee to refrain from selling the patented products or products manufactured by the patented process within the defined territory reserved by the licensor or in the licensed territories of other licensees. By combining these obligations, exclusive marketing territories can be created or their boundaries strengthened. [1] Indirectly, exports can be restricted through the grant of an exclusive licence. They can also be restricted indirectly through the limitation of a manufacturing licence with respect to first-sale price and/or quantity. Indeed, one of the best ways of sealing off a territory is by imposing price and quantity restrictions on licensees that could export to the territory.

This chapter discusses export restrictions as such, and not as disguised in price, quantity or field-of-use limitations. These indirect ways of restricting exports are discussed in the next following chapter. The scheme in this chapter is to discuss direct restraints on exports, first, in the light of the Commission's 1975 policy review

statement, and thereafter where the Commission has given decisions on them.

Part 1

POLICY STATEMENT ON EXPORT RESTRICTIONS

Should a licensor be able to contract to prohibit licensees from making direct imports into territories into territories he wishes to reserve to himself ? Were he unable to contract so, would that be likely to impair the incentive to inventiveness and to licensing ? These are two of the questions dealt with by the Commission's 1975 review of competition policy. [2] They sprang directly from a view put to the Commission that

> "if a patentee's rewards were reduced to to unacceptable levels by exposing him to competition from his foreign licensees he could be discouraged from granting licences altogether. In particular, small and medium-sized licensors should be protected against being swamped by competition from their more economically powerful licensees. Moreover, any considerable discouragements to the granting of licences could induce large enterprises to retain their innovations and enter foreign markets themselves, rather than by licensing to disseminate innovations and to help the promotion of alternative production and marketing units".

Therefore, the view continued, the power to contract for an export restriction should be regarded as indispensable for the protection of the licensor's property rights, as germane to the very existence of the patent, and so beyond the reach of the prohibition in Article 85. In answering the above stated questions, the Commission rejected the views from which they sprang and the conclusion they promoted. It rejected both,

> "against the background that a licensor is in a position to choose whether to grant licences or not, that the licences are subject to royalties in his favour and that the licensor normally enjoys advantages in time and in cost when competing with his licensees".

And when not competing with his licensees, the licensor would have no need for the restriction. Appropriate cases would be considered for exemption under Article 85(3).

1 IMPAIRMENT OF INCENTIVES TO INVENTIVENESS.

To put it, as indeed it was put to the Commission, that licence restrictions designed for the licensor's protection should be allowed because of their appropriateness for preserving the attribute of patent rights as an incentive to inventiveness is, if not indulging in fantasy, at least grasping at very slender, gossamer reeds. Whatever incentive there is in the patent system to inventiveness is unlikely to be impaired by the licensor not being able to contract for an export prohibition. As Professor Turner has written:

> "Inventive activity resembles a lottery in that among the possibilities are some extremely high payoffs. It is doubtful that anyone who would be induced to invest in research in hopes of a thousand-to-one payoff would be deterred if the potential payoff were reduced to eight hundred-to-one. Again, more generally, the uncertainties are too great to make the kind of close calculation that would be materially affected by relatively moderate, though substantial, changes in the value of the patent reward". 3)

The doubt expressed by Professor Turner is surely a realistic one. It may be that the Commission shared it, for the point goes unanswered in the 1975 review.

2 IMPAIRMENT OF INCENTIVE TO LICENSING

If he could not contract for an export ban, would the patent holder be less likely to license his patents ? To answer this question, regard must be had to the reality which attends much of the patent licensing that takes place in contemporary business life. At least some licences will be due to anti-monopoly legislation in the field of patents. 4) Besides that, the patent holder may be forced into licensing his patents through fear of the consequences that might flow from a refusal to license them. Were he not licensed, the rejected applicant might be in a position to invent around the patent and in time market a superior product or invention; he might try to take over the patent holder's business; or he might openly defy the patent, asserting it to be invalid. To head off these consequences when they appear probable to him, the patent holder may have to license. To allow the patent holder, when "buying-off" challenges to a patent of doubtful validity, to contract for the protection of an export ban on products which ought really to be in free commerce

would be to injure doubly the public interest: the interest in free commerce in unpatented commodities, and the interest in maximising exports from this kingdom. [5)]

The view that if they are not permitted to contract for export bans, large enterprises might be induced "to retain their innovations and enter foreign markets themselves" is easily dealt with. Why should such an enterprise, when it is able and willing to enter foreign markets where it holds patents, license those patents any more readily with than without freedom to contract for an export restraint for its own protection ? It could defend the home market with the patents it holds there: but it ought not to be able to grant itself patents that cannot be obtained on the home market, through contracts which restrain exports thereto. If it is unable or unwilling to enter a foreign market, the large enterprise is compelled to license its patents for that market, if not to avoid compulsory licensing then at least to have an income from those patents. Besides, any unexploited potential on the foreign market will attract infringers and copiers, who may be hard to trace and expensive to prosecute. The appointment of a foreign licensee will help in deterring infringers. It is, therefore, axiomatic that the patent holder who is compelled to license cannot be influenced in the matter by his inability to contract for an export ban.

3 IMPROPER PROTECTION OF PATENT RIGHTS

Although not raised in the 1975 policy review, it is unlikely to have escaped the Commission's deliberations that export restraints may be designed latently to protect the licensor's patent against having its validity challenged before courts on the territory reserved for himself and into which the licensed product(s) could be directly imported from a licensed territory. When a contractual restraint on export can be enforced in the licensed (foreign) territory, the licensor's parallel patent does not have to be exercised against an import. Not having to be exercised in defence of the reserved territory, the patent avoids the possibility of a challenge to its validity: a possibility designed to serve the public interest. The (foreign) court through which the export ban is enforced could not admit a challenge to the validity of the licensor's patent abroad,

because validity is a matter for the law in the state that issues that patent. Moreover, by selecting a judicial forum beyond the territory of the Common Market, or a legal system beyond the Common Market as the proper law of the licence contract, both national interests and Community interests could be subverted by the licence parties.

4 PROTECTION OF THE LICENSEE

Dealing with contractual restrictions to protect a licensee from direct imports into his territory by other licensees, the Commission noted, in its 1975 policy review, that opinions in support of allowing such restrictions were in general based on the proposition

> "that a licensee needs sole marketing rights in his territory in order to safeguard his investment in the initial promotion of production and sale, /and/, in the absence of such protection, there would be a disinclination to accept licences and patentees would therefore be in danger of losing their rewards".

Again, the Commission rejected the views submitted to it on this side of the 'export restraint' problem. Export bans designed to protect a licensee's market, and so confer on him exclusive marketing rights, were not indispensable to the existence of the patent as a stimulus to invention or to innovation. In appropriate cases, however, such bans might qualify for exemption under Article 85(3).

4.1 De Facto Protection

Not every licensee will require exclusive marketing rights to induce his acceptance of a licence obliging him to invest in the initial promotion of production and sale. Indeed, the holder of an exclusive manufacturing licence may be expected to have considerable advantages over potential foreign exports in terms of time, place, customary outlets, loyal loyalties, and the like, which individually or together could, in fact, give him a marketing monopoly over the licence products within his territory. If he is efficient, this de facto monopoly ought ordinarily to be adequate for permitting a fair return to investments while allowing consumers a fair share in the benefits resulting from his exclusive manufacturing licence.

It is convenient to mention, at this point, and rather briefly, the problem of exports from COMECON.

It is well known that state-trading enterprises in COMECON often ignore the true costs of production and marketing in their drive for hard Western currencies. Exports at any price is not infrequently their goal. Against that kind of competition, EEC licensees of technology which is also licensed to COMECON enterprises deserve the protection of export bans. But these bans may be hard to secure under the "buy-back" deals in which Western technology suppliers often become involved. Where they can be secured, export bans imposed on COMECON enterprises should as a general rule be legal under Community law. Anti-dumping legislation within the EEC might, on being enforced, merely be closing the door after the horse has bolted. 6)

4.2 Statutory Protection Of Rights.

Domestic patent law may permit the licensee to exclude imports of the licence product(s) from his licence territory. In particular, it is an infringement of a U.K. patent for invention, while the patent is in force, (1) where the invention is a product, to import the product or keep it whether for disposal or otherwise; (2) where the invention is a process, to import any product obtained directly by means of that process or keep any such product whether for disposal or otherwise. 7) The infringement rules of our domestic patent law shall, however,

> "not apply to any act which, under any provision of the Community Patent Convention relating to the exhaustion of rights of the proprietor of a patent, as that provision applies by virtue of [section 86], cannot be prevented by the proprietor of the patent" (Patents Act 1977). 8)

Subject to that particular exception in the infringement rules,

> "the holder of an exclusive licence under a patent shall have the same right as the proprietor of the patent to bring proceedings in respect of any infringement of the patent committed after the date of the licence" (section 67, Patents Act 1977).

He would not, of course, have the same right as the patent holder were the exclusivity clause in his licence caught by Article 85(1) and not exempted under Article 85(3). But assume here that that clause is legal.

As holder of an <u>exclusive</u> licence, the licensee could assert patent rights to prevent the importation into

the U.K. of patented products, save obviously where those rights have been exhausted under any provision of the C.P.C. His unilateral assertion of rights would fall beyond the scope of Article 85(1), since it would lack the character of an exercise of rights that was the object, the means or the consequence of an agreement. As the Advocate-General observed before the Court of Justice in Parke, Davis v Probel (1968):

> "We are dealing with a unilateral action by the holder of patent rights, that is, the assertion of its national, original rights (which are not based on an agreement). Even though the patent holder may be bound to his licensee to exercise these rights, it is, however, not this agreement that could impair competition, but only the national (subjective) patent right".

Provisions of the C.P.C. relating to "exhaustion of rights" can be found in Articles 32 and 78 CPC. It is the latter of those two Articles that is relevant to the present discussion. In the Commission's words, Article 78 CPC is

> "designed to ensure that a patented product put on the market in any Member State by the holder of one or more parallel national patents may move freely throughout the territory of the Community. The partitioning of the Common Market into nine national markets is thus forbidden". 9)

Article 78 CPC should not be read in isolation from the Treaty setting up the European Economic Community, for it was with a view to contributing to a realization of the objectives in the EEC Treaty that the Member States concluded the Community Patent Convention.

> "It is clear from Articles 2, 3, 30 to 37, 85 and 86 EEC, that one of the essential aims of the Community consists of creating a Common Market in which products move freely and competition is not distorted". 10)

Exhaustion of national rights cannot, therefore, be alleged where prevention by the proprietor of the patent of certain acts within his patent's scope would not prejudice realization of the objectives of a common market which are set down in Article 1 EEC. The principle of "exhaustion of rights" is discussed in the final chapter of this thesis.

4.3 Disinclination To Accept A Licence

A contention that if the licensor is not permitted

to grant exclusive marketing rights to licensees, they will disinclined to accept licences, thus endangering the patentee's potential rewards, may be overlooking the undoubted benefits to be derived from the inward licensing of patents:

> "The inward licensing of a new product or process, either as a complement to an existing range or as a diversification, provides a means of acquiring knowhow quickly, without the long periods usually necessary for intramural development; also it permits a reduction in cost and the entering of a new market or achievement of a high degree of total capability". 11)

It is true, however, that licensees will be disinclined to accept licences for patents of suspect validity. In which case, it will be necessary to induce their acceptance of licences through a grant of exclusive manufacturing and marketing rights. In other words, to buy-off the most likely attackers. In these circumstances, a grant of exclusive marketing rights is designed to undermine the public interest.

Part 2

COMMISSION DECISIONS ON EXPORT BANS

1 BAN ON EXPORT TO ANOTHER MEMBER STATE

In its decision on the Davidson Rubber Company agreements, the Commission rejected as not being indispensable to the attainment of Article 85(3) objectives a direct restraint on exports designed for the protection of licensees in different territories of the Common Market. The relevant facts are, briefly, that the Company, having itself never manufactured nor sold the contract products on the Common Market, exclusively licensed three firms, located in different Member States, to use an important process for the manufacture of elbow rests, together with certain equipment for executing the process. The number of competing processes, like the number of manufacturers using them, were few and the Davidson licensees held a substantial share of the relevant EEC market, given that car manufacturers themselves produced large quantities of the relevant products purely for their own consumption.

In their original form, certain know-how concession contracts (ancillary to the principal Davidson licences)

> "did not meet the conditions for an application of Article 85(3) because they contained a clause prohibiting each party from exporting the articles manufactured by the Davidson process to the other's territory, a clause which constituted a noticeable restriction on competition and could not be regarded as indispensable to the attainment of the favourable objectives of the agreements in question".

This obligation, which prevented the application of Article 85(3), was deleted from the contracts at the Commission's request.

But in its stead, and presumably at the Commission's request, there was inserted into the principal licensing agreements

> "a provision stating that none of the clauses might be invoked to hinder the sale between Member States of the EEC of the articles covered by the licensing agreements or to impose obligations which could fall under the restrictions laid down in the EEC Treaty".

It is likely that this provision would have prevented a unilateral assertion of patent rights under domestic law to restrain an importation of licence products into the licence territory. The provision would, moreover, have caught measures aimed at the indirect restriction of exports.

Facts in the Davidson decision indicate that each licensee had a marketing submonopoly of sorts - for the decision mentions that each licensee

> "as a general rule supplies car manufacturing undertakings which have their headquarters in the territory assigned to them, the latter themselves passing the items to any assembly plants they may have abroad. However, in recent years, even car manufacturers without their headquarters in the territory assigned to the various licensees have been supplying them".

Thus, the customary marketing submonopolies recognised initially as existing for each of the Davidson licensees were beginning to break down when the Commission was giving its decision. Then, the licensing agreements had on average been running for some 12 years - long enough, perhaps, for each licensee to have had a reasonable chance of amortising investments in the necessary plant and promotion. But for the 12 years, the Davidson licensees look

as though they enjoyed a submonopoly of the marketing and manufacture of the contract products. Small wonder, then, that loss of the export restriction towards the end did not lead them to abandon the licensing agreements. The restrictive effect on competition of the clause prohibiting export would probably only have become noticeable as the customary marketing practices of the different licensees began to give way in the manner stated by the Commission.

In one of its more recent decisions on the AOIP-Beyrard licensing agreement, the Commission held, as incompatible with Article 85(1), a conditional ban on exports by AOIP. This ban arose from Clause 1(2) of the licensing agreement: AOIP, the licensee, was authorized to export the licence products to any third country in which the licensor (Beyrard) had neither licensed nor assigned his rights to third parties. The licence products were patented devices used in unpatented endproducts. Although lacking actual effect because no third-country patents had been licensed or assigned, the clause certainly had the object of restricting competition. This, apparently, was enough to warrant the Commission's condemnation of it. In the Commission's view,

> "the protection of one licensee or assignee against the competition of another licensee constitutes a restriction of competition within the meaning of Article 85(1), when such protection results from a contractual prohibition on exports or imports".

In the abstract, that is quite true. In general, however, the Commission is required to establish, at least on a basis of probability, that the restriction is noticeable before invoking the prohibition in Article 85(1). And, as the statement itself acknowledges, protection of a licensee through an exercise of the patent which avoids the concept of 'agreement' in Article 85(1) would not constitute a restriction of competition within the meaning of that Article.

2 BAN ON EXPORT FROM THE EEC

In the licensing agreement between Kabelmetal and Luchaire, the latter was banned from exporting to countries outside the territory of the Common Market. This ban, the Commission decided, was unlikely to affect noticeably trade

between Member States. The licence products were unsuitable for middleman trading, that rendering it unlikely that the products would be reimported into the EEC for subsequent sale between Member States. Apart from the nature of the contract products, other factors are capable of making reimportation unlikely. Community external tarrif barriers, for instance, could rule out a probability that contract products will be reimported. [12] When it is unlikely that goods will be reimported to the EEC, a ban on their export should not infringe the Article 85 prohibition.

3 BAN ON EXPORT TO THE EEC.

Such a ban runs a risk of infringing not only Article 85(1) but also laws in non-Member States where the licensee subjected to the ban is situated. Dealing first with the risk of infringing Article 85(1), this was run by the parties to the Raymond-Nagoya licensing agreement. The licensee (Nagoya, of Japan) was banned from exporting the contract products beyond a territory defined in the licence. Exports to the Common Market were within the scope of the ban. But the ban was limited to export of the contract products, as such. When in situ they could be exported anywhere.

> "Those products, if they are incorporated into the separate parts of Japanese cars or in the bodywork of vehicles manufactured in Japan or in the other sales territories by Japanese or foreign undertakings, may be exported to the countries of the Common Market with the separate parts or with the assembled cars".

Nevertheless, had special circumstances not intervened in favour of the limited ban, it could have infringed the Article 85 prohibition.

By reason of the nature of the licence products (they "are not standardised products which can be used by any car manufacturer for its different models"), of circumstances surrounding manufacture of those products (the "manufacture of such components is carried out in close and constant collaboration" with the undertaking which orders them), and of the fact "that inside the EEC the same articles can be supplied without difficulty by Raymond and that apart from Raymond there are in the

Common Market numerous other manufacturers of attachment components", the Commission was able to decide as

> "little likely that attachment components manufactured by Nagoya under licence to Raymond would be supplied to the Common Market. Consequently, by reason particularly of the characteristics of the products in question, the prohibition on Nagoya exporting these articles to the Member States of the EEC cannot have a noticeable effect on competition within the Common Market".

In other words, the theoretical consequence of the ban on Nagoya differed from its probable (negligible) effect on competition.

Turning, finally, to consider, very briefly, laws in non-Member States. A ban on export of contract products from the territory of the United States to the EEC could escape Article 85(1) only to fall foul of the US antitrust laws. [13] Further to the south of the American continent, many of the South American states have adopted as part of their laws Decision 24 of the Cartagena Agreement (or the "Andean Pact", which aims to establish the "Andean Common Market"). Brazil's Normative Act 15 (1975), an Act modelled on Decision 24, prohibits in general clauses which regulate, alter or limit exportation. The Act is designed to promote the internal economic development of Brazil.

Part 3

CONCLUSION

Export bans have long been a fairly thorny issue in EEC law, quite clearly because they are designed to affect interstate trade and competition and can, therefore, prejudice realization of the objectives of a single market between the Member States of the EEC. Although they are not prohibited 'per se' under Article 85(1), in general export bans are safest seen as falling within the scope of that Article, particularly where they extend to exports to another Member State. Seen as such, parties to the agreement may apply to have the bans exempted under Article 85(3).

Notes

1 See, e.g., the EEC Commission's draft regulation on patent licensing agreements:(1977) 1 CMLR D25.
2 Page 21, paragraph 24.
3 "The Patent System & Competitive Policy", 44 New York U.L. Rev. 450, 459 (1969).
4 Consider: section 48, Patents Act 1977.
5 E.g., Re. Penn Corporation's Patent (1973) RPC 233; see, for a report on exports the "Survey of British Exports", Financial Times, 3/6/77.
6 E.g., K.Done on "Sales of Chemcial Plant to COMECON: The Pigeons are coming home to roost", Financial Times, 29/12/77; Pinder on "The future of international trade and investment", Chemistry & Industry, November 19, 1977, page 893, at 897.
7 See, for full definition of infringement, section 60, Patents Act 1977.
8 On the C.P.C., see, e.g., W.R. Cornish, JBL, April 1976, page 112.
9 Commission's Opinion of September 26, 1975: OJ L261, 9/10/75, page 26, part II.
10 Commission's Opinion of April 4, 1974: OJ L109, 23/4/74, page 34, part III.
11 Kent on "Outward & Inward Licensing", Electronics & Power, September 1975, page 916.
12 E.g., Re. SABA (1976) 1 CMLR D61; comment on this case by V. Korah, JBL, July 1976, page 284.
13 E.g., Zenith Radio Corp. v Hazeltine Research Inc. (1969) USSC 395 US 100; Extractol Process Ltd. v Hiram Walker & Sons Inc. (1946) USCC 153 F.2d 264.

CHAPTER 9

PRICE, QUANTITATIVE OUTPUT AND FIELD-OF-USE RESTRAINTS

Export restrictions make quite plain the intention of the parties to the licensing agreement to affect interstate trade. Indirectly, other restrictions in patent licensing agreements can have a similar affect on interstate trade. Whether direct or indirect, an interference with trade patterns through the mechanism of agreements between enterprises will be caught by Article 85(1) when said agreements noticeably distort competition within the Common Market. Among the restrictions which may affect trade between Member States are those stated in the chapter title. Indeed, a price restriction may affect interstate trade to a far greater degree than a mere export restriction. It may, therefore, offer greater protection against foreign competition than the latter. A quantitative output restriction goes one better, or worse (depending on viewpoint), than the price restriction, since it restricts not only price competition but also non-price competition. And, lastly, high price markets can be isolated from effective competition through agreements between producers to confine their manufacturing activities to a defined technical field, or field of use.

Although they are safest seen as falling within the scope of the Article 85 prohibition, price and quantitative output restrictions would be likely to experience great difficulty in passing through Article 85(3) to an exemption. They are capable of conferring 'absolute territorial protection' on patent licensors and licensees - something which, in general, is anathema to the Commission and the Court of Justice. [1] It is possible, however, to envisage situations where the risk may be such that those restrictions would be indispensable to the attainment of desirable improvements in the economic process or of worthwhile progress. These situations are discussed below, beginning first with restrictions on <u>first-sale</u> price (i.e. pre-exhaustion of patent rights).

1 FIRST-SALE PRICE RESTRAINTS

These restraints usually concern the 'minimum', rather than the 'maximum', selling price for products manufactured under licence. They can be effectuated through the mechanism of a royalty obligation. Royalties are a cost to the licensee; and, if high enough, that cost can inhibit his freedom to price the output below what rivals charge. Imposing restrictions on price through the royalty mechanism is not 'per se' abusive of the patent monopoly: something the Roche Report clearly shows.

In this Report, it is mentioned that Berk Pharmaceuticals had sought, and been granted, a compulsory licence for the manufacture of diazepam (one of the reference drugs). The royalty for this licence was at a fixed rate per kilo of £465: a rate that

> "placed a limit on reductions in price; in the case of the hospital business, /Berk/ said that, since Roche Products' prices were set at a level slightly above the royalty, it had no hope of competing in that market".

Due in large measure to 'the technical and manufacturing charges incurred and the high rate of royalty' payable by Berk, diazepam yielded Berk a relatively low profit margin [2] - thus limiting price-manoeuvreability. The redeeming feature of a royalty over a price restriction is that it does not, when fixed (as distinct from variable), impair the incentive to inventiveness. By improving on the licensed invention, its application costs can be reduced and profits increased. Alternatively, selling prices can be lowered and a new market penetrated. This presumes, of course, an ability in the licensee to improve on the invention: an ability which he may actually lack.

A price restriction as such, rather than in the form of a royalty, could be indispensable to the attainment of Article 85(3) objectives only in rather exceptional circumstances: where a small or medium-sized licensor needed protection against the competition of an economically more powerful licensee, or where a licensee is unwilling to accept the risk involved in a licence without special protection.

1.1 Protection Of Licensors

Suppose here that a manufacturer with limited manufacturing capacity acquires a valuable patent with consider-

able long-term prospects. Two courses are open to him for exploiting that patent: he can license larger and more efficient concerns to exploit it and live off the licence royalties, or he can invest in extra manufacturing capacity yet reap some of the benefit of any immediate high demand by issuing licences. Being larger and more efficient than their licensor, the licensees could, were he to take the latter of the two courses open to him, ruin the investment and drive him from the market. Due to scale of production, they will have a cost advantage over him up to the point where the capacity he invests in comes efficiently "on tap". Thus, before he was able to get an efficient foot in the door to the market, the patentee might be eliminated and his investment lost. Two competitors remain where there otherwise would have been three: the competition there otherwise would have been is no longer conceivable.

How can the patentee who wants to take the second of the two courses protect the investments its taking would entail ? Arguably, royalties would offer adequate protection. In practice, however, a royalty that would be high enough to protect those investments would be almost impossible to negotiate. Licences would be refused; and his expansion plans might depend on royalty returns from licensing. Likely too, short-term licences would be refused. What could offer adequate protection for the investments might be first-sale price restraints. In the event they likely would afford adequate protection, price-fixing clauses would, in the present circumstances, surely be in the long-term interests of competition. In areas of high unemployment, the clauses would also be socially desirable.

1.2 Protection Of Licensees

Exceptionally, a clause which gave a licensee a right of control over his licensor's first-sale price could merit exemption under Article 85(3). The right might secure acceptance of a non-exclusive licence involving substantial risk to investments required by the licence. Where the licensor does not compete with the licensee, his agreement to grant further licences subject to a right to fix minimum selling prices might secure acceptance of a risk-bearing licence. Although here, perhaps, a differential royalty arrangement favouring the <u>initial</u> licensee

might give his investments adequate protection while restricting competition to a lesser degree.

1.3 Endproduct Royalties As An Alternative ?

It is permissible under our Resale Prices Act, 1976, to contract for the right to fix the minimum first-sale price of a patented product, or of the product of a patented process. Would an obligation to pay royalties on the unpatented endproduct of a patented process be more favourably viewed by the Commission than a price-fixing clause covering such product ? In its decision on the Davidson Rubber Company agreement, the Commission passed over without comment an undertaking by each licensee

> "to pay the licensor a royalty calculated on the basis of the net sales price of the manufactured articles or the cost price of the raw materials used in the exploitation of the process".

So, it would appear that both input-based and output-based royalties are unobjectionable to the Commission's policy under Article 85.

On the other hand, there is a fairly persuasive school of American patent antitrust thought that urges a ban on endproduct royalties, favouring instead an input-based royalty whenever the licensed patent is for a process.[3] Endproduct royalties are seen as being apt to misallocate resources on the market(s) in the input product(s), and as having similar economic effects to tying arrangements.

If, in view of the foregoing, the Commission retains its present apparent antagonism towards price-fixing clauses, it may unwittingly be driving patentees into more harmful royalty arrangements.

1.4 The Profit-Maximising Patentee

When the patentee does not have facilities for exploiting his patent, licensing it may be the best, if not the only, course open to him for realising the patent's potential. Circumstances force him to issue at least one licence, which, in view of the size of the risk its acceptance involves for the taker, may need to be exclusive. In the event he issues an exclusive licence, his interest in getting maximum revenue from that licence would not be served by having the right to fix minimum price. Rather, that interest is likely to be best served by a clause which gives the licensor a right to fix the <u>maximum</u> first-sale

price at which the exclusive licensee can sell the licence product. [4] This would prevent the latter from reducing output in order to maximise his share of the profits, at, of course, the licensor's expense.

1.5 Potential Drawbacks With Price-Fixing Clauses

Licensing schemes under which the licensor has a right to fix minimum first-sale price may lead to substantial competition being eliminated in respect of relevant goods. There may be far less enthusiasm among price-fixers, and the beneficiaries of price-fixing, to attack patents which they well know, or at least strongly suspect, are invalid. Moreover, price-fixing clauses can dull, if not eliminate, incentives to inventiveness and innovation. An instance here can be found among the facts to U.S. v U.S. Gypsum Co. (1948). There, a large number of price-restrictive patent licences were issued for the manufacture of patented gypsum board. Soon after these licences were issued, the price of patented gypsum board rose dramatically and remained at a high level throughout the early years of the depression. At the same time, unpatented boards which would have competed with its higher priced relative disappeared from the market. There was nothing to suggest that its disappearance was the result of a concerted action by licensees. The view presented before the US Supreme Court was that individual self-interest, rather than collective will, drove the competitor from the market. Not only was present competition eliminated, but the licensees made no effort at innovating new products that might compete with the patented gypsum board. [5]

2 QUANTITATIVE OUTPUT RESTRAINTS

It was once the EEC Commission's view that, among other licence limitations, production quotas in patent licences were beyond the reach of Article 85(1) when they fell within patent coverage. They did not, said the Commission, restrain competition because they only entailed

> "the partial maintenance of the right of prohibition in the patentee's exclusive right in relation to the licensee, who in other respects is authorised to exploit the invention". [6]

That view was abandoned some years ago. Now, it is a want of the requisite effects within the Common Market, not some

quirk of logic, that alone puts licence restraints beyond reach of the Treaty prohibition.

2.1 The 1975 Policy Review

In this document, the Commission, reversing the view stated above, saw Article 85(1) as applicable after all

> "to contractual obligations imposed on a licensee which restricts his production to specific quantities, since the normal result of such restrictions would be to prevent the licensee from increasing his output and make him a less effective competitor. It is possible also for such restrictions, if imposed on a number of licensees, to have similar effects to export bans".

It may perhaps be that the Commission's present attitude towards output quotas was influenced by the American patent antitrust school which believes them to be worse than minimum price restraints. In that school's view, as put by Professor Baxter:

> "In one important respect an output limit is even more harmful than a price restriction: the latter eliminates price competition: output quotas render futile all forms of non-price competition as well". 7)

There is, in effect, a difference between a minimum and a maximum output quota. In, for instance, the Burroughs licensing agreements, the licensees were obliged to manufacture the contract product "in sufficient quantities". In the Commission's view, that minimum output quota did not constitute a restriction of competition within the meaning of Article 85(1). Indeed, it is common practice for licensors to have minimum output clauses in their licensing agreements to guard against charges of under-exploitation of the patent and applications for compulsory licences.

2.2 Royalty Clauses.

A clause requiring the payment of minimum royalties normally aims to secure an adequate exploitation of the patent. Conceivably, such clause can be anti-competitive. 8) Clauses that provide for variable (or 'sliding') rates of royalty can either quantitatively restrict or quantitatively encourage higher output. In, for instance, the Tool Metal case, decided by the House of Lords in 1955, a clause in the disputed licensing agreement provided for one rate of

royalty to be paid on the sale or use of up to 50Kg. per month of the 'contract material' and a much higher rate to be paid on the sale or use of contract material made by the licensee in excess of that quota. This royalty arrangement sought to effectuate a market-sharing plan between the licensees. [9)]

Section 6(4), Restrictive Trade Practices Act 1976, tackles the sliding royalty device by treating as a section 6(1) restriction an obligation on a party to make payments calculated by reference to one or other of two specified bases, such payments being calculated, or calculated at an increased rate, in respect of quantities of goods or materials exceeding any quantity specified in or ascertained in accordance with the agreement. The two bases -the one an output base, the other an input base - specified in section 6(4) are:

> (a) the quantity of goods produced or supplied by the party bound by the obligation, or the quantity of goods to which he applies any process of manufacture;
> (b) the quantity of material acquired or used by him for the purpose of or in the production of any goods or the application of any such process to goods.

An obligation to make payments calculated at a decreased rate of royalty would encourage rather than limit output under the licence. And, in view of the Commission's general approval of minimum output obligations, it is most unlikely that a 'sliding down' royalty would infringe Article 85(1). In one American case, Schmitt Foundation v Stockham Valves (1968), a circuit court could find nothing illegal in a rate of royalty that decreased as sales increased. [10)]

2.3 The Possibility Of An Article 85(3) Exemption

In theory, of course, maximum output quotas may be exempted under Article 85(3). But, in practice, only in very exceptional circumstances would they stand a chance of gaining exemption. An exceptional circumstance would be that of the small manufacturer mentioned earlier who might need the protection both of minimum first-sale price restraints and maximum output quotas in order to survive the grant of licences to economically more powerful rivals.

However, the risk to the smaller should not be overstated. It is a fact of business life that smaller companies license large rivals and survive to prosper and grow, partly for a reason that killing off smaller concerns can do a power of harm to a company's public image. Rather than kill off the smaller firm, it might be more profitable to the large licensee to take over its licensor's business. Moreover, the influence of trade unions on corporate behaviour cannot be entirely ruled out in this country.

Sharing, through maximum output restraints, the available market in a patented product among several licensees is somewhat analogous to issuing each licensee with an exclusive licence but rather more harmful to the consumer's interests. For, as stated at the beginning, a quantitative output restriction can confer 'absolute territorial protection' on the licensees. By reason of the financial risk which each licensee is bound by his licence to take, an Article 85(3) exemption could be sought but would be most unlikely to be forthcoming from the Commission. The less restrictive alternative might be separate exclusive licences, and these might be urged upon the parties by the Commission.

3 FIELD-OF-USE RESTRAINTS

> "When patented inventions are capable of use in different applications, a licensor may normally limit a licence to a distinct field of use. In these circumstances, he may give several licences to different licensees for respectively different applications".
>
> (1975 Policy Review)

So as to illustrate a field-of-use restraint, take the following supposition. A patent covers techniques for generating ultrasonic energy and transmitting it efficiently to a work piece. The patent holder uses the techniques in the field of working metals. But in addition to the working of metals, the patented techniques are also applicable in welding and in the extrusion of materials, like plastics. The patentee would like to exploit this extra potential in his patent by licensing the other applications, while putting his own field off limits to the licensee(s). If he is not permitted to restrain entry to his own field might he not license his patent for the other potentially

valuable applications ?

3.1 Protection Of The Licensor

It is a reasonable assumption that the generality of manufacturers want to license their inventions, where an adequate "price" can be obtained. The price may be the withdrawal of a challenge to the patent's validity; or in heading off attempts at inventing-around the patent. Assisting the incentive to license is the possibility of compulsory licensing. Lastly, there is the prospect of royalties. Thus, it is, in general, always a matter more of not swamping by antitrust measures an enthusiasm to license on the part of patent holders than of trying to overcome by antitrust inaction their reluctance to do so. A threat of no, or substantially less, licensing of patents if traditional licensing practices are curtailed and controlled need not, therefore, be taken too seriously.

All that is not, however, to imply that a licensor's field of use should never be permitted the protection of a field limitation. Where a licensee could utilise the licensed invention in competition with him, the licensor may, by reason of his having committed substantial investments to the exploitation of his patent, need the protection of a field limitation. The risk to his investments may be substantially increased by his issue of a licence. On the other hand, the royalty returns from the licensees might be seen as adequate compensation for the greater risk. Yet, these royalty returns may be long-term benefits; while in the short-term his present business operations and investments might be ruined. Setting a higher royalty for the licensor's field of use may not give him sufficient protection.

3.2 Customer Control Clauses

These clauses are often mistaken for, or wrongly described as, field-of-use clauses. More correctly, they involve a limitation of fields of marketing - and not of technological use of the invention. They could be seen as an extension of the patentee's right to choose what he will sell and to whom he will sell. Thus, his licences could be restricted so as to prohibit first-sales by the licensee for, say, 'hospital use', 'commercial use', 'repackaging in pill form', or 'veterinary use'. A customer

control clause is likely to infringe Article 85(1), though on grounds, say, of risk to public health, a case could be made out for its exemption.[11)]

3.3 Field Restrictions In Machinery And Plant Hire Contracts

Field restrictions may be built into plant and machinery, in order perhaps to protect the equipment on hire, or to facilitate economic discrimination.[12)] In the former instance, the lessor could claim that a clause of the contract forbidding any alteration to, or modification of, the equipment to avoid the field stop, on pain of cessor of the lease, is necessary to the protection of his reversion on the lease. While in the latter instance, he could assert that his aim is merely to maximise the revenue returns to his monopoly on the equipment.

3.4 Misuse Of Field Restraints

Competition beyond the scope of the licensed patent(s) may be what field restraints are intended to eliminate. In an American case, for instance, the patentee had licensed a process to certain dairies for the manufacture of vitamin D. The licences had clauses prohibiting use of the process for the manufacture of oleomargarine, a competitor of the licence product. The circuit court's opinion strongly suggests that this field restraint was designed to restrict the unpatented competition.[13)] In another American case, Vulcan Mfg. Co. v Maytag Co. (1934), defendant licensed plaintiff under a patent for an improved washing machine wringer.[14)] The licence was limited to manufacturing for use only with those models of washing machines then being manufactured by the plaintiff. It has been suggested that the probable aim of this limitation was to stifle the competition that new washing machines could offer Maytag's machines. Field restraints aimed at discouraging inventiveness on the licensee's part, or investment in research and development, would be caught be the Article 85 prohibition. Its exemption would be out of the question.

3.5 The Profit-Maximising Patentee

The least restrictive, and likely, therefore, to be the more acceptable, form of field-of-use licensing is the issue of a non-exclusive licence, or non-exclusive licences, with authority to enter fields beyond the licence holder's

speciality, subject to such royalties or other conditions as are specified in the licence for the different fields of use. The possibility that new fields of use might come to light later on in the patent's term would never adequately justify a field limitation, since a renegotiation clause could cover that possibility. The rate of royalty in the non-exclusive licence(s) could vary from field to field, with the most valuable field commanding the highest royalty. Differential royalties would permit the patent holder to maximise his income from the patent monopoly. The more licences he issues, the greater should be the patentee's income and the better for competition. A differential royalty scheme will generally impose less of a restraint on competition that would do a single non-discriminatory royalty designed to maximise returns, for the former scheme will permit the invention to be utilised over a wide range of applications. And the widest conceivable use of an invention surely makes the most economic sense.

3.6 Recent Commission Opinion

This appears in the Commission's 1977 draft for a patent licensing regulation. How much of this draft will remain in the final regulation is hard to assess at this point in time, since the published 1977 draft appears to be undergoing a substantial rethink as regards basic approach and philosophy. Assuming the Commission's 1977 thoughts on field restraints are not greatly altered, its attitude is likely to be that field restraints will be justifiable "only if the licensor can prove that the licensee is not technically equipped to exploit the patent properly in the excluded fields of application".[15] On the other hand, reasonable differential royalties are unlikely to be objected to.

4 CONCLUSION

Of all the restrictive clauses that could form part of the consideration in a patent licensing agreement, minimum first-sale price and maximum output quota restrictions are likely to be seen by the Commission as capable of occasioning the greatest harm to the aims of EEC competition policy. Save in very unusual circumstances, these restraints are unlikely to be exempted under Article 85(3) when caught by Article 85(1). Indeed, to date, they have not even received

a mention in the Commission's decisions on licensing agreements, let alone been considered for an exemption. But perhaps the absence of any mention of such restraints in past Commission decisions is but an indication that they are very seldom resorted to openly by licence parties. A survey, in the late 1960s, of licensing practices among US companies lends some support to that view - of 108 US companies responding in 1970 to PTC Research Institute questionnaires, only 2 from the 108 responses admitted to limiting first-sale price in their licences; 76% of the companies questioned said they never limited the licensee's production; but only 28% said they never engaged in field-of-use licensing.[16)]

All three types of licence restriction considered above can be, and probably sometimes are, employed to shore up patents which are weak or technically invalid. The most likely attackers of a patent's validity could be bought off with shares in the patent monopoly and thereby converted from potential challengers to committed defenders. Assured of his share by appropriate restrictions, each licensee may be willing to pay a nominal royalty for 'club membership'. It is the consumer who may have to pick up the final bill.

Notes

1 E.g., Grundig & Consten v EEC Commission (1966) CMLR 418; Commission's 1977 draft regulation on patent licensing agreements, (1977) 1 CMLR D25.

2 UK Monopolies Report (Roskill Report):197, April 1973, page 26.

3 Baxter on "Legal Restrictions on Exploitation of the Patent Monopoly", 76 Yale L.Jo. 267 (1966).

4 Turner on "The Patent System & Competitive Policy", 44 New York U.L.Rev. 450 (1969); for an economic proof of this statement, see appendices to this thesis, page

5 333 US 364; see Furth on "Price-Restrictive Patent Licences Under the Sherman Act, 71 Yale L.Jo. 815 (1958); also Gibbons on "Price Fixing in Patent Licences and the Antitrust Laws", 51 Va.L.Rev. 273 (1965).

6 In its 1962 Notice on Patent Licensing Agreements; see Buxbaum on "Restrictions Inherent in the Patent Monopoly: A Comparative Critique", 113 U.Pa.L.Rev. 633 (1965).

7 Baxter, note 3 supra; Turner, note 4 supra.

8 Consider the clause mentioned in Re. Raymond-Nagoya (1972) CMLR D45; also, Chemidus Wavin v Soc. Pour La Transformation Etc. (1977) FSR 181 where a minimum royalty clause survived an attack on the basis that it infringed Article 85(1); but now see Article 2(7), draft regulation, note 1 supra.

9 (1955) 2 AER 657 (H.L.); sliding royalties and quantity limitations have been approved by the US courts but are now coming under increasing antitrust attack by the US Department of Justice.

10 (1968) USCC 404 F.2d 13.

11 Re. Hoechst-Beecham Pharma Agreement, EEC Bulletin 7/8, 1976, page 28, paragraph 2122; consider: Tripoli Co. Inc. v Wella Corp. (1970) USCC 425 F.2d 932, discussed in chapter 14, this thesis, page 198.

12 E.g., Sperry Products v Alcoa (1959) USDC 171 F.Supp. 901; Wilbur-Ellis Co. v Kuther (1964) USSC 377 US 422.

13 Vitamin Technologists Inc. v Wisconsin Etc. (1944) USCC 146 F.2d 941; see Gibbons on "Patent Field Restrictions", 66 Columbia L.Rev. 423 (1966); also Adelman & Juenger on "Field-Of-Use Licensing", 50 New York U.L.Rev. 273 (1975).

14 (1934) 73 F.2d 136.

15 Article 2(3), draft regulation, note 1 supra.

16 Oppenheim on "The Patent-Antitrust Spectrum of Patent And Know-How Licence Limitations", 15 IDEA 1 (1971).

CHAPTER 10

PATENT TYING AGREEMENTS

> "Tying arrangements serve hardly any purpose beyond the suppression of competition",

is what one US Supreme Court justice wrote in 1949.[1] Though far from uncontroverted,[2] that is still the general view in which tying agreements are held and, in US antitrust law, it is used to justify the general prohibition on their use. When it accompanies the licensing of patents, tying is seen by that law as being abusive of the patent monopoly: an abuse which renders the licensed patent(s) unenforceable against infringers pleading the practice in their defence. But the practice of tying does not render the patent(s) invalid.

> "Of course, the anti-competitive clause cannot itself be enforced. Once the misuse has been purged, however, suit may again be brought. The defence of misuse is fully available not only to one under licence with the patentee but to all parties who are sued for infringement". 3)

In a nutshell, that states the general position of tying arrangements under US antitrust law.

Our own domestic law is rather less severe on the practice of tying. In particular, our Patents Act 1977 permits, as did its predecessor, the 1949 Act, voluntary tying agreements to be concluded, and enforced. Coercive tying is practised by using economic power over one commodity (the tying commodity) to obtain, or to restrain, business in another, different commodity (the tied commodity). Thus, for instant purposes, a patent tying agreement is being defined as

> an agreement or arrangement to supply or to license a patented product or a patented invention but only on condition that the other party also acquires a different product, or at least agrees not to acquire that product from another supplier, or any other supplier.

The coercive element in that definition is emphasised.

If a tying agreement caught by section 44, Patents Act 1977, is to escape being made void by the section, the agreement must be, or must be shown to have been, concluded

in the manner specified in that section.[4] Described by one judge as "highly penal" law,[5] the law now found in section 44 aims to prevent those who have

> "a monopoly in respect of an article or a process by means of a patent, so using that monopoly as to obtain for themselves a virtual monopoly in respect of other articles and processes for which they have not obtained any patent".[6]

Thus, where it has been coerced or forced through a use of the patent, the tying agreement is void and the patent itself cannot be enforced against anyone pleading section 44(3) until the tie has been purged from the agreement.

To negate a charge of coercive tying based on the patent(s), the party seeking to enforce the tying condition or the patent(s) must establish[7]

> (a) at the time of the making of the contract or granting of the licence in issue, that he was willing to supply the product, or grant a licence to work the invention, as the case may be, to the person supplied or the licensee, through an alternative contract on terms that were reasonable and which did not include the condition caught by section 44(1); and
>
> (b) that the tied party is entitled under the contract or licence in issue to relieve himself of the tie by giving the supplier three months' notice in writing and paying such compensation as may be awarded in arbitration.

If he was offered a reasonable alternative contract but opted instead for the breakable tie, the party now tied cannot complain of having been coerced into the tie. Moreover, in view of its breakable nature, a tying agreement not void when caught by section 44 would be most unlikely to restrict or distort third-party competition under the protection of Article 85(1).

But not all tying conditions in patent contracts appear to fall within the provisions either of section 44(1), Patents Act 1977, or of earlier patents statutes. Chiefly, where it is effectuated through a differential royalty clause, or where it involves only services, the tying condition may be able to escape the wording of the relevant provisions. In the event it does escape the controls in domestic law, the tying provision could be caught by Article 85(1).

1 FINANCIAL INDUCEMENTS, AND TIED SERVICES

1.1 Financial Inducements

A differential royalty clause was analysed in Tool Metal Co. v Tungsten Electric Co. (1955) to find out if it fell within the meanings of the key words "require", "prohibit", and "restrict" - also found in section 44(1), Patents Act 1977. The majority judgment of the House of Lords was that mere financial inducements (however great or small) were not caught by patent tying legislation. It held the three words to be referring to obligations. They did not cover a case

> "where the licensee remains free to choose but the presence of the condition will, in some circumstances, create an inducement to buy from the licensor".

To be caught by the legislation, the purport of a patent tying clause

> "must be to limit the right of the licensee to make a choice". 8)

What had a considerable influence on the majority was the "highly penal" nature of the law involved in the particular pleading: a nature which was seen to call for a restrictive interpretation of the three words.

In another area of restrictive trade practices law, a differential royalty clause does constitute a "restriction". That area is covered by the Restrictive Trade Practices Act, 1976. According to section 6(3) of this Act,

> an agreement which confers privileges or benefits only upon such parties as comply with conditions as to any such restrictive matters as are described in section 6(1)(a) to (f), or imposes obligations on parties that do not comply with such conditions,

is to be treated as an agreement under which restrictions are accepted in respect of section 6(1) matters.

Thus, what does not constitute a restriction in one piece of restrictive trade practices legislation does so in another. This obvious disharmony could be corrected by amending legislation in patent law, or a judicial interpretation of section 44(1) words along the lines in section 6(3) of the 1976 Act. Yet, when the 1977 Act was being put together, the drafters cannot have been ignorant of the disharmony. So perhaps Parliament intended that there should be no correction of the Tool Metal interpretation.

1.2 Tied Services

Section 44(1), Patents Act 1977, is concerned with conditions purporting to "tie in" anything other than the patented product, the product which is the patented invention or (if it is a process) any product obtained directly by means of the process or to which the process has been applied. And with conditions purporting to "tie out" articles (whether patented products or not) or patented processes. If it were to be widely construed by the courts, the word "anything" in sections 44(1)(a) and (b), Patents Act 1977, could be made to cover services and incorporeal rights. Although perhaps the context in which it is used might be seen to confine it to articles and materials. By contrast, the Patents Act 1949 had the word "articles" where the 1977 Act now has the word "anything". Where, however, the rendering of services necessarily involves the use of a patented process, a condition in an agreement purporting to tie-out competing services could be caught by either of the Acts.

2 ARTICLE 85(1) ON TYING AGREEMENTS

This Article, in paragraph (e), prohibits, in particular, agreements which

> "make the conclusion of contracts subject to acceptance by other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of such contracts".

Thus, at the very least, the Treaty prohibition catches agreements to tie third parties. It used to be suggested that the Article could not be applied to tying agreements themselves, as distinct from agreements to make tying agreements with third parties. But no writer these days doubts that tying agreements are within the field of application of Article 85(1).

2.1 Market Power And Coercive Tying

Before a supplier or licensor (A) could 'make the conclusion of a contract subject to acceptance by another (B) of supplementary supplies, or obligations in respect thereof, which have no connection with the subject of such contract', A would need to possess substantial economic power over the subject (article, service, invention) with respect to which B desires to conclude a contract. A might have that power over the subject (X) through the

patents that he owns.

Absent economic power over X, by subjecting the conclusion of the contract to B's acceptance of supplementary supplies (Y) A will lose out to his business rivals who are willing to supply X at its going market price and without Y.

> "As a simple example, if one of a dozen stores in a community were to refuse to sell flower unless the buyer also took sugar it would hardly tend to restrain competition if its competitors were ready and able to sell flower by itself". 9)

Section 44, Patents Act 1977, may be read as presuming patents to afford the requisite degree of economic power to suppliers or licensors.

When A has adequate market power over X, he could use the power to force B's acceptance of Y in whole or part-payment for concluding a contract in X. The limits to A's coercive power would be set by the proximity of substitutes for X and by the essentiality of X to B's needs. When the joint price of X and Y exceeds X's value to B, he will turn to a substitute for X, or go without it altogether. There is, therefore, a limit to the consideration that can be squeezed from a given demand for X. In analogous terms, the amount of juice in the orange is finite. A tying agreement may permit A to squeeze almost the full potential profit from his patent on X.

2.2 The Art Of Tying

Save perhaps where the tie is built into machinery at the design stage, the practice of tying will nearly always fall within the Article 85 concept of "agreements or concerted actions". As the cases about to be discussed show, the art by which tying agreements may be put into operation or effect can vary.

To begin with, take the facts of Huntoon Co. v Kolynos Inc. (1930). 10) In Huntoon, the licensed patents covered an improvement comprising a collapsible tube having a closure cap attached to the tube by a wire loop: not what might be called the height of ingenuity. Still, the patentee managed to license his invention. The defendants were given an allegedly "royalty-free" exclusive licence relating to collapsible tubes intended for tooth paste and other dental preparations. The licence was in name only royalty free, as

the licensor had reserved to itself in the licence a right to manufacture the unpatented spring loop while obliging the defendants to purchase from it all the wire loops needed under the licence. In any event, they were required to purchase at least 20,000 gross of wire loops per annum. This obligation was held to be void, under the domestic patents legislation then in force.

In an earlier case, Sarason v Frenay (1914),[11] the licensee was obliged to purchase from the patentee's agent all the pyrophosphates it needed with the licensed process, a process for bleaching straw-plait, hats, and other fibres. This tying obligation was avoided by the patents statute. It was effectuated through 'label licensing'. Label licensing was also employed in Re. Hunter's Patent (1965).[12] In Hunter, a patented sealing head, for sealing lids on jam jars and other containers, was leased to jam makers under express notice that no licence, express or implied, was being granted to use the head. The lessees were, however, given to understand that licences to use the sealing heads would be granted expressly (by packet label) with packets of Hunter's unpatented jam jar lids, purchased at Hunter's current list price. This arrangement was seen by the court to be caught by tying provisions of the patents statute. It was, therefore, null and void in the absence of proof of a reasonable alternative contract offer. It may have been Hunter's aim, via the tying arrangement, to practise price discrimination, in order to maximise its profits from the patent.

It has been suggested that the tying provisions in domestic patents legislation might not catch the practice of simply not suing for infringement of the patent anyone who purchases complementary supplies from the patentee, or his agent.[13] This could circumvent the problem with express label licensing. But this would be merely to license the patent in an indirect manner; and it would be likely to have the elements of an arrangement or understanding about it. Assuming it could get around the provisions in domestic law, it is unlikely that Article 85(1) would miss it. It could, in the alternative, be regarded as abusive of a dominant position under Article 86 EEC, because of the

very limited duration of the licences. Finally, it could constitute grounds for compulsory licensing of the patent(s) under the 1977 Act.

Tying may be effectuated through a differential royalty clause. There are several instances of royalty-effectuated tying in US antitrust caselaw. In, for instance, Pyrene Mfg. Co. v Urquhart (1946),[14] it was held a misuse of the patent on a fire extinguisher to license its use on a royalty-free basis only to those purchasing complementary unpatented fillers from the patentee's nominee. Royalties were exacted from those purchasing the fillers from the nominee's competitors. The court saw as being no excuse that the tying arrangement was designed to permit amortisation of initial promotional costs. In another case, contractors purchasing an emulsion for use with a patented process from a named supplier had their royalties based on the number of gallons of emulsion. Users who purchased the complementary emulsion elsewhere were charged royalties on the number of square yards covered by the processed emulsion. This arrangement was held to be unlawful.[15]

Finally, tying can be practised through conditional leasing and performance guarantees. In, for instance, Advance Business Systems & Supply Co. v SCM Corp. (1969),[16] the supplier of copying machines reserved, in a service contract relating to his machines, the right to suspend the service contract in respect of machines in which other suppliers' copying paper and supplies were used. The service contract was to serve as a guarantee against faulty operation of the machines. The reservation in the contract was held illegal under section 1, Sherman Act. Since guarantees would probably be seen as mere inducements, as distinct from obligations, section 44, Patents Act 1977, would, therefore, not catch them. They could, however, fall within the fields of application of Articles 85 or 86.

2.3 Section 44(4) Agreements

The opinion has already been expressed that agreements within the ambit of section 44(1), Patents Act 1977, yet not void because of having been reached in accordance with the provisions in section 44(4) are unlikely to distort competition within the Common Market to a sufficient degree to infringe Article 85(1). This view is held on a

basis that the potentially limited duration of the tie will not prejudice third-party competition. The licensee is given a right to break the tie; and will no doubt exercise that right when competing offers in respect of the tied product are likely to be worthwhile to him. Were he to break the tie, and pay the compensation, if any, awarded to the supplier or licensor, he would still have the offer of the reasonable alternative contract (minus the tie) to fall back on. The tied product could be obtained on the open market. Inducing the licensee to break his tie with the licensor would hardly be actionable as interference with a contractual relationship. [17)]

2.4 Revenue Maximisation Through Tying

A section 44(4) agreement might provide in its terms for the supply of the tying product (X) at a suitable price and of the tied product (Y) at its going market price. Alternatively, the terms might stipulate for X to be supplied "free", or at cost, and for Y to be supplied at its going market price. In neither case could the joint price of X and Y be pushed too close to a point at which output under his licence becomes unprofitable for the licensee, without him wanting to break the tie, as he is entitled to do under subsection 4, and find other suppliers who will charge him a price for Y that allows him to produce and market at a reasonable profit. In neither case could the patentee squeeze the full potential profit from his patent: a section 44(4) agreement would not permit him to do so. [18)]

There are, however, clauses which appear to escape the ambit of section 44(1). Thus, supplying X "free", or at cost, on condition that the licensee acquires the complementary product (Y) from the licensor, or his nominee(s), but charging him royalties for the use of X should Y be acquired from an unspecified source is a practice which falls beyond the meanings of key words in subsection 1. The practice involves mere inducements, rather than distinct obligations. It could, on the other hand, be caught by Article 85(1). [19)] If X is really being supplied "free", or at cost, it is equivalent to a cut in the price of Y. Absent proof of a predatory intent, that cut would enhance the working of competition. But charging the licensee a price for Y above what is going on the general market

in Y other than for use with X probably means that he is being made to pay for X through the price of Y. In short, X is not really being supplied "free". Charging above the going market price for the tied product is not inconsistent with attempting to maximise revenue from the patent on the tying product.[20)]

Revenue from the patent on X could be maximised either by discriminating between the different demand intensities for X, as measured by the consumption of Y, or by blocking the substitution of Y for X in the production mix (or recipe). When practising such discrimination, the product tied by the agreement would act merely as a meter on the consumption of the invention, those using more of the invention than others being made to pay more for it. This type of tying arrangement will almost inevitably raise the price of the X-Y endproduct above what it otherwise would be - but, for that, not perhaps inexcusable from the viewpoint of the patent system. The arrangement would permit a more perfect economic exploitation of the patent monopoly.[21)]

2.5 Does Tying Raise Entry Barriers ?

Tying agreements have been charged with restraining potential competition by raising entry-barriers on the market in the tied product to the level of those on the market in the tying product. That charge is only partly correct for some tying arrangements. Its inaccuracies stem from its assumption that there is no general market in the tied product and from its oversight of a possibility that the patent licensor may be purchasing his requirements of Y on the open market at a competitive price instead of producing it himself.[22)] The tying arrangement may be merely a means of maximising revenue from the invention, by either of the methods stated above.

2.6 Competitive-Offers Clause

A tying arrangement may, in its terms, oblige the licensee to inform his licensor of superior offers in respect of the tied product, and to allow his licensor an opportunity to match those offers. Such obligation is analogous to an obligation on the patent holder to consult with, and obtain the consent of, his licensee(s) before granting further licences for the licensed territory. A

'prior consent' clause can infringe Article 85(1).[23] So too could a competitive-offers clause, which is really an information-gathering device, yielding a more or less perfect knowledge of competitive moves on the market in Y. For that reason alone, the clause is capable of distorting competition. It could, moreover, facilitate the practise of discrimination on the licensor's part against "undesirables" rocking the boat, or possibly a scheme of predation. The clause is, of course, quite distinct from the actual tying arrangement itself, which latter may escape the Article 85 prohibition.[24]

3 EXEMPTION UNDER ARTICLE 85(3).

The suppression of competition is not by any means the sole purpose of patent tying agreements. At least some such agreements will aim simply to maximise revenue from the patent monopoly, and not to restrain competition beyond it. When the licensor's objective is merely to derive, through the tying mechanism, the maximum potential revenue from his legal monopoly, denying the use of that mechanism deprives him of part of what he has been granted by the state. That is, of course, a theoretical view; and one which is unlikely to find sympathy among those charged with the enforcement of Article 85. Where an agreement is seen to be caught by Article 85(1), an exemption may be sought for it under Article 85(3).

3.1 Attitude Of The EEC Commission

3.1.1 In The Notice On Patent Licensing Agreements

Patent tying agreements are not 'per se' restrictive of the competition protected by Article 85(1). That at least was recognised as far back as 1962 when the Commission issued its Notice on Patent Licensing Agreements. Even today, a tying agreement is not caught by Article 85(1) unless, in fact or in probability, it noticeably restrains interstate trade and competition. In 1962, the Commission's view was that no noticeable market effects would be likely to flow from

> "quality clauses or obligations to procure supplies of certain products imposed on the licensee - in so far as they are indispensable for the technically perfect exploitation of the invention".
>
> (Emphasis added)

The Commission went on to assert in that view that competition worth protecting could not be distorted where prescribed quality standards related to the protected products or to semi-products, raw materials or auxiliary materials - provided the standards were intended to prevent the technically incorrect application of the invention. An obligation to procure supplies of certain products could be imposed on the licensee only where quality could not be established by objective standards: wherein, the tying obligation had the same scope as a prescription of quality standards.

Fifteen years on from 1962, the Commission's views about the market effects of tying arrangements conforming with the above Notice have undergone radical change.

3.1.2 Attitude In 1978

This almost certainly is that noticeable market effects are capable of flowing from clauses conforming to the 1962 Notice. If the Commission's 1977 draft regulation is taken as reasonably indicating present thinking on tying agreements, then in the future it is likely that an Article 85(3) exemption will only be given in respect of

> an obligation on the part of the licensee to procure supplies of certain intermediate products from the licensor or from an undertaking designated,
> if the licensor can prove that the intermediate products are needed to meet specifications concerning the quality of the patented product or of products manufactured using a patented process. 25)

Thus, where quality can be specified objectively, a tying clause would be unlikely to receive an exemption. Moreover, specifications concerning quality which are subjective can effectuate a tying agreement and so fall within the the scope of the Article 85 prohibition when the other conditions therein are satisfied.

3.2 Biased Specifications

A piece of equipment can be designed in a way that ties supplementary supplies to it. 26) This practice would, however, lack the Article 85(1) element of 'agreement' and, so, fall beyond the ambit of the prohibition. Written specifications can, of course, be biased towards a particular supply source, creating in the process a tying agreement. This particular practice is rife among maintenance manuals.

In domestic law, it is likely to be seen as giving rise to a mere inducement, or advertising. Article 85(1) might catch the practice; and in the event it was caught, the practice might not be exempted since in general it would aim not so much at quality as at securing a subjective advantage.

4 TIED SERVICES

Making the conclusion of a contract for supplying a patented article or machine subject to acceptance by the party to be supplied of complementary services is, in general, likely to fall beyond the scope of section 44(1), Patents Act 1977, unless, of course, the word "anything" is seen to cover services. Assuming so extensive a meaning is not given that word, the agreement wherein are tied the rendering of complementary or supplementary services could be caught by Article 85(1). An application for exemption under Article 85(3) could plead the tying agreement as indispensable, by virtue of risk to investments. It could be that the tying of complementary services is necessary for the maintenance of a business reputation or the safeguarding of investments. The facts of an American case, US v Jerrold Electronics Corp. (1960), well show how a firm's business could be ruined without a tying contract covering the supply of services. [27)]

In Jerrold, the defendant had developed a rather unique broadcast antenna system, capable of reaching remote geographical areas beyond the reach of conventional systems. At first, the firm was ready to supply its system free of conditions regarding the provision of necessary services, like installation and maintenance. But under this type of supply arrangement, numerous systems installed by firms other than Jerrold and maintained by them began to fail; and the Jerrold system's reputation began to suffer because of the poor workmanship and maintenance of others. Jerrold was a relatively young company. To save the reputation of its system, and indeed the health of its business which then was much dependant on that system, Jerrold decided to supply the system only if the buyer accepted an after-sales servicing contract with it. Merely warning customers against the dangers of using the services of competing firms had proved inadequate. [28)]

Despite the general attitude of the American law towards tying contracts, the district court found in favour of the Jerrold agreement. It was seen as justified by virtue of customer inexperience in the field, inadequate customer financing, devotion by Jerrold of most of its resources to developing the new industry, and the need for cooperation with public authorities in various areas.

In addition to the after-sales contract, Jerrold also tied to the supply of its system a contract for installing it. [29] Again, the district court found this practice was justified, largely by the fact that payment for a system was nearly always conditional upon the system working successfully. In the court's view, the installation contract tied to the supply of the Jerrold system made commercial sense: surely, it felt, it was cheaper and more practicable all round to have the system properly installed in the first place.

On the particular facts of Jerrold, it would be easy to exempt the tying agreements under Article 85(3). At least, until the system became familiar to other firms. The uniqueness of its system gave Jerrold a considerable command over the relevant market. Indeed, it was temporarily dominant in the marketing of community television antenna systems - not merely because of the volume of its business but also because some of the equipment vital to such a system was exclusively available through it. The dominance was not, however, structural in nature. The tying agreements did not afford Jerrold a possibility of eliminating substantial competition. Two major companies ("formidable competitors") were on the point of entering the relevant market when Jerrold first practicised tying.

5 DIFFERENTIAL ROYALTY CLAUSES AND ARTICLE 85(3)

Where a tying agreement is effectuated through a differential royalty condition, the agreement is not necessarily beyond the benefit of exemption. That much can be read from the Commission's decision on the Heidemaatschappij agreement. The arrangement might be justifiable on the basis either of risk compensation or of cost recovery.

6 TYING-OUT ARRANGEMENTS

Both "tie-outs" and "tie-ins" can fall under section

section 44(1), Patents Act 1977. A tie-out usually prohibits or restricts the licensee's use of articles or processes which could compete with the licensed invention. [30] But tie-outs effected through a differential royalty mechanism are subject to the view already stated for mere financial inducements. An old domestic case, Mouchel v William Cubitt & Co. (1907), shows the kind of agreement against which the legislation is directed.[31] In Mouchel, the defendants covenanted that they would not at any time, without the written consent of the plaintiff, carry out, or contract to carry out, any ferro-concrete or other similar work which might be an infringement of the licensed patents or be in competition with them. The defendants, having a large construction business both in and beyond the licence territory, claimed that the covenant, if valid, would prevent their use in the business the modes of building construction which they had used before the date of the licence. They claimed, moreover, that the covenant was wider than was necessary for the protection of the patentee's interest and injurious to the public interest, was in undue restraint of trade, and was, therefore, void. This defence for breach of covenant was unsuccessful. It should be noted, though, that Mouchel was decided before tying practices were subjected to statutory controls.

A tie-out clause may be designed to secure the fullest technical and economic exploitation of the licensed invention, and not at all concerned with acquiring business in unpatented complements. In the event, however, that a competing patented invention should prove superior to the tied-out article or process, the licensee could, under a section 44(4) agreement, always break the tie by exercising his right of termination. Prohibiting or restricting the use of competing articles and/or a patented process in a contract for the supply of a particular invention may indirectly tie-in the licensor's supplies, or those of his nominee(s). In, for instance, Landis Machine Co. v Chaso Tool Co.(1944),[32] it was the patent holder's practice to license the use of a combination patent for a threading die to those purchasing unpatented cutting chasers from him and on condition the die was not used with competing cutting chasers. The duration of each

label licence was limited to the life of a chaser. Such practices would be caught by section 44(1); and, if not caught by the section, in theory it would be caught by Article 85(1).

Royalty clauses may effectuate a tie-out of competing products or competing processes. Such 'non-competition' clauses were considered by the Commission in its decision on the AOIP-Beyrard licensing agreement. It refused to exempt a clause requiring AOIP to pay royalties on all products falling within the subject matter in the licensing agreement, whether or not the products were manufactured by using the Beyrard patents, and even in the case of products manufactured on the basis of AOIP's own development work or of a licence granted to it by a third party. This clause, said the Commission, was likely to discourage AOIP from carrying out its own research, at least to the point where the product of any research might incur an obligation to pay royalties to Beyrard. The restriction of competition involved with the clause was substantial, seeing that AOIP was a research-minded enterprise. In the Commission's words, AOIP

> "employs 3500 staff; it manufactures and markets devices for telecommunication and navigation, electrical and electronic measuring devices, and low-tension equipment and automatic starters for electric motors in various power stages".

The clause was seen, moreover, to have the same effect as another clause much disliked by the Commission: the post-patent-expiry royalty clause.

A clause requiring the payment of royalties on all contract products, whether or not they incorporate a use of the patented invention, may indeed have the effect attributed it by the Commission as stated above. Yet, such effect may be wholly incidental to what the clause is trying to secure. In, for instance, Re. Brownie Wireless Company's Application (1929), [33] the applicants for a compulsory licence argued that an obligation in the standard form licence used by Marconi (and issued to over 2300 manufacturers) to pay royalties on articles made without using the patented invention was abusive of the patent monopoly. This argument was rejected by the court, in view, inter alia, of

a possibility that said articles could be used by purchasers in a way that would infringe the Marconi patent. It was not unreasonable, therefore, said the court, for Marconi to insist on that royalty at the point of manufacture, where it could effectively be accounted for and collected. The incidental nature of the effect referred to above is, however, most unlikely to permit the clause to be exempted under Article 85(3).

7 CONCLUSION

The charge which is most often levelled at patent tying agreements is that they facilitate an extension of the patent monopoly to the market(s) in the tied product(s). This alleged extension of monopoly is not, however, a necessary consequence. Any substantiation of the charge will depend very much on an investigation of the market.

Notes

1 Standard Oil Co. of California v US (1949) USSC 337 US 293, at 305.
2 E.g., Bowman on "Tying Arrangements & the Leverage Problem", 67 Yale L.Jo. 19(1957); see, further, the appendices to this thesis, page 233 and page 241.
3 Lyle Stewart v Motrim Inc. (1975) USDC 5 CCH Trade Reg. Reporter 60,531:67,349.
4 See also section 57, Patents Act 1949; and corresponding provisions in the Irish, Australian, New Zealand, Canadian and South African patents statutes.
5 Tool Metal Co. v Tungsten Electric Co. (1955) 2 AER 657, at 671 (per Lord Oaksey).
6 Huntoon Co. v Kolynos Inc. (1930) 1 Ch. 528, at 562 (per Romer, LJ).
7 See also section 57(3), Patents Act 1949.
8 Pages 670-671, note 5 supra; but see the dissenting judgment of Viscount Simonds at pages 664-665.
9 Northern Pac. Rly. Co. v US (1958) USSC 356 US 1.
10 As note 6 supra.
11 (1914) 2 Ch. 474.
12 (1965) RPC 416 (Ireland).
13 Blanco White on "Patents for Inventions", 1974 edition, page 366, paragraph 10-206.
14 USDC 69 F.Supp. 555.
15 Barber Asphalt Corp. v La Fero Greco Contracting Corp. (1940) USCC 116 F.2d 211.
16 USCC 415 F.2d 55; also OJ, C313, 29/12/77, concerning guarantees on household appliances given by the Zanussi Group which were found to be incompatible with Article 85(1) EEC.
17 See chapter 14, this thesis, page 195, note 25, and page 202.
18 See appendices to this thesis, page 237
19 See, e.g., EEC Bulletin, May 1966, Chap. II, paragraph 10, page 11, containing reference to a cross-licensing agreement between a German firm and a French firm. The Commission objected to a royalty-effectuated tying arrangement.
20 See, further, Burstein on "A Theory of Full-Line Forcing", 55 Nw.U.L.Rev. 62 (1960); Bowman, note 2 supra; Baxter on "Legal Restrictions on Exploitation of the Patent Monopoly", 76 Yale L.Jo. 267 (1966); and appendices, this thesis.
21 Appendices to this thesis, page 233.
22 See, further, Ferguson on "Tying Arrangements & Reciprocity:An Economic Analysis", 30 Law & Contemporary Problems 552, at 563 (1965)
23 Re. Heidemaatschappij-Bronbemaling (1976) 2 CMLR D67.
24 Compare: Re. Roche 'Vitamins' (1976) 2 CMLR D25 (Article 86 EEC).
25 (1977) CMLR D25.
26 Consider: Automatic Radio Mfg. Co. v Ford Motor Co. (1968) USCC 390 F.2d 113.
27 187 F.Supp. 545.
28 The circumstances forced Jerrold into the tying agreement. Without the tying agreement, Jerrold could have ceased to trade.
29 See also, Dehydrating Process Co. v A.O. Smith Corp. (1961) USCC 292 F.2d 653.
30 Consider: Vulcan v Maytag, chapter 9, this thesis, page 118.

31 (1907) 24 RPC 194.
32 USCC 141 F.2d 800.
33 (1929) 46 RPC 457.

CHAPTER 11

GRANT-BACK CLAUSES IN LICENSING AGREEMENTS

"Invent a better mousetrap and the world will beat a path to your door", said Ralph Waldo Emerson. And when the world does beat a path to your door seeking licences to manufacture and market your better mousetrap, it would be folly not to have in your licensing agreements a clause to protect your position against the possible appearance of a still better mousetrap than the one protected by the patent under licence. The clause will seek to protect your investment in patents and licences against a possibility that, through ready availability to him of your licensed mousetrap technology, the licensee will discover new and better mousetraps and with these render obsolete the licensed invention(s). [1)]

In licensing his inventions, the patent holder surrenders a competitive advantage. It is therefore both sensible and reasonable that he should wish to protect himself against consequential disadvantages. Even where the patent holder does not compete with his licensee, there is the prospective value to other possible licence applicants of his patent portfolio to be considered. It is with several possibilities in mind that grant-back clauses have long been included in patent licensing agreements. There is a possibility of a patent portfolio being rendered worthless; a possibility of the patent holder being driven from his market by improvements on his invention to which he has no access; and a possibility that licences will not be accepted unless the applicants are allowed a corresponding access to improvements that might be made by the patent holder to his invention(s).

A grant-back clause looks to the future: it is concerned with future inventions. Such clause can be defined as

> a promise by the licensee to assign-back or license-back to his licensor all <u>future</u> improvements, and all rights to apply for patents for such improvements, in the particular art or technology to which the licensed inventions relate.

If the licensor reciprocates, as he normally does, by making

a promise to license his future improvements, or any improvements assigned or exclusively licensed-back to him, there is a reciprocal grant-back arrangement.

Grant-back clauses, or arrangements, can fall within the prohibition in Article 85(1). They may also fall within the rules of our domestic law which makes illegal and void any unreasonable restraint of trade. That a clause is not illegal under domestic rules of law does not mean it cannot be caught by Article 85(1). This applies, of course, to any clause in a licensing agreement and not just to grant-back clauses. It is, therefore, relevant to consider grant-back clauses in the context of our domestic law on restraint of trade. That will be done first. Thereafter, the clauses will be examined in the light of Article 85(1) and of decisions of the EEC Commission.

Part 1

GRANT-BACK CONTRACTS IN DOMESTIC LAW

Under our domestic law, there is no set or fixed consideration for a patent licence. Apart from a promise to pay royalties, a patent contract for a simple licence usually has a grant-back clause under which both licensor and licensee can benefit from each other's improvements, or rights of access to improvements, in the relevant technology base. Failure by a licensor to reciprocate his licensee's promise to license his future rights back to the licensor might be evidence of unreasonableness on the latter's part, and possibly, therefore, abusive of the patent monopoly. But aside from that possibility, if it could be shown that a grant-back clause would be likely to harbour a disincentive to the licensee's inventiveness, the clause would be void under domestic common law.[2)]

Clauses that discourage inventiveness in a substantial way are illegal and void in the light of a public interest in promoting inventions and their disclosure. A licensee who is bound to grant or transfer-back any future rights he might acquire in inventions he might make may not be much, if at all, inclined to invest in inventive effort, patent any such inventions, or innovate. The clause could induce near-total secrecy about inventions, thus closing to society possible avenues to technical or economic progress. Inherent in that possibility is the elimination of potential

competition.

The form in which the grant-back is to be executed will be relevant to any assessment of the likely effects of a grant-back clause. If it is to be in the form of a non-exclusive royalty licence, the grant-back clause itself is unlikely to harbour any appreciable disincentive to the licensee's inventiveness. All the better too, and reasonable, when the licensor reciprocates his licensee's promise. If, however, it calls for an exclusive grant-back (whether by licence or assignment), the clause is capable of restraining trade unreasonably. There must, of course, be more than a mere possibility of that effect: it must be sufficiently likely before the clause could be avoided. The degree to which the stated effect would be likely or proximate would have to be predicted on an analysis, inter alia, of the scope of the grant-back clause, of the state and complexity of the art to which the licensed inventions and associated know-how contributes, of the resources at the licensee's disposal for carrying out improvement schemes, of the market positions of the parties to the clause. Such prediction would be extremely costly in many cases, and perhaps way out of proportion to any harm the exclusive grant-back clause could cause. Yet the clause is capable of discouraging inventiveness, without being in any way necessary to protecting the licensor's interests. The simplest, most cost-effective solution would be to declare exclusive grant-back clauses prima facie illegal, thereby discouraging resort to the practice. It is likely that such a solution would be welcomed by all that believe our patent system serves its basic aim. At present, however, our domestic law treats clauses which provide for exclusive grant-back of future rights as prima facie legal.

Arguably, if as part of an exclusive grant-back arrangement the licensor of the present inventions is bound to license his licensee under any future rights which the latter assigns or exclusively licenses back, the arrangement itself harbours no ill towards the licensee's inventiveness. But that may not be so. An American antitrust court has seen that type of arrangement as requiring the licensee either to cease all inventive effort within the scope of the grant-back clause or to keep on renewing his

licence in order to escape the consequences of his own ingenuity. [3] Moreover, at common law, unless the grant-back clause were void ab initio, termination of the licence contract with the grant-back clause would deprive the licensee of his access to patents already assigned or exclusively licensed-back. Hardly a recommendable course when those patents are valuable. There may, however, be some saving for the licensee in section 45, Patents Act 1977, should he wish to terminate his licence contract.

Under section 45, the licensee has a right to determine,

> "at any time after the patent or all patents by which the product or invention was protected at the time of the making of the contract or granting of the licence has or have ceased to be in force, and notwithstanding anything to the contrary in the contract or licence or in any other contract",
> (Emphasis added)

his licensing agreement

> "to the extent (and only to the extent) that the contract or licence relates to the product or invention".

Under the same section, moreover, if

> "the court is satisfied that, in consequence of the patent or patents concerned ceasing to be in force, it would be unjust to require the applicant to continue to comply with all terms and conditions of the contract or licence, it may make such order varying those terms or conditions as, having regard to all the circumstances of the case, it thinks just as between the parties".

Part 2

GRANT-BACK CLAUSES UNDER ARTICLE 85(1)

Freedom to invent and to innovate is a cornerstone of workable competition. New inventions, when fully innovated, are capable of penetrating and breaking-down barriers to market entry. When entry barriers are raised artificially - through restrictive agreements - the workability of interstate competition can be impaired. Agreements, or clauses in agreements, which are likely to impair the incentive to inventiveness to an appreciable degree may be caught by Article 85(1). This was made clear in the Commission's 1962 Notice on Patent licensing Agreements. Its most recent view, in the Commission's 1977 draft regulation

on patent licensing agreements, takes a more strict approach to grant-back clauses. In 1962, the Commission thought that a non-exclusive grant-back clause would have no appreciable effect on competition when the licensor reciprocated in a similar undertaking his licensee's promise. Such clause would not, therefore, be caught by Article 85(1). But in 1977, the Commission had reached a position where that clause was being seen as capable of falling within the scope of Article 85(1) but open to possible exemption under Article 85(3). Consistent with the Commission's new view, the clause could oblige the licensee to pass on to the licensor any experience gained in exploiting the inventions and to grant licences back in respect of inventions relating to improvements and new applications of the original invention. [4] The obligation on the licensee had to be non-exclusive, and the licensor bound by a like obligation and authorised to grant sub-licences to other licensees, before the clause could be exempted under the draft regulation. The proviso respecting the authority to sub-license any rights granted back is rather difficult to square with the Commmission's decision on the licensing agreement between Kabelmetal and Luchaire. More on that decision later in the chapter. The decision on the Raymond-Nagoya agreement will be dealt with first.

1 RAYMOND-NAGOYA DECISION

Delivered in 1972, this gave the Commission an opportunity to put over its thinking on grant-back clauses: thinking that in time would come to disown its 1962 views. Under the agreement notified originally to the Commission, Nagoya (the Japanese licensee) was obliged (1) to <u>assign</u> to Raymond, the EEC licensor, the property in any improvements or modifications which it might make to the Raymond technique, and (2) to grant Raymond an <u>exclusive</u> licence for the patents, utility models or designs and models which it might obtain <u>outside Japan</u> for inventions in the field of the contract products (attachment components or fasteners) yet outside the Raymond technique. Given the form in which a grant-back was to be executed and the scope of the obligation on Nagoya, the clause in question fell beyond

the indulgence in the 1962 Notice. It appeared capable of satisfying the conditions set out in the Article 85 prohibition. The Commission did not, however, press its analysis of the clause anywhere near a decision that the clause infringed the Treaty prohibition. But one could presume as much that it did. The Commission urged a change in grant-back terms on the parties to the agreement and they accepted it.

Evidence in support of a likelihood that the clause calling for exclusive grant-back of future rights would affect noticeably trade between Member States and competition can be gleaned, albeit only thinly, from the facts to the Commission's decision. They suggest that Nagoya had, or could probably obtain easily, the technical and financial resources for advancing the relevant base in which the Raymond technique lay. Toyota, the large Japanese car manufacturer, had a majority stake in Nagoya; while Nagoya itself was "the biggest subcontractor of the Japanese car industry. Apart from the contract products, it manufactures brake linings, tyres and upholstery material". A manufacturer like Nagoya would be likely to have a fair track record on invention and innovation. This record would have figured importantly in any case the Commission might have made out against continuance of the exclusive grant-back clause. Assuming a propensity to inventiveness in the fastener field, Nagoya's inventions could come from a fairly wide marketing pitch. Hence, the supposed incentive to inventiveness in Nagoya would likely be impaired over a considerable area of commercial activity. Raymond, as "the largest manufacturer of plastic attachment elements in the Common Market", would be able to benefit substantially from the removal of that potential competition. In particular, its part of the German market in the contract products was "larger than that of all the other manufacturers combined". Thus, the grant-back clause in its original form held out more than a mere possibility that the parties to the agreement could eliminate substantial competition in the relevant products.

Accepting the change urged upon them by the Commission, the licence parties altered their agreement in the following respects:

(1) In so far as patents might be granted to Nagoya for its improvements or modifications to the Raymond technique, Nagoya was obliged to license them on a non-exclusive basis to Raymond; and
(2) should Nagoya, unrelated to the Raymond technique and during the period the contract was in force, perfect inventions in the field of plastic or plastic and metal fasteners and should it register patents, utility models or designs and models outside Japan, it would be obliged to grant Raymond a non-exclusive licence in such inventions, etc., for the term of the contract.

In its comments on the alterations, the Commisssion noted that they allowed Nagoya to license firms other than Raymond in the Common Market under any future patents it might acquire. Apart from Raymond, there were in the Common Market other manufacturers of attachment components. These would, presumably, be interested in Nagoya's improvements and inventions. They would compete, at least potentially, with Raymond under any licences it might be granted due to the grant-back clause.

Part of the grant-back arrangement which was unlikely to have any appreciable affect on trade between Member States and competition within the Common Market was that under which Raymond was obliged to offer Nagoya first refusal on an exclusive licence for Japan under any patents for improvements or modifications that it (Raymond) might acquire. No alteration was, therefore, sought in respect of this obligation. The possibility, or likelihood, that this obligation on Raymond would impair competition on the Japanese market was something which fell beyond the jurisdiction of the Rome Treaty because the impairment there would be unlikely to be transmitted to the Common Market in a way which would affect interstate trade.

2 DAVIDSON RUBBER COMPANY DECISION

In this case, each licensee, there being several, was obliged to grant the Company and its other licensees in their respective territories a licence for any patents on improvements to the licensed process which it itself discovered. The Company (as licensor) was, on its side, bound to transmit to its licensees any technical data that it might acquire in the future. Having been assured by the

parties that any grant-backs would be non-exclusive, the Commission decided that the grant-back clause would be unlikely to infringe Article 85(1).

In fact, at the time of the Commission's decision (being some 13 years or so after the grant of the first licences to Happich, of Germany, and Gallino, of Italy), none of Davidson's Common Market licensees had applied for patents on improvements to the Davidson process. Thus, what might have been predicted as sufficiently likely back when the first licences were issued by the Company would not have been realized: improvements to Davidson's process. Perhaps the process was beyond economic improvement; again, perhaps the licensees lacked the necessary resources, be they in inventive ability or innovative ability. Fact would have defeated prediction.

On the other hand, the decision states that

> "Gallino is more and more using an unpatented process of its own which it has developed after the Davidson licence was granted to it".

Did Gallino not patent this process because of the grant-back clause ? Or was the process unpatentable ? Or, even if patentable or patented, did the process fall beyond the ambit of the grant-back clause ? Was Gallino deterred from patenting its process by the knowledge that its competitors would be entitled to licences under the grant-back clause ? Could the lack of patented improvements be seen as possible evidence of the actual anti-competitive effect of the non-exclusive grant-back clause ? These questions are but a means for speculation. The decision itself cannot provide any answer to them.

Though still important in 1972, the Davidson process faced several competing techniques (apart from Gallino's process), one being then up-and-coming yet said, in the decision, to be in need of further improvement. As a licensed invention loses its market importance, the impact of an exclusive grant-back clause on competition will shade towards the imperceptible where, as regards the future, it will not infringe Article 85(1). Of course, ex visu of when the grant-back clause was first agreed to it could still infringe that Article.

3 BAYER-GIST DECISION

To begin with, the facts to this decision. They centre on a series of agreements concluded over the period 1969 to 1975 between Bayer AG and Gist-Brocades NV, two large and very important firms on the Common Market. The agreements deal

(1) with the manufacture of raw penicillin in plant belonging to Gist-Brocades and the supply of this material to Bayer, and
(2) with the manufacture of an aminopenicillanic acid (6-APA) in plant belonging to Bayer and the supply of part of this output to Gist-Brocades. 5)

Since the end of the 1960s raw penicillin has been patent-free, although special knowledge of fermentation techniques is still required for its commercial production.

The history of 6-APA is as follows. In 1957, this intermediate product was first discovered by Beecham, which holds the product patent and certain process patents on it. The product patent still valid in some Common Market countries will expire in July 1978. In 1960, Bayer (of Germany) patented an independent biological process for the manufacture of 6-APA and licensed its use to Beecham, among others. Beecham reciprocated Bayer's licence by licensing the German company under the product patent and at the same time licensing or sublicensing numerous other firms, some of which were located on the Common Market.

In 1966, Gist (of Holland) patented an independent chemical process for the manufacture of 6-APA and licensed Bayer and others (the most important of these being located beyond the Common Market's territory) under the patent. Because it is a chemical process, it appears that Gist's process is easiest to follow and to adapt to existing chemical plant. Consequently, it is the most widely used of the processes. Recently, other important 6-APA manufacturing processes have been developed, among them Bayer's new enzyme process and Beecham's new independent enzyme process.

As regards the contract materials, raw penicillin is used in the manufacture of sterile salts, 6-APA, and another intermediate product, an amino acid (7-ADCA). 6-APA is cheaper than raw penicillin to produce and is processed into semi-synthetic penicillins which, in turn,

are processed into proprietory medicinal products.

Among the agreements notified to the Commission was one in which Gist granted Bayer

> "a non-exclusive, non-transferable licence for its chemical process and provided Bayer with the necessary know-how for the manufacture of 6-APA in Germany. Bayer further received a non-exclusive, non-transferable licence for the worldwide utilization and marketing of the 6-APA manufactured under licence. Both firms undertook to inform each other of any improvements in the manufacturing process and to grant each other licences in respect of such improvements. The same conditions apply should a new process for the manufacture of 6-APA be discovered".

That undertaking, said the Commission, restricted competition within the Common Market:

> "Competition between the two firms in research is restricted by the obligation imposed by the licensing agreement to issue licences to each other not only for improvements to existing processes for the manufacture of 6-APA but also new, independently developed processes. The effect is that for the duration of the agreement neither of the two firms can obtain a competitive advantage over the other in research nor can either gain individually by keeping research results to itself". 6)

But, in addition, it also lent strength to the view that, although Bayer and Gist, competitors in the manufacture and sale of raw penicillin, 6-APA and special penicillin derivatives, had not expressly agreed to cease competing in such manufacture, as much could be read from the circumstances of the case. In particular, the undertaking to grant future licences was, to the Commission,

> "logical only if the firms are to specialize and to continue doing so even if the other party discovers a new process".

Given the various circumstances considered by the Commission,

> "it would serve neither the spirit nor the purpose of the agreement if, during its course, one party were able to become an independent competitor in the manufacturing preserve of the other".

The grant-back obligation was exempted under Article 85(3) as being

> "an indispensable part of the specialization scheme, since it permits the optimum use of plant for the latest and most economic processes. Since the licences are to be non-exclusive, they can be issued to other firms. An obligation should be imposed which will enable the Commission to supervise the operation of this clause".

Although Gist agreed, by implication from the various circumstances, to concentrate on manufacturing raw penicillin to the exclusion of 6-APA, this does not mean it will cease all further effort at improving on its existing 6-APA processes, or at researching and developing new and independent processes for manufacturing the material. To begin with, Gist's sales of 6-APA are considerable, the amount at its disposal, taking that produced under contract by Bayer, being said in the decision to be about 15% of world production. Thus, it would have to undertake research so that, had it to revert to its own production of 6-APA, it would be up with the market leaders. Moreover, Bayer and Gist are each 'financially involved in the other's new or expanded plants and each has agreed to provide additional finance when necessary'. It was, said the Commission, 'in the interests of both to see that these plants are operated as economically as possible'. This would have been further inducement for Gist to continue researching and developing new manufacturing processes for 6-APA. On past evidence and current trends in the discovery of enzyme processes for the manufacture of 6-APA, it is highly likely that each firm will improve on existing processes or invent new and independent processes. Each firm certainly has the capability for invention and innovation.

4 KABELMETAL-LUCHAIRE DECISION

As part of the licensing agreement between the German and the French firms, Luchaire was obliged to grant future rights in improvements back to Kabelmetal by way of a non-exclusive licence. At first glance, Luchaire appears free to license or not its future patents to third parties. But taking into account that Kabelmetal had the right in the agreement to license such future improvements to its other licensees, Luchaire could not refuse any such licensee(s) a licence for its improvements. Thus, the

agreement with Kabelmetal took away from Luchaire a right that was of the very essence of the patent. It could impair the incentive in Luchaire to seek out improvements to the Kabelmetal process, and so looked capable of distorting competition. That effect could be serious on a market characterised by conditions of oligopoly, as on such market competition is made to work mainly on the research and development level, the oligopoly market being transparent as regards price.

But for all it could in theory visit upon competition and trade, Kabelmetal's right to sublicense Luchaire's future inventions was judged unlikely to do so in any appreciable way or to any noticeable degree. It was judged so because of the small likelihood that Kabelmetal would issue further licences to firms that would be able to compete effectively with Luchaire before expiry of the licensing agreement in issue. Thus, the fear there might be in Luchaire of losing by virtue of Kabelmetal's right any competitive advantage it might acquire was largely unreal. 7)

Part 3

CONCLUSION

The safest view to take of grant-back obligations that call for a grant-back to be in the form of an assignment or exclusive licence is that they are caught by Article 85(1) whenever they concern licensed inventions which contribute in an appreciable way to trade between Member States. There is small chance, in practice probably no chance, of an exclusive grant-back obligation being exempted under Article 85(3), as it is most unlikely to be indispensable to whatever benefits the licensing agreement is seen as likely to attain. A non-exclusive grant-back clause will afford adequate protection for the licensor's interests, including his patent portfolio. Where the licensor does not manufacture the licensed product or use the licensed processes, it would be only fair and reasonable for him to have a right to sublicense any future inventions that might be licensed back to him. This right in his licensor ought not to impair appreciably the licensee's incentives to inventiveness when he can charge a royalty on any such future inventions to sublicensees. Moreover, his ability to license his future inventions to third

parties beyond the ambit of his licensor's right of sub-license should act as inducement to inventive and innovative effort. Where the licensor manufactures the licensed invention or uses the licensed processes, a non-exclusive grant-back clause would be fair and indispensable compensation for the risk to investments the licensor takes when he grants a licence and transfers know-how to the licensee. If the licensee is to be paid a royalty on any license-back of rights, so much the better for competition. Unless the licensor is prepared to reciprocate the licensee's undertaking to grant future rights back, it is unlikely that the grant-back clause will receive the Commission's approval. An undertaking by the licensee to share improvements on the licensed invention with his licensee is likely to be seen as indispensable to the optimum use of plant for manufacturing the licensed invention. Failure on the licensor's part to reciprocate could constitute an abuse of the patent monopoly or of a dominant position.

The scope of the grant-back clause will have an important bearing on whether or not it is exempted under Article 85(3). The Commission proposes in its draft regulation on patent licensing agreements to exempt en bloc or automatically only grant-back clauses "in respect of inventions relating to improvements and new applications of the original invention". The grant-back clause considered in the decision on the Bayer-Gist/Brocades agreement would be far too wide in comparison with that formula. Indeed, it is questionable whether, in Bayer-Gist, so extensive a grant-back obligation was necessary for securing the objectives in Article 85(3). Yet, Bayer-Gist was rather unusual in sofar as the licensing agreement and the specialization agreement were really one and the effects of individual clauses therein would have been extremely difficult to disentangle. Even the effect attributed in the decision to the grant-back clause is somewhat artificial - the real cause of that effect could almost as easily have been attributed to the specialization agreement proper.

Taken in isolation from a bundle of effects with which it is convergent, the effect of an individual grant-back clause may not appear harmful. But where the effects converge on a patent pool, competition may be substantially

restrained and economic stagnation prevail in an industry. Alternatively, the pool may be the means to a 'super' monopoly. To put that into simple mathematics: if the licensor is taking from his licensees all their inventive output, the latter are taking from one another and the former grows big at their expense.[8] Thus, agreements to pool the products of future inventiveness can be extremely harmful and would merit special consideration in any decision to exempt them. Usually, multiple agreements to pool future rights in invention provide for licensing to pool members on a royalty-free basis. This could impair appreciably the members' incentives to inventiveness and thereby harm competition.

Notes

1 For US antitrust law see: Linowitz & Simmons on "Antitrust Aspects of Grant-Back Clauses in Licence Agreements", 43 Cornell L.Q. 217 (1957); Chevigny on "The Validity of Grant-Back Agreements Under the Antitrust Laws", 34 Fordam L.Rev. 569 (1966); Stedman on "Acquisition of Patents & Know-How by Grant, Fraud, Purchase, and Grant-Back", 27 U.Pitts.L.Rev. 161 (1966).

2 E.g., Printing & Numerical Registering Co. v Sampson (1875) LR 19 Eq. 462. The 'disincentive to inventiveness' theory is rather a spurious hypothesis. The "act of invention and the development of new ideas is inherent in the human mind" (Banks Committee on The British Patent System) and, therefore, is really beyond the range of an incentive. A grant-back clause could act as a disincentive to patenting one's inventions, or to investing in research and development.

3 Transparent-Wrap Case (1946) USCC 156 F.2d 198, at 203.

4 (1977) 1 CMLR D25.

5 Gist-Brocades supplies Bayer with the raw penicillin it requires, and the rest of its production is either sold to others or processed by Gist-Brocades itself into derivatives, a small proportion of which is made into penicillin V (a sterile salt). Approximately half of the raw penicillin is processed under contract by Bayer into 6-APA for Gist-Brocades, using the chemical process licensed to it by the latter. Bayer processes the rest into 6-APA using its own recently developed enzyme process, most of which is further processed into semisynthetic penicillins. Bayer does not sell large quantities of 6-APA to third parties, whereas Gist-Brocades' sales are considerable, having nearly tripled during the years 1971-1974.

6 The competition restricted is that which, in all probability, would have existed had there been no specialization agreement.

7 Compare: International Nickel Co. v Ford Motor Co. (1938) USDC 166 F.Supp, 551.

8 US v Aluminum Co. of America (Alcoa)(1950) USDC 91 F.Supp. 333, at 410.

CHAPTER 12

PATENT POOLING AND PACKAGE LICENSING

As a matter largely of convenience, two patent practices are dealt with in this chapter. The first, that of "pooling" patents, is a practice which results in the creation of a patent pool. The patent pool is a phenomenon to which joint venture antitrust theory is applicable. The second, package licensing, is practised when related patents, not infrequently pooled patents, are licensed 'en bloc'. After patent pooling has been discussed, this chapter examines package licensing, a practice which is conceptually similar to the practice of "tying".

Part 1

PATENT POOLING

Writing over 200 years ago, in his famous book 'The Wealth of Nations', Adam Smith charged that "people of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public, and in some contrivance to raise prices". The practice of pooling patents, involving a meeting of persons with similar patent interests, is not beyond that charge. The pool may be a way of reducing or eliminating present competition between patent holders, or of reducing the threat of future competition from new technology. On the other hand, though, the pool may serve a useful pro-competitive end. Thus, patent pools may help in fostering competition or, although restricting competition, may achieve or promote the economic or technical progress that likely would be lost without them.

A patent pool, or patent interchange, has been most suitably defined as comprising

> "all modes and forms of cooperation between patents held by different interests". 1)

The pool quite often has legal personality. Indeed, a company may function solely as a pool, licensing the pooling parties and third parties under the pooled patents. As often though, the pool is simply an arrangement and lacks legal personality. Whether as a legal person or as an arrangement, the pool may fall within the field of application of Article

85(1), though will not do so where the pool is conceptually similar to a merger. [2]

Express bilateral cross-licensing of patents or interests in patents presently held is perhaps the simplest form of patent pool. There need not, however, be an agreement in the conventional sense. A pool could be implied from the fact of royalty-sharing. Again, separate infringement actions by several patentees might not exclude a pooling agreement where the patentees concert their actions against the infringers by cooperating in matters of evidence. [3] Finally, failure by several patentees to sue one another in infringement for what third parties are being sued for could evidence a pooling arrangement in respect of the patents.

1 DOMESTIC LAW

Cooperation through pooling agreements is fairly widespread in industry in the United Kingdom. For instance, on enquiring into the lamp industry in the UK, the Monopolies Commission found

> "from the very early days the main British lamp manufacturers had pooled their patents granting each other permission to use such patents". [4]

The same industry had, moreover, a

> "policy of pooling litigious resources so as to attack by means of patent actions outside competitors who were guilty of 'unfair competition' ".

The pooling of litigious resources - the creation of a fighting fund - could in itself be caught by Article 85(1).

The Restrictive Trade Practices Act, 1976, a consolidating Act, deals with the problem of patent pooling by setting beyond the benefit of a statutory exemption certain pooling agreements, and licences made or granted in pursuance of such agreements. A patent pooling agreement is defined in paragraph 5(5), Schedule 3 of the 1976 Act, as an agreement

> (a) to which the parties are or include <u>at least three</u> persons ("principal parties", in the Act) each of whom has an interest in one or more patents, and
> (b) by which each of the principal parties agrees, in respect of patents in which he has an interest, or in respect of patents in which he has or may during the currency of the agreement acquire an interest, to grant a subparagraph 6 interest.

Subparagraph 6 states that the subparagraph 5(b) grant must be

> (a) of an interest in one or more such patents to one or more of the other principal parties; or
> (b) of an interest in at least one such patent to a third person for the purpose of enabling that person to grant an interest in it to one or more of the other principal parties, or to one or more of those parties and to other persons.

An interest in relation to a patent means

> an interest as proprietor or licensee of the patent or an interest consisting of such rights as a person has by virtue of having applied for a patent or by virtue of having acquired the right to apply for a patent.

Of course, more than the mere existence of a patent pooling agreement is needed if the agreement is to be subject to registration under the 1976 Act. The agreement must also meet the conditions found in section 6(1) of the Act before its registration is called for. Those conditions include the acceptance of section 6(1) restrictions by two or more parties.

But once the agreement is registrable with the restrictive trade practices authorities in the UK, it remains so

> "notwithstanding that it is or may be void by reason of any directly applicable Community provision, or is expressly authorised by or under any such provision". 5)

Thus, exemption from the prohibition in Article 85 will not negative the obligation laid down in domestic law for the registration of certain agreements. Failure to furnish particulars of an agreement which is subject to registration under the 1976 Act renders the agreement void. Parties giving effect to, or enforcing or purporting to enforce, the (void) restrictions risk an action for breach of a statutory duty. 6)

2 ARTICLE 85(1) EEC

Every patent pool implies the existence of an agreement or arrangement between enterprises, which latter, under Article 85, must be economically independent. But patent pools are not per se prohibited under the Article. To be prohibited

under paragraph 1, Article 85, the agreement must affect trade noticeably and restrain competition within the Common Market. In deciding whether the pooling agreement restrains, in fact or in probability, competition to a perceptible degree, regard should be had, inter alia, to the relationship that existed between the patents prior to pooling, the scope of the pooling agreement, competition between the pooling parties following their agreement to pool the patents, and to the significance of the patents prior to and following the pool.

An improvement patent is one which is subservient to the basic patent throughout the latter's currency and validity. Far from restraining competition, a pooling agreement covering a dominant patent and a subservient patent could only promote competition when the licences are unrestricted beyond the payment of royalties. Absent the pooling agreement, the basic patent will block economic or technical progress through use of the subservient patent. [7] An example taken from the history of radio valve development shows the blocking operation of a basic patent.

A, an inventor, was granted a patent on a two-electrode thermionic valve. B, another inventor, subsequently discovered and patented an improvement to A's patented invention. B's patent, a great technological stride in valve technology, covered the addition of a grid to control the flow of electrons between the anode and the cathode of A's valve. Each patentee could have excluded everyone from manufacturing, using or marketing the invention covered by his patent. In other words, each could have exercised his <u>negative</u> right of exclusion. And A's patent would have blocked B from exercising his common law (<u>positive</u>) right to manufacture, use or market his improvement. Clearly, a pooling arrangement here could only advance the public interest.

Turning now to where the relationship between patents is complementary, it is hard to see how there could be any real competition between them to restrain. As an example here, take it that A has a patent on an alloy and a process for working it up. B's patent covers a furnace or mechanism which is ideal for working A's invention. A pooling agreement covering these related patents should ordinarily not

restrain competition. Indeed, it is conceivable that the absence of such agreement could affect the patent holders' competitive positions on other markets. 8)

Where patents held by different persons are competing, actually or potentially, pooling them restrains the competition that otherwise could have taken place between them. And if significant competition is restrained within the Common Market, the pooling agreement will be caught by Article 85(1).

Patents of doubtful validity are often pooled to avoid an open fight over validity. The UK Monopolies Commission discovered, during its enquiry into the home lamp industry, that patents of doubtful validity were subject to industry-wide pooling agreements, with the aim of avoiding costly and often ruinous litigation over validity. In this regard, the patents can be blocking, complementary or competing. Pooling patents with the aim of avoiding costly invalidity suits is really a no-challenge agreement. 9) A patent pool with that objective in mind is capable of restraining potential competition: the competition that inheres in the likelihood of a challenge to validity. No-challenge agreements have been held to infringe Article 85(1). When the avoidance of patent conflict is the aim of a pooling agreement, said agreement could be exempted under Article 85(3).

The position regarding conflict settlements through patent pooling has been the subject of several cases under the US antitrust laws. In the US Supreme Court, in US v Singer (1963), Mr. Justice White concluded:

> "There is a public interest here which the parties have subordinated to their private ends. Where there is no novelty and the public parts with a monopoly for no return, the public has been imposed upon and the patent clause subverted". 10)

However, patent pooling with a view to conflict avoidance is not prohibited per se under the antitrust laws. Some thirty years prior to Singer, it was stated by the Supreme Court that,

> "where there are legitimate conflicting claims or threatened interferences, a settlement by agreement, rather than by litigation, is not precluded by the [Sherman] Act. An interchange of patent rights is frequently necessary if technical advancement is not to

be blocked by threatened litigation". 11)

But if each of the pooling parties knows, or has good reason to suspect that the other's or others' claims are not patentable, their pooling agreement is not likely to escape prohibition under US antitrust law. 12)

The scope of a pooling agreement may bring it within reach of the Article 85 prohibition. If the agreement extends beyond present patents to future patents or interests therein, as it often will do, then requiring future patents or interests therein to be licensed royalty-free to pool members could harbour a disincentiveness to inventiveness or to the disclosure of inventions. Such obligation could infringe Article 85(1).[13] An assign-back clause is highly likely to be caught by Article 85(1), with small or no chance of an Article 85(3) exemption.

3 ARTICLE 85(3) EEC

Patent pools may be exempted from the prohibition in Article 85 on proof that the agreements satisfy the conditions in Article 85(3). Where competing patents are pooled, there may be objective advantages to the consumer from the technical or economic progress made possible through the pooling agreement. Consumers would usually be in a more secure legal position under an agreement to pool patents of uncertain scope. When it is the validity rather than the scope of patents that is doubtful, the pooling agreement covering these patents is unlikely to possess any objective benefits from the consumers' viewpoint. Indeed, they are likely to be paying for nothing.

Where there is a will in the Commission to exempt an agreement, usually there is little problem in finding ways in which the agreement is likely to contribute to the objectives in Article 85(3). The agreement would, however, have to be cleared of restrictions which were not indispensable to the attainment of those objectives. In this regard, restrictions ancillary to the pool itself might block the granting of an exemption. Clauses, for instance, which oblige pooling parties to pool litigious resources to defend the pooled patents; which oblige the parties to license-back their future patents to pool members on a royalty-free basis; or which restrict the licensing of pool patents to third-parties.

A patent pool does not, by itself, afford the pooling parties a possibility of eliminating substantial competition in respect of a substantial part of the relevant products, save where patents are pooled with the only view of avoiding the likelihood of a challenge or challenges to their validity. In the saving instance, besides lacking any real benefits for consumers, the pooling agreement is likely to become a cover for actions aimed at deterring legitimate competition beyond the pool and its members. But the mere fact that the pooled patents cover almost all the productive capacity of an industry does not mean there will be no competition among the pooling parties. Indeed, competition is often quite vigorous under a pooling agreement.

To conclude this part of the chapter, some details from two famous American cases on patent pooling are worth giving. In the Cracking Case (1931) [14] the US government brought an antitrust action against three primary defendants, each a large producer of cracked gasoline, and a patent-licensing concern. Each primary defendant owned numerous patents on its particular cracking process. Since, however, "the phenomenon of cracking was not controlled by any fundamental patent, other concerns had been working independently to develop commercial processes of their own". Disputes broke out regarding validity, scope and ownership of the various patents and, as a way of resolving the disputes, the defendants pooled their respective patents (characterised by the Supreme Court as "competing patented processes for the manufacture of an unpatented product"). Although the process patents accounted for over half of the cracked gasoline capacity, the cracked gasoline itself accounted for only 26% of all gasoline sales. In other words, some 74% of the relevant market in gasoline was beyond the reach of the patent pool. The Supreme Court approved the pooling agreement, including ancillary agreements as to the royalties to be charged and as to division of those royalties. But it also spelled out the following warning:

> "If combining patent owners effectively dominate an industry, the power to fix and maintain royalties is tantamount to the power to fix prices. Where domination exists, a pooling of competing process patents is beyond the privilege conferred by the patents and constitutes a violation of the Sherman Act. The lawful

> individual monopolies granted by the patent statutes cannot be unitedly exercised to restrain competition".
>
> (Mr. Justice Brandeis)

In the Hartford-Empire Case (1945) [15] there was effective domination of an entire industry through the patent pool. Around 800 patents (including many which were competing and conflicting) were, in the words of Mr. Justice Roberts,

> "by cross-licensing agreements, merged into a pool which effectively controlled the industry. This control was exercised to allot production /in various fields/. The result was that 94% of the glass containers manufactured in /the USA/ on feeders and formers were made on machinery licensed under the pooled patents".

It was not, however, so much the fact that the pooled patents accounted for all but 6% of the relevant productive capacity as the manner in which the power of the pool was used that came in for the Supreme Court's condemnation. The power was used to eliminate competition in respect of a substantial part of the relevant goods.

Among factors that influence the attitude of US courts towards patent pooling agreements is whether or not outsiders can have access to the pool on reasonable terms. Again, Mr. Justice Brandeis in the Cracking case:

> "If the available advantages are open on reasonable terms to all manufacturers desiring to participate, such interchange may promote rather than restrain competition". [16]

The behaviour of a pool may be indicative of the true purpose behind it. A legitimate aim for pooling patents is in making available patents that are blocking, complementary, or competing and conflicting. But where the aim of the pool is to eliminate competition, this being evidenced in its behaviour, then quite obviously the pool is illegal and inexcusable. [17]

Part 2

PACKAGE LICENSING

A package licence can be defined as a licence of more than one, or all, of the licensor's present patents, patent applications, or future patents relating to similar areas of technology for a definite term in consideration of the payment of a uniform royalty <u>irrespective of the number</u>

of patents actually used. From an antitrust viewpoint, apart from facilitating an en bloc transfer of protected technology in a single technological field, package licensing avoids the cost of policing patents as well as other costs. When some but not all related patents are licensed, those remaining unlicensed could be infringed by the licensee in practising his licence. Knowing this, the licensor will try to incorporate in his royalty for individually licensed patents an increment or element to capture the policing cost that a package licence would avoid. Licence negotiations are not costless either. Both sides of the bargaining table must bear negotiating costs. Designing licences to suit the specific requirements of diverse applicants will not only prolong the licence negotiations, so increasing this cost, but will also require information (e.g. production costs) that may be expensive to come by and confidential to the applicant's business operations. These costs cannot be ignored when evaluating the legality of package licensing.

The valuation of individual patents is generally a difficult task, if not in some cases a nigh-impossible task. The value of a patent will depend normally on, inter alia, its scope (which is often highly contentious), its proximity to substitute products or processes, its useful life (having regard to fashion, taste, stage of obsolescence, and nature of the endproduct), its position in the technology (some patents will be better placed than others), and the validity of its claims (have they been judicially verified ?). Patent valuation is not a costless task. There is, moreover, the cost of royalty accounting when royalties are payable on actual use only. Only package licensing can avoid these policing, negotiating, valuing, and accounting costs.

1 COERCIVE PACKAGE LICENSING

Against package licensing, it is commonly alleged that the practice is simply "tying" in disguise.[18] An applicant is forced or coerced into accepting unwanted licences in order to obtained the desired licence(s). The practice could be caught by section 44(1), Patents Act 1977, when the purport of the licence is as described in that section. Competing inventions could be effectively 'tied-out' through package licensing. It might, therefore, be

prudent always to offer an alternative contract on reasonable terms - individually priced patents, reasonable administrative charges, and so on - to disarm a possible charge of coercion. [19)]

Coercive package licensing could be "abusive" of the patent monopoly, as a matter both of domestic law and of EEC antitrust law. A domestic case wherein the practice was alleged to be abusive is the Brownie Wireless case, decided in 1929. [20)] The relevant facts are that Brownie applied for a compulsory licence under just two of a group of thirteen related patents owned by the Marconi Company. Marconi held a very large number of patents relating to wireless telephony (the wireless, for short). These patents fell under two heads, namely, (1) thermionic valve patents and (2) circuit patents. The group of thirteen patents covered circuitry. They were useful in the construction of valve radio receivers.

At the time, there were two classes of receiver on the market: the crystal receiver (with or without a valve amplifier) and the valve receiver. While the crystal receiver was entirely free of Marconi's patents, the valve receiver could not then be made without infringing one or more of the thirteen patents, as these covered key aspects of valve receiver circuitry. The Marconi Company did not itself manufacture valve receivers. Instead, it licensed a subsidiary and some 2300 independent manufacturers to do so.

The licensor's standard form (A2) licence covered the thirteen circuit patents; and its standard conditions obliged royalties to be paid regardless of actual use of the licensed patents. This royalty was "based", or calculated, on a valve holder, an unpatented element in the circuits not only of valve receivers (covered by the Marconi patents) but also in those of valve amplifiers (free of Marconi patents). Brownie manufactured valve amplifiers for use with its crystal receivers. Thus, under the terms of the A2 licence on offer to Brownie, the company would have been forced into accepting patents it did not want, for a royalty that would have been payable regardless of their actual use, and on products that were entirely free of the Marconi Company's patents.

Brownie refused Marconi's A2 licence, even though

2300 other manufacturers had accepted it, apparently as being quite reasonable, and, charging Marconi with an abuse of the patent monopoly, sought a compulsory licence at a reasonable royalty under two circuit patents only. On appeal from a Patents Office decision, the court saw nothing unreasonable in Marconi's refusal to license two patents only. As Mr. Justice Luxmoore wrote:

> "The whole subject matter of the circuit patents is highly technical and difficult. Frequently, it is a debatable question as to which of the circuit patents are being utilised in any particular receiving set. It is impractical to deal with individual patents and to demand in respect of each set [i.e. valve receiver] manufactured a royalty proportionate to the value of the patents actually used in that set. It is consequently fairest to the manufacturers to strike a general average and impose royalties calculated in a simple manner to cover the whole range of circuit patents. Such a course not only avoids the complication and expense in assessing the royalties, but places each manufacturer in a secure position, because whatever variation he may make in his receiving sets, he need not in practice consider the range and extent of his licence, for he will always be working within it".

So, the justification then for forcing unwanted licences on a prospective licensee lies in the general inconvenience that would prevail if related patents had to be individually priced and licensed. The cost of administering, say, 2300 different licences would not only be enormous but perhaps also economically inexcusable. Of course, if licensees would be prepared to bear that cost, which in general they will not be, maybe they should have a choice in the matter. It is unlikely, however, that the alternative costs would be less than the cost of the unwanted licences.

2 PACKAGE LICENSING AND ARTICLE 85 EEC

A voluntary package licence which is concluded along the lines described in section 44(4), Patents Act 1977, not only would be valid under section 44(1) of the Act but also would be unlikely to infringe Article 85(1). In the unlikely event it should be caught by the Article 85 prohibition, the licence could try for an Article 85(3) exemption. The basis for royalty calculation would ordinarily be indispensable to attainment of the Article 85(3)

objectives promised through the licensing agreement. In other words, payment of a uniform royalty irrespective of the number of patents actually used would be a necessary restriction. But in that regard, the Commission's decision on the AOIP-Beyrard agreement harbours an inconsistency. There, the Commission held to be incompatible with Article 85(1) a licence clause providing for payment of royalties whether the patents were actually used or not. This particular clause is equated in the decision with an obligation to pay royalties after expiration of a patent. [21] So, should there be a pro rata diminution in the rate of royalty as individual patents in the package expire ? To argue for such diminution is indirectly to urge individual pricing of the patents involved. And a major justification for package licensing is that it avoids the costs that would inevitably accompany the individual pricing of patents. The Commission's apparent rush to judgment in Beyrard does not consider the relationship behind the packaged patents, or the reason behind the clause it so readily condemned. That aside, the expiry of patents in a package is, anyway, far from being conclusive as to any diminution in the value of the remaining patents.

Part 3

CONCLUSION

In the 1977 draft of an exempting regulation on patent licensing agreements, the Commission repeated the substance of an opinion delivered through its 1962 Notice on Patent Licensing Agreements that patent pooling agreements and licensing agreements whereby the licensor grants a licence only on condition that the licensee takes a licence for one or more additional patents which he does not require can be given no automatic exemption from the prohibition in Article 85(1). [22] Individual exemptions may, however, be granted under Article 85(3). It is worthy of mention here that US antitrust courts, although condemning the behaviour of patent pools, appear so far to have stopped short of actually dissolving such pools. The consequences of dissolving patent pools could be extremely grave. That aside, where royalties are not fixed or maintained by the pool, and there is no sharing of markets, the pool will be neutral as regards price competition among pool licensees.

Moreover, where the pool is ready to license third-parties on reasonable, preferably non-discriminatory, terms, it should be commended and not condemned. [23] If royalties are payable in respect of future patents licensed-back to, or through, the pool, the incentive to research and development will not be impaired to any noticeable degree. And, finally, if royalties are not demanded in respect of patents of suspect validity, or perhaps uncertain scope, perhaps the no-challenge nature of the pool could be overlooked where the suspicion attaches only to a small minority of the pooled patents.

Package licensing, although closely akin to the much-disliked practice of tying, is not without its commendable aspects. The practice trades-off costs under one general heading against an increase in the price of the contract products. Where, however, individually priced patents are desired, they should be made available to the licence applicant, at his expense. [24]

Notes

1 US v Line Materials (1948) USSC 333 US 287, note 24.

2 On joint venture antitrust law in the EEC, see: Re. SHV-Chevron (1975) 1 CMLR D68, commentary by V.Korah, JBL (1975), page 243; Re. De Laval-Stork, OJ L215/11, 23/8/77; Re. GEC-WEIR Sodium Circulators, OJ L327/26, 20/12/77.

3 Consider: US v L.D. Caulk Co. (1954) USDC CCH Trade Cases 67,919:69,997.

4 Report on the Supply of Electric Lamps (1951):287, pages 24 to 33; also Jones & Marriott on "Anatomy of a Merger", 1970 edition ('Pan Management Series') for some historical background to the international electric lamp cartels; and US v General Electric (1949) USDC 82 F.Supp. 753.

5 RTPA 1976, section 5.

6 RTPA 1976, sections 35(1)(a) and (b), and 35(2).

7 Consider: section 48(3)(d), Patents Act 1977. US A-G's Antitrust Committee (1955), 242-7, observes: "Several factors must be considered in determining the market power a pool gives its participants. To be examined initially is the nature, coverage and value of the interchanged patents. Are the interchanged patents, for example, competing, non-competing or complementary ? From this follows scrutiny of the role of the patents in a relevant market, and of the market position of the interchange members concerning both the subject of the interchanged patents and the industry generally. Finally, it is important to consider competition between the members, the royalty and licensing policies, presence or absence of exclusionary tactics towards nonmembers, and continuous use of interchange litigation funds against infringers. All these may be relevant in determining whether the interchange gives its participants monopoly power".

8 An American case dealing with the pooling of complementary patents is Baker-Cammeck Hosiery Mills v Davis (1950) USCC 181 F.2d 550; see, further, the appendices to this thesis at page 225.

9 On no-challenge agreements see chapter 13, this thesis.

10 347 US 174.

11 Standard Oil Co. (Indiana) v US (1931) USSC 283 US 163, at 171; "In cases where several applicants claim the same subject matter the Patent Office declares an interference. This is an adversary proceeding between the rival applicants, primarily for the purpose of determining relative priority": Mr. Justice White in the Singer case; consider, further, Re. Heidemaatschappij-Bronbemaling (1975) 2 CMLR D67.

12 E.g., Precision Instrument v Automotive Maintenance Machinery (1945) USSC 324 US 806.

13 See chapter 11, this thesis. In the present context, two unreported American cases settled by consent decrees, US v Automobile Manufacturers Assn. (1969) and US v Aircraft Manufacturers Assn. (1972),are relevant. In the former case, the US Government filed an antitrust action against an industry-wide patent and technology agreement relating to automobile pollution abatement technology and devices. It attacked, in particular, clauses in the agreement requiring all members to grant royalty-free licences to each other on all patents secured by the members and obliging members not to accept licences from outside

inventors unless all members could get such a licence at the same royalty. The second case dealt with almost identical clauses. The government charged that these clauses reduced competition between the parties for technical inventions, and reduced competition for patents developed by others.

14 As for note 11 supra.

15 Hartford-Empire Co. v US (1945) USSC 323 US 386 and 324 US 570.

16 See also: US v National Lead (1945) USDC 65 F.Supp. 513, at 531; contrast, Besser Mfg. Co. v US (1952) USSC 343 US 444; under the so-called "bottleneck theory" of US anti-trust, "The Sherman Act requires that where facilities cannot practically be duplicated by would-be competitors, those in possession of them must allow them to be shared on fair terms", A.D. Neale on "The Antitrust Laws of the USA", 1960 edition, page 67.

17 E.g., Kobe v Dempsey Pump Co. (1952) USCC 198 F.2d 416; also Singer, note 10 supra, and Besser, note 16 supra.

18 See chapter 10, this thesis.

19 Section 44(4), Patents Act 1977.

20 (1929) 46 RPC 457.

21 Compare: Automatic Radio Mfg. Co. v Hazeltine Research Inc. (1950) USSC 339 US 827; Brulotte v Thys (1964) USSC 379 US 29.

22 Article 5, Commission's 1977 draft regulation on patent licensing agreements.

23 E.g., Re. Henkel-Colgate/Palmolive (1971) OJ L14/14, 12/12/71; Re Research & Development (1971) CMLR

24 E.g., Re. Henkel, note 23 supra.

CHAPTER 13

CHALLENGES BY LICENSEES TO THE VALIDITY OF PATENTS

Patents, as granted by our Patents Office, are not incontrovertably valid. The validity of our patent of invention can be questioned and attacked before the domestic courts of this kingdom. Five grounds are available in our domestic law upon which the validity of a patent can be challenged. These grounds are stated fully in section 72(1), Patents Act 1977, and included among the stated grounds for attack are

> "(a) the invention is not a patentable invention;
> (c) the specification of the patent does not disclose the invention clearly enough and completely enough for it to be performed by a person skilled in the art;
> (d) the matter disclosed in the specification of the patent extends beyond that disclosed in the application for the patent, as filed".

The grounds listed in section 72(1) are the

> "only grounds on which the validity of a patent may be put in issue (whether in proceedings for revocation under section 72 above or otherwise)": section 74(2).

The only proceedings in which the validity of a patent may be put in issue are laid down in section 74(1), and these include

> "(a) by way of defence, in proceedings for infringement of the patent".

When proceedings are brought for the non-payment of royalties, or their equivalent, as promised in a licence contract with the licensor or patent holder, it has long been a principle of the common law that, in an action on the contract, the licensee is not permitted to raise or challenge the validity of the patent for which the royalties are being claimed. His acceptance of the licence impliedly estops the licensee from challenging the licensor's title to the patent. [1)] Section 74(1), Patents Act 1977, is, therefore, merely expressing the common law. In favour of this implied estoppel are several practical considerations. There is, moreover, the old maxim that one may not 'approbate and reprobate' at one and the same time. If he wants to attack the patent, he should renounce his licence (and thereby face the probability

of an injunction). Implied estoppel may be seen as expressing a view that the licensee should not be allowed to "skulk" behind the protection of a licence and from there "snipe" at the patent holder's title in an attempt to avoid a bad bargain. In fairness to the patent holder, the licensee should step out from behind his licence and face up to the patent action, infringement.

Short of repudiating his licence from the patent holder, the licensee could circumvent the implied estoppel by successfully asserting that his conduct falls beyond the scope of the licensed patent(s). It would then be left with the patent holder to assert his patent rights, as distinct from his contractual rights, against the licensee's conduct. The licensee's assertion is not inconsistent with the existence of the implied estoppel that arises from his licence.

The implied estoppel arising from the acceptance of a licence could be negated by the licensee's "eviction" from his licence. Eviction could be seen as arising from a decree of invalidity being entered against the patent in a suit between the patent holder and a third party, from flagrant defiance of the patent rights by unlicensed persons, or from a finding of infringement of a prior patent. In reality, the eviction brings the licence contract to an end, so releasing the licensee from the implied estoppel. The action against the licensee would, therefore, be based on the patent rights. Although eviction seems never to have been argued intentionally before our domestic courts, there is no reason why they should not recognise it as terminating the implied estoppel. [2]

A pleading that he is impliedly estopped from challenging validity will not necessarily prevail in an action against a purchaser of goods subject to that patent. Ordinarily, the purchaser would be licensed to use or vend the patented goods through purchasing them from the patentee, or his licensee, subject to any limitations that might be imposed on the licence. [3] But, as Mr. Justice Parker observed in Gillette v A.W. Gamage (1909), there is nothing to compel the purchaser of patented goods to accept the position of a licensee. But for the patent, the purchaser's ownership of the article would justify his dealing with it in any way he pleases and his lordship saw

"no reason why he should not be entitled to

> rely on this ownership, repudiating any implied licence and attacking the validity of the patent". 4)

To counter the possibility of a licensee repudiating his licence in order to end the implied estoppel, an express estoppel clause could be inserted into the licence contract. However, a contract not to attack the patent's validity may well be a void restraint of trade under our common law. In an obiter statement in VD Ltd. v Boston (1935), Mr. Justice Clauson thought it remarkable that a court bound by the provisions of the Statute of Monopolies could be called upon to give effect to a licence clause in respect of what might well, by reason of that statute, turn out to be an invalid monopoly and an illegality. 5) But the legality of a no-challenge clause under our domestic law remains still to be judicially decided. Thus, when he is bound in contract not to attack the licensed patent(s) validity, the licensee will need to establish the invalidity of that contract before pressing home his attack on the patent(s) after repudiation of his licence. Under domestic law, an express estoppel erects an additional artificial barrier to the competition that inheres in the freedom to challenge the validity of patents. The competition affected by these estoppel barriers is potential, rather than actual. To assess the real or the probable impact of an express or an implied estoppel on that competition will be a far-from-easy matter.

Aside from the possibility of an express estoppel being illegal at common law, there is the chance of it being caught by section 44(1), Patents Act 1977. This section has already been discussed in chapter 10. It is not intended to enter upon that discussion again at this point. The intention here is to discuss the legality of both implied and express under Article 85(1).

Part 1

LICENSEE ESTOPPEL AND ARTICLE 85(1) EEC

1 ESTOPPEL, REPUDIATION AND INCENTIVE TO ATTACK

As much as follows seems to be implied both by the common law and by section 74(1)(a), Patents Act 1977: that a defendant to an action for unpaid royalties should not be allowed to keep all his cake (i.e., contractual immunity from injunction) while trying to eat it (i.e., have the patent invalidated). The defendant must choose between the

probable consequence of repudiating his licence and paying what is owed to the plaintiff under the royalty agreement. [6] If he should choose the former yet fail to have the patent invalidated, the unsuccessful attacker is likely, if he can persuade the patentee to grant him another licence, to pay a higher price for the new licence; and that too after the expense of the invalidity proceedings. Nailing his colours to the mast may, therefore, prove to be a very expensive venture for the licensee. Clearly, the licensee who has already invested heavily in his licence could not normally afford to repudiate it due to the probable attendant consequence of an injunction.

There is, moreover, facing those who would attack a patent's validity a strong (and for that costly) presumption by our domestic courts in favour validity. The aim of this presumption is to strengthen the national patent system. Imagining, nevertheless, that that presumption is diluted somewhat with a view to encouraging attacks on validity by licensees who are protected from injunction by their contracts, a likelihood that attacks will be pressed or pursued must depend obviously on whether or not, and if so the extent to which, the attackers' positions can improve without the patent. What incentive would there be to attack validity when the patent's invalidation would be likely to lead to a deterioration in the attacker's profits.

Imagine that several manufacturers have licences under the same patent(s). Without violating the provisions of our Resale Prices Act, 1976, the licensor has limited the licences in a way which permits the minimum first-sale price to be fixed from time to time. Any licensee that exceeds the fixed price, that is, sells below the stipulated minimum, could be pursued through the patent action, as an alternative to an action on the contract. If the licensor does not compete with his licensees, the latter are the sole beneficiaries of the price-fixing arrangement. Were the patent invalidated, the price-fixing arrangement could go with it owing to the effect of the Restrictive Trade Practices Act, 1976. Invalidate the patent, moreover, and potential competitors may be induced to enter the market. Thus, the patent's value to these manufacturers is in the price order it secures and its deterrent effect on outsiders. Since it is

the licensee who is usually best placed to attack validity - simply because the patentee usually provides him with the necessary ammunition to do so - and (unlicensed) outsiders who are usually worst placed to do so, the latter cannot be relied upon, much less expected, to defy the patent and it would be quite unrealistic to expect the former to start invalidation proceedings if, upon the patent's invalidation, his profits are likely to be put at risk by the entry of outsiders. Better, therefore, for the licensee to pay a token royalty on the suspect patent. If the price-fixing arrangement were to be prohibited, perhaps a well-placed licensee might attack the patent. This assumes, of course, that the conditions mentioned above are satisfied: that he can 'approbate while reprobating'. But even under those conditions the would-be attacker must take account of the possible reaction of his fellow manufacturers: they may turn on the attacker who is out to spoil the game secured by the patent(s). To be sure, their possible reaction will dampen the incentive to attack the patent(s) validity.

2 ESTOPPEL AND ARTICLE 85(1)

Permitting an estoppel to hinder an attack on the validity of a suspect patent is capable of distorting competition within the Common Market and of affecting trade between Member States. Implied estoppel, however, cannot really be accomodated with the concept in Article 85(1) of 'agreements between enterprises'. True, it is because of his contract with the licensee that the patentee, in an action for unpaid royalties, can plead estoppel against a challenge to the validity of the patent(s) involved in the contract. On the other hand, the estoppel was implied originally by the common law courts with a view to serving the public interest in the days before competition became an altar stone for sacrificing licensing practices in the interests of a common market.

It is clear enough, though, that competition within the Common Market may be noticeably distorted to the detriment of trade between Member States whenever a licensee, deprived through estoppel of the chance of having the patent invalidated, is required to pay a royalty, or other consideration, for having done what in reality he should have been

able to do freely: because the patent(s) of invention should not have been granted in the first place. Against the EEC Commission's view that post-expiry royalties can be anti-competitive within the meaning of Article 85(1), surely an obligation to pay royalties on a patent that, in the first place, ought not to have been granted can be no less anti-competitive.

Implied estoppel in our common law seeks to serve the national conception of the public interest. There is, however, in present respects, a Community law concept of public interest which, to the Commission's view, advocates freedom of a patent licensee to have the licensed patent(s) invalidated in an action for revocation. But the influence of American developments in relation to implied estoppel and the right of licensees to assert invalidity in an action for unpaid royalties can be detected in the Commission's decisions. It is highly likely that the Commission would lend its weight to an attack on our common law doctrine of implied estoppel in any action on the licence contract.

3 PUTTING VALIDITY IN ISSUE UNDER THE PATENTS ACT 1977

Any attack on the doctrine of implied estoppel is also an attack on section 74(1) of the 1977 Act. It will be remembered that this section lists the proceedings in which the validity of a patent may be put in issue; and it is quite clear in the Act that validity may <u>not</u> be put in issue, by way of defence, in proceedings in the law of contract for non-payment of royalties promised by the licensee. Assuming the avoidance of a no-challenge clause, an implied estoppel could not, of course, prevent the licensee from applying to have the patent <u>revoked</u> on one or more of the grounds given in section 72(1). Yet, seeking revocation could be less attractive to licensees than simply putting validity in issue <u>by way of defence</u> in proceedings for unpaid royalties. Likely, a majority of licensees in a position to challenge validity would prefer to meet proceedings in contract with the defence of invalidity rather than initiate revocation proceedings, yet not be willing to repudiate their licences in order to press the attack. Indeed, if a patent is invalid, or presumed so, arguably licensees when

pressed for the promised royalties should be allowed to defend themselves by raising invalidity. That is not to say, however, that the licensee who succeeds in having a patent invalidated should be let off all royalties. There are wider issues, of an anti-competitive nature, that that absolution could raise. Those issues aside for the moment, to pray in aid of retaining immunity from injunction while attacking the patent in an action for unpaid royalties a superior obligation in the Rome Treaty is conceivable. One could presume that Parliament does not intend the Patents Act 1977 to stand in the way of an attempt by a licensee to enforce the rights given him in that Treaty. But the problem here is a complicated one that might perhaps be best dealt with through amendment to the 1977 Act along the lines indicated.

4 PRIOR INVALIDITY AS A DEFENCE

There is some old authority, in Grover & Baker Sewing Machine Co. v Millard (1862), [7] for denying that a prior declaration of invalidity bars a later action for unpaid royalties on the invalidated patent. In Grover, despite the patent's invalidation in infringement proceedings against an outsider, the court granted an injunction and consequent relief against the defendant for his failure to pay royalties in respect of using or marketing the invention. Yet, even were the patent's invalidation to be seen as having "evicted" the licensee from his interest in the patent, the common law would still call for payment of the royalties promised and owing prior to the eviction. In order to escape future royalties, the common law still seems to require the evicted licensee to argue and establish all over again the patent's invalidity. Quite clearly, this is an extremely wasteful practice. As regards royalties owing at the date of eviction, the plaintiff could plead, in support of claim to them, a rule of consideration that the surrender of a claim to a legal right is good consideration for another's promise. This rule should be seen, at least, to prevent any refund of royalties, no less in the case of the person who has the patent invalidated as in the case of another who is permitted the defence of prior invalidation.

As a way of providing incentive or encouragement to attack patents of suspect validity, licensees who succeed in having patents invalidated in an action for unpaid royalties

could be permitted a refund of royalties already paid while ones who plead that invalidation would be denied a refund. But the opinion here is against refunds of royalties,[8] since they could discourage an early challenge to validity and be anti-competitive. Patent actions could still be brought against unlicensed competitors and their competition suppressed through the grant of injunctions, to the licensee in his own name if his licence is exclusive. While his licence stood, the licensee would be immune from injunction. Moreover, in the case of an exclusive licence, the patent holder would be unable to license others for the territory or field of the attacker, actual or potential.

An alternative way of providing an incentive to attack suspect patents would be to permit successful challengers to avoid payment of royalties owing for the period during which the attack is pressed to the invalidation. Those pleading that invalidation but taking no part in the successful attack would be bound to pay royalties owing at the date of the patent(s) invalidation.[9]

Either way, the atmosphere surrounding licence negotiations is likely to be soured with distrust. Licensing might be discouraged. What licensing took place could involve the licensor taking precautions to lessen the chances of a successful attack, or at least precautions to delay an attack (this implying that perhaps refunds should be allowed). Beyond the date of the patent's invalidation, in the interests of the public all use of the invention covered by that patent should be royalty-free.

Part 2

EXPRESS ESTOPPELS AND ARTICLE 85(1)

As mentioned earlier, a no-challenge agreement may be void at common law as an illegal restraint of trade; and that quite apart from its possible avoidance under section 44(1) Patents Act, 1977. It is to counter the possibility of the licensee repudiating his licence as an opening to an attack on validity when patent rights are asserted or applying under section 72(1), Patents Act, 1977, to have the patent revoked that an express estoppel is included in most cases among the terms of the licence contract. While those may remain but possibilities, they are not for that something which licensing practise should ignore.

Within the field of application of Article 85(1), express estoppels tend to be viewed by the Commission as being prohibited beyond the possibility of exemption under Article 85(3). This emerges clearly in what now follows: a consideration of Commission decisions on no-challenge clauses in licensing agreements.

For convenience, the Commission's decision on the Bayer-Gist/Brocades licensing agreement will be considered first. In this decision, the Commission's policy towards no-challenge agreements was put as follows:

> "The no-challenge clause in the licensing agreement has also been removed as an unnecessary restriction. If Gist-Brocades and Bayer, two of the largest 6-APA manufacturers, had continued to agree not to contest the validity of each other's patents, the result might have been that third parties would have been prevented from exploiting freely for the benefit of the consumer a process which did not in fact merit the protection of a patent".

As a contribution to reasoning, that statement reveals a woeful lack of commercial common sense. For, certainly, it does not follow, because they are large manufacturers, that Gist-Brocades or Bayer would have attacked the other's patent(s) if it strongly suspected invalidity. Indeed, it is just as conceivable that the doubter, in recognition of the patentee's financial muscle or litigious resources, would refrain from an attack and reach some mutual understanding with a view to maintaining the status quo. It is, moreover, axiomatic that when the benefit to a licensee from the existence of a patent, however doubtful its validity may be to him, is likely to be substantially greater that the advantage which might flow from its invalidation, a challenge to validity is highly unlikely. A no-challenge clause should also entail a <u>probability</u>, and not just a mere possibility, of attack on validity. Article 85(1) is <u>not</u> infringed by the presence of a <u>possible</u> distortion of competition. The probability of a challenge will be <u>inversely</u> proportional to, inter alia, the strength of the presumption surrounding validity, the respective strengths of the parties to the no-challenge agreement, and the pace of developments in the relevant industry.

The Commission's attitude in Bayer-Gist/Brocades is

consistent with the policy expressed in its decisions on the Raymond-Nagoya and Davidson Rubber Company agreements. In its decision on a clause in the Raymond-Nagoya agreement that obliged Nagoya not to challenge the validity of the licensed patents during the term of its licence from Raymond, quite logically, the Commission saw this obligation as being beyond "the essence of the patent". It took from Nagoya the power to have royalties reduced and to have certain restrictions removed on establishing invalidity. Not only, and quite obviously, would reduced royalties have strengthened Nagoya's competitive position, but the position of third parties interested in manufacturing the contract goods would also have been improved by a declaration of invalidity. The Commission recognised, however, that a successful challenge by Nagoya to the validity of the Raymond patents would have strengthened its position on the Far East market only, since for technical reasons the contract products were unlikely to be exported by it to the Common Market. A challenge by Nagoya to Common Market patents was ruled out for related commercial and technical reasons. The clause was not, therefore, likely to have an appreciable effect on Common Market competition.

In Davidson, the licensing agreements were said not to have met the conditions for an Article 85(3) exemption because they included no-challenge clauses. These clauses, said the Commission, prevented

> "the licensees from using the powers given them by their national law to free themselves by an action in avoidance from the obligations imposed on them by their contracts".

The clauses were deleted after consultation with the Commission, and the exclusive licensing agreements proceeded to an exemption.

Both the Davidson and Raymond decisions assume in their reasoning about no-challenge clauses that national law in the EEC Member States permits patent licensees to challenge the validity of the patents under which they are licensed. [10] At least when proceedings are brought under our domestic law for the payment of agreed royalties, that assumption would not be correct: validity cannot be put in issue, by way of defence, in such proceedings.

Finally, to the Commission's decision on the AOIP-Beyrard licensing agreement. Clause 5 of this licensing agreement prohibited AOIP from challenging, directly or indirectly, the validity of the Beyrard patents. Beyrard, it may be noted, was an inventor only. He needed to license in order to be able to exploit his patents. AOIP, on the other hand, was a large, well-staffed and equipped organisation with a fair deal of financial muscle. Relieved of its obligation under clause 5, AOIP might well have attacked the Beyrard patents, since the licensor's resources would have been slim in comparison with the litigious resources that AOIP probably commands. In short, Beyrard would probably have been a poor match for AOIP in any fight over validity. As to clause 5, the Commission opened with a familiar statement:

> "Such no-challenge clause is not a matter pertaining to the existence of the patent. Rather, it constitutes a contractual restriction of competition in that it deprives the licensee of the possibility, which is available to everyone else, of removing an obstacle to its freedom of action in the commercial field of an action for revocation of the patent".

It then continued:

> "Even if it is the licensee who is best placed to attack the patent on the basis of information given to him by the licensor, the public interest in its revocation requires that the licensee should not be deprived of this possibility".

This latter statement is more or less verbatim the sentiments expressed by the US Supreme Court in Lear Inc. v Adkins (1969), the leading American case which sought to give implied estoppel "a decent burial". [11)]

The Commission's statements regarding express estoppel, coupled with its cries of "public interest", can easily be translated in terms of the essentially non-contractual restriction of implied estoppel: which is no more than a procedural block on invalidity attacks. But could this procedural stop or its express relative also be a servant of the "public interest" ? While undoubtedly the public has an interest in having invalid patents revoked, that interest has to be weighed against the interests in promoting security of licence contracts and fair play between

contracting parties, discouraging costly actions and spurious allegations designed to weaken the patent holder's position vis-a-vis third parties, thus making it difficult to license the affected patent(s), and in encouraging the licensing of patents. Merely paying lip service to the public interest, without any proper analysis of the competing elements that go to create that interest as regards a particular matter, is a sham way of making law. But, then, were one not to believe that the patent system is indispensable to the attainment of economic or technical progress, would there be any reason for permitting the patent right itself to be reinforced through contractual restrictions ?

Part 3

CONCLUSIONS

The doctrine of implied estoppel has been in our common law for a long time. It is a doctrine of real property law that, on a basis of analogy between the leasing of real property and the licensing of patents, became a principle of patent licensing law over a century ago. The close analogy that was drawn between those practices in order to justify the introduction of implied estoppel to patent licensing does not bear scrutiny in depth, and is largely a false analogy. [12] However, the doctrine is now embedded in the Patents Act 1977 and its removal would, therefore, require the intervention of Parliament. Under this statute, invalidity may not be defensively asserted in proceedings for the payment of royalties due under a licence contract.

This procedural stop on validity challenges may not be in the public interest, at least the public interest as is conceived by the EEC Commission. Thus, any attempt to avoid the procedural block in our domestic law is likely to be supported by the Commission in any case where the Community interest is threatened. It is likely too that the Commission will try to take an appropriate leaf from US antitrust law, a law which cast out the doctrine of implied estoppel some ten years ago.

But any 'casting-out' of implied estoppel from the field of potential application of Community trade and competition law (possibly on the basis of Articles 30-36

EEC) will have to grasp the difficult nettle of royalty payments. As a matter of contract law, royalties due the patent holder at the date of invalidation of his patent should remain payable, absent any agreement to the contrary. Their payment could be justified in contract law on the principle that the bargain involving those royalties was based on an honestly-held claim to a patent, whether eventually shown to be valid or not. [13] As regards future royalties for an invalidated patent, these can be seen as falling beyond claim owing to a total failure of consideration.

With regard to the public interest in ridding society of invalid patents, freedom and incentive for the licensee to attack patents of known or strongly suspected invalidity would be important. Abolishing the doctrine of implied estoppel, whether by judicial interpretation of the patents statute or by legislative amendement, of itself might not encourage licensees to attack technically invalid patents or those procured by fraud. A suitable inducement to the would-be attacker might be ultimate freedom from royalties accruing as of the date on which his challenge to the patent's validity was pleaded in court proceedings. Save where fraudulent procurement of the patent is established, royalties owing at that date should remain payable, thus discouraging anti-competitive tactics by licensees in a position to have patents invalidated.

With abolition of the doctrine of implied estoppel, the attacker will retain his contractual immunity from an injunction during the attack. If licensees had first to repudiate their licences before attacking invalid patents, very few of them would feel confident enough to launch an attack on validity. Allowing the attacker to retain his contractual immunity from injunction may well be unfair to the licensor, who has licensed in good faith and on the strength of an examined patent. Yet, this essentially private interest in fairness should not be permitted to displace the public interest in having technically invalid or fraudulently procured patents shown up in their true colours. Finally, the presumption favouring the validity of patents should be diluted somewhat - unless, of course, class actions be allowed. Otherwise, the would-be attacker's task will often be too onerous for all but the strongest licensees.

Moreover, abolition of the doctrine of implied estoppel will cast into doubt the present strength of the presumption regarding validity.

It is conceivable that abolition of implied estoppel could lead inventors to fly to the cover of trade secret law in preference to disclosing their secret inventions for a patent. This presumes, of course, that the present patent system is effective in that regard;and that presumption is questionable. [14)] That aside, the threat of non-disclosure is apt to be overstated. The patent system would still retain whatever attraction it has for inventions which merit its protection, while those lacking in patentable qualities would be as well left to trade secret law.

Another possible consequence of abolition of implied estoppel is that licence negotiations will take place in an atmosphere of distrust. This view, however, attributes a greater role in licence negotiations to patents than they often would normally merit. Far more important in many licence negotiations will be the know-how and its quality. Still, that does not completely discount the possible consequence. In the case of a manufacturing patentee, the possibility of an applicant attacking the patent after it has been licensed to him could lead that patentee to exploit his invention to the exclusion of everyone else. But, again, this threat of less licensing is largely theoretical due to the numerous other factors that may virtually compel the licensing of patent(s) to an applicant. Exhuming this particular bogeyman will have small effect where the patentee cannot himself exploit his invention(s). He will be no less likely to license his invention(s) after the demise of implied estoppel than at present. If he is to have any income from his patents, the non-manufacturing patentee is compelled to license them.

These conclusions on implied estoppel are relevant to express estoppels, or no-challenge clauses. Such a clause, in any one of its several guises (e.g., as an obligation on the licensee to contribute to the defence of licensed patents), is generally unacceptable to the EEC Commission when it comes to the exemption of licensing agreements. But the Commission's policy on express estoppels is still quite crude, and in need, therefore, of a refined expression.

Finally, regarding the presumption favouring the validity of patents as granted by the patents office. If this presumption is not diluted, or a class action instituted, the prohibition of express estoppels and the abolition of implied estoppel may be neither a great loss to the licensor-plaintiff nor, allowing for a royalty-debt adjustment, much of an inducement to a would-be attacker to battle the strong odds. The strength of the presumption favouring validity will, in part, be proportional to the standards surrounding the granting of patents. An examined patent could be seen as lending greatest strength to the presumption. Hence, a policy that declares itself to be against express estoppel clauses, latently against the doctrine of implied estoppel, may in reality be little more than fashionable antitrust cosmetic in the light of a strong presumption in favour of patent validity.

Notes

1 For a general discussion on patent licensee estoppel, see Treece on "Licensee Estoppel in Patent & Trademark Cases", 53 Iowa L.Rev. 525 (1967). In real property law, a tenant is estopped from attacking his landlord's title in an action for unpaid rents: Hill & Redman on "Law of Landlord & Tenant", 15th. edition (1970), page 11.

2 Consider: the NV 'Splendor' Case (1933) 50 RPC 393. On "eviction" in US patent licensing law see, e.g., Drackett Chemical Co. v Chamberlain Co. (1933) USCC 63 F.2d 853; Scott Paper Co. v Marcalus Mfg. Co. (1945) USSC 326 US 249; McKay v Smith (1899) USDC 39 F. 556.

3 See chapter 14, this thesis.

4 25 RPC 492; also Coyle v Sprule (1942) 3 DLR 126 (Canada). On a proposal for the abolition of licensee estoppel in Canadian patent licensing law, see "Working Paper on Patent Law Revision" (June 1976, Department of Consumer and Corporate Affairs), page 279.

5 52 RPC 303; also see Pope Mfg. Co. v Gormully (1892) USSC 144 US 224.

6 Contrast here the position under US patent antitrust law which "permits an accused infringer to accept a licence, pay royalties for a time, and cease paying them when financially able to litigate, secure in the knowledge that invalidity may be urged when the patentee-licensor sues for unpaid royalties": Blonder-Tongue Inc. v University of Illinois Foundation (1971) USSC 402 US 313, interpreting the effect of the ruling in Lear Inc. v Adkins (1969) USSC 395 US 653 that abolished the doctrine of implied estoppel.

7 8 Jur. NS 713; now see Canadian Working Paper, at page 261.

8 Consider: Troxel Mfg. Co. v Schwinn Bicycle Co. (1971) USDC 334 F.Supp. 1269; on appeal, USCC 465 F.2d 1253, at 1260. Procurement of a licensing agreement by fraud would be a prerequitite to a refund of royalties: SCM Corp. v RCA (1970) USDC 318 F.Supp. 433, at 472; Nashua Corp. v RCA (1970) USCC 431 F.2d 220, at 227. As regards claims to refunds of royalties, the circuit court judgment in Troxel was followed in, among other cases, Atlas Chem. Ind. Inc. v Moraine Prod. Inc. (1972) USDC F.Supp. 353.

9 E.g., Troxel, note 8 supra, on appeal to the circuit court.

10 E.g., section 20(2)(4), German Law Against Restraints of Competition, 1957.

11 As at note 6 supra.

12 For criticism, see 39 Harv.L.Rev. 637 (1926).

13 E.g., Horton v Horton (1960) 3 AER 649.

14 See the Canadian Working Paper, as at note 4 supra, page 47.

CHAPTER 14

SALES OF PATENTED PRODUCTS UNDER DOMESTIC LAW AND EEC ANTITRUST LAW

A patented product is, quoting the definition in the Patents Act 1977,

> "a product which is a patented invention or, in relation to a patented process, a product obtained directly by means of the process or to which the process has been applied". 1)

Strictly speaking, no product ever <u>is</u> an invention, for invention is a mental concept. Invention is never a thing, in the sense of a mechanism or a physical or chemical aggregate. 2) And, strictly speaking once more, patents are granted only for inventions, not for things. Were a product rather than an idea to be protected under our patent law, a patent could at once be rendered almost worthless in commerce by anyone who could present the idea behind the product in a radically different form. However, this is not the place to quibble over definitions.

A patented product is an article or phenomenon which owes its existence to a utilisation of the invention and, therefore, tribute to the idea that is the invention. To the patent holder is due whatever 'profit and advantage' can legitimately be had from exploiting the invention. The profits, whatever they may be, from exploiting the invention fall within the patent holder's exclusive entitlement.

When a patented product is marketed by the patent holder, or by his licensee, its purchaser or lessee generally acquires, by our common law, a licence to use and/or to vend the marketed product. His licence could be gratuitous, or else be subject to a royalty or other consideration. It is <u>not</u> a rule or principle of our common law that a patentee can profit only once from his patent. To put that another way, the first <u>proper</u> marketing of the patented product does not <u>exhaust</u>, as such, the potential in the patent with respect to controlling use or destination of the marketed product after property in it passes to the purchaser. 3)

The aforesaid rule has, however, been <u>modified</u> by the Patents Act, 1977. It is now true that infringement

proceedings can no longer be brought against any act which, under any provision of the Community Patent Convention relating to the exhaustion of rights of the proprietor of a patent, cannot be prevented by the proprietor of the patent. But, under the CPC, a patent is exhausted, or capable of being exhausted, only to the extent that prevention by the proprietor of certain acts within his patent's scope would prejudice realization of the objectives of the Common Market which are set down in Article 2, Treaty of Rome. The relevant provisions of the CPC should not be read in isolation from the Treaty setting up the European Economic Community, for it was with a view to contributing to a realization of the objectives of the EEC Treaty that the Member States concluded the Community Patent Convention.

The theory of exhaustion of the rights in invention has it that the patent is "spent" by a first proper marketing of the patented product. A national patent subject to the exhaustion doctrine could be exhausted either by vending the protected product on the domestic market or by vending it on a foreign market under a "parallel" patent. [4] It is not usual, however, for wholly domestic legal systems to regard their national patents as being exhausted by a marketing abroad, when the rationale for the doctrine of exhaustion is free use and alienability on the home market. On the other hand, states which are party to the Treaty of Rome are bound by the provisions of European Community law. And, under that law, national patents can be exhausted by a first proper marketing within the territory of the Common Market. The primary aim of the doctrine of exhaustion in Community law is to serve the objectives of the Common Market set down in Article 2 EEC, by ensuring that trade between Member States is not restricted or prevented by an unwarranted resort to patent rights. Where trade between Member States is unlikely to be harmed by the exercise of patent rights aimed at regulating or preventing the use or disposition in trade of a properly marketed product, the Community law doctrine of exhaustion has no relevance to the proceedings.

Beyond this introduction, the chapter examines the licensing principles that pertain under our common law to the proper marketing of patented products. The opinion here

is that those principles are still relevant beyond the field of application of Community law. After examining the common law position dealing with implied licences to use and/or vend patented products, exhaustion of right is examined. The discussion on the doctrine of exhaustion begins with an outline of exhaustion as a principle of American common law. Thereafter, the Community law doctrine is discussed, first, as it obtains under the rules of the EEC Treaty, and finally, as it is found in the provisions of the Community Patent Convention.

Part 1

LICENCES TO USE OR VEND THE PATENTED PRODUCT

1 GENERAL PRINCIPLES

1.1 The "Absolute" Right Of An Owner

When a product is unpatented, in theory its owner has an absolute right of disposal over the product. The owner may use or enjoy it as he thinks fit. Save here, that an owner who has disposed of part of his property in the product must always tailor his use of it according to the maxim: so use your rights as not to interfere with another's rights. English law prefers, in general, the unfettered ownership of products. Only in very exceptional cases would our law prevent a purchaser from performing fundamental rights of his ownership against the product that he has bought if by his so doing a personal undertaking to the seller or a third party would be breached. Restrictive covenants may not normally burden ownership in a chattel. Under our common law, moreover, damages are the normal remedy for breach of a personal interest. The injunction is, in general, regarded as an inappropriate remedy in the case of most personal interests. [5)]

When a specific product is sold, ownership, in general, passes from vendor to purchaser when the contract is formed. Those party to an undertaking by the purchaser as to how, when or where he will exercise his rights of ownership in the product must furnish him with consideration before they can enforce his undertaking. According to our law of contract, the party who does not furnish consideration takes no part in the bargain. [6)] Thus, where A sells to B on condition that B, should he sell the product to

another, will obtain from the other certain undertakings as to its use or further disposition and B receives those undertakings from C, unless A also furnishes C with consideration for what he is undertaking he (A) cannot enforce the undertakings. If no consideration passes from A to C for the latter's undertakings, A, in order to enforce them, will have to show C's use or disposition of the product either infringes a proprietory interest he holds or is in breach of a statutory right in his (A's) favour. [7] If A cannot show either, only B, having presumably furnished C with consideration at the time of the sale, can enforce C's undertakings - and B may be neither available nor much inclined to do that. It is, of course, quite inconsequential to A's failure to furnish C with consideration for his undertakings that A is expressed to be a party to the informal sale contract between B and C.

1.2 The Exception For Patented Products

The law relating to the sale or other disposition of property in patented products holds an important exception to the principles described above. This exception stems from a distinction that can be made between ownership in an article or product and the right of privilege under the patent. [8] That a person can establish ownership in a patented product is not per se proof of payment of the tax or toll due the patent holder by virtue of his patent on the product. The patentee can demand that toll from any person who becomes owner of the patented product with a view to trading or dealing commercially in it. As Mr. Justice Buckley said long ago, patented articles

> "have this special quality or characteristic, that, except with the licence of the patentee, they cannot be used or sold, thus differing from goods in general". [9]

A purchaser of the patented product gets his licence when the patentee gets, or is in a position to get, his tax or profit under the patent. Should, for instance, B purchase the patented product not from the patentee (A), nor from another who has A's consent to market it, but from D, a counterfeit who has pirated A's idea, made the patented product and later sold it (to B), ownership in the product may well pass from D to B in the contract of sale. However,

from its inception, that product has been stamped, so to speak, with a tax in A's favour, a stamp that can be erased only by payment of the tax. [10] Thus, before he could safely deal in the product purchased from D, B would have either himself to pay the tax (and thereafter claim reimbursement of it from D, if he is still around) or to get D to pay that tax. As regards the tax itself, our domestic law makes no stipulation as to the form of the tax, profit, consideration - call it what you will - or to its quantum.

As part or whole consideration for granting a licence, A might receive from B an undertaking not to sell the patented product to C. Should B threaten a breach, or actually breach, this undertaking to A, the latter could seek an injunction to arrest the threat or the breach. Breach in fact would give an action on the contract or in the tort of infringement. Were A to found his action on the contract, one might read that as asserting a personal interest against B. On the other hand, were he to prosecute the breach through the tort of infringement, so leaving the patent's validity open to a possible challenge, A's action might be read as the assertion of a proprietory interest against the licensee.

1.3 Who Needs A Licence ?

So far as our domestic law goes, the answer to that question is that all need a licence from the patentee who acquire the patented product with a view to trading in it or through it. Being many times removed from the point where it was first properly marketed does not excuse a purchaser from obtaining the patentee's licence. [11] Without that licence, the purchaser would be apt to infringe the patent. But an act which would constitute an infringement of the patent, by virtue of section 60(5), Patents Act 1977, shall not do so if, inter alia, it is done privately and for purposes which are not commercial. Thus, it is in our domestic law [12] that the purchaser of a patented product that is intended for a purely domestic use does not require the patentee's licence for such user. In practice, of course, it would be most improbable anyway for a patentee to waste his time seeking damages or an injunction in the case of a wholly private user.

1.4 How Is A Licence Acquired ?

Apart obviously from an express grant, certain deal-

ings in a patented product which otherwise would infringe the patent but which qualify as "proper" will imply the grant of a licence to use or vend the product. A proper supply (sale or lease) of the patented product implies the grant of an appropriate licence to its purchaser or lessee. Yet, should a purchaser or lessee have notice at the time of the supply that he is not being given a licence to use or vend the patented product, quite clearly he will not acquire one. [13] Within certain statutory bounds, the patent holder is free to license or not.

2 EXTENT OF A PURCHASER'S LICENCE

The licence to use or vend the patented product does not have to be coextensive with the patent. An express licence from the patentee is normally exclusive. For instance, the purchaser of products properly marketed abroad, whether or not under a parallel patent, could be granted an exclusive licence by the UK patent holder to resell the products in the United Kingdom. Incidentally, it is an infringement of the patent, while the patent is still in force, to import the patented product into this kingdom: section 60(1), Patents Act 1977. [14] When the person supplied is notified at the time of the purchase that he is not being given a full licence in respect of the patented product, he can be pursued subsequently as an <u>infringer</u> should he exceed the limits on his licence. [15]

2.1 Limitation Of Use

The patent, where the invention is a product, prohibits all use of the product; and, where the invention is a process, the patent on it prohibits all use of any product obtained directly by means of that process: section 60(1). Thus, use of the patented product may be limited or restricted under our domestic law to any act or acts within the scope of the patent monopoly. Unfortunately here our domestic case law is lacking a case which would provide a suitable instance of the limitation of "use". But several cases have been judicially considered under American law, mostly the antitrust law. One such American case is Baldwin-Lima-Hamilton v Tatnall (1958). In BLH, the patent in suit covered a strain gauge that, when not forming part of a permanent test fixture, was used mainly for testing stress factors in aircraft wing structures. This latter type of

stress testing consumed the patented gauge. The gauge was sold by the plaintiff-patentee on express condition that it would not be incorporated by its purchaser in a permanent test bed but would be used only in tests that consumed its usefulness. [16] A conceivable aim for the condition on use was price discrimination. Likely the prohibited use was the more profitable use; and the seller was practising price discrimination by charging a higher price for the more profitable use while relying on his patent, or a patent action, to prevent low-price purchasers from cross-selling to high-price users. The limited licensing of the gauge sought to subdivide a single technological use into more or less profitable commercial uses. Uses of the patented product which are consistent with the idea claimed in the patent would fall within patent coverage. An alternative aim to price discrimination could have been the exclusion of competition from the seller's market in permanent test fixtures. Either way, the condition seeking to restrict "use" was unenforceable.

2.2 Limitation Of Marketing

Apart from being able to limit his licences with respect to function or application, the licensor could also limit them with respect to time or to space. So long, of course, as the limitations do not degenerate into an 'abuse of monopoly': sections 44 and 48(3)(d),(e), Patents Act 1977. National Phonograph Co. of Australia v Menck (1911) dealt with a licence limited with respect to the person. [17] There, a purchaser from the patentee was licensed to vend only to a commercial class of persons defined from time to time by the patent holder, and expressly prohibited from vending the patented product to any person outside the defined class. In an extensive review of our domestic law and Australian law regarding the power of patent holders to control use and disposition of patented products after sale, the Privy Council acknowledged a power given the patentee in his patent to so limit a purchaser's licence as to prohibit sale of the patented product to a specific person, or class of customers, saying too that any excess of the licence would constitute an infringement.

As well as being able to exercise control over a licensee's customers by virtue of his patent, it was at one

time within the powers of a patent holder to control the price at which a purchaser could resell the patented product. The only proviso here was that the purchaser should be given notice of the price limitation when he bought the patented product. [18] This power over resale - but not for this matter over first sale - was abolished by the Resale Prices Act 1964. It remains abolished under the Resale Prices Act, 1976. Prior to the 1964 Act, both maximum and minimum first sale and resale price limitations were seen by domestic law to fall within patent coverage, the patent not being exhausted by the first proper marketing. All who bought the patented product with notice of the price limit on resale price were bound by that notice in any subsequent dealings in the product. Infringement actions were brought against dealers and pedlars who resold patented products below the notified minimum price. [19] Since the 1964 Act, however, it is no longer possible to enforce minimum resale price maintenance through infringement actions, save perhaps in the case of secondhand patented products. But the right to enforce maximum resale price ceilings is not touched by the Acts - and this right may not be so worthless as first appearances might tend to suggest.

3 PURCHASE FROM AN INFRINGING SELLER

3.1 The Innocent Purchaser

Imagine here that the vendor though licensed in other respects is not licensed for a particular type of sale. He now goes and exceeds the licence he has been given for the patented product - say, by selling to a customer outside the scope of his licence. Does the customer get a licence ? Is the sale an "improper" marketing ? Would the purchaser be an infringer, notwithstanding his innocence of the vendor's excess ? When the purchaser is truly innocent of the excess, that is, when he has no actual or constructive knowledge of the limits to the vendor's licence at the time of the sale, the patentee will be estopped from denying that the vendor was licensed to sell as he did, and consequently also from denying that the purchaser obtained an unlimited licence to use or vend the patented product. [20] The same estoppel and consequence would hold also for an innocent purchaser from one licensed to use but not to market.

3.2 The Infringing Purchaser

When he is aware at the time the patented product is being sold to him that the vendor is not licensed to sell him the patented product, the purchaser will not get a licence for the product, for the patentee cannot be estopped from denying the vendor was licensed. Since the vendor cannot give him a licence for the product and he knows this, the purchaser must be an infringer. That much is made quite clear in the Menck Case (1911), where the defendant fraudulently induced the seller to exceed his licence in a sale of the patented product. The defendant had previously been removed from the list of dealers to whom the vendor could resell the product. Because he knew when he bought the patented products that he was excluded from the ambit of the vendor's licence with respect to those products, the Privy Council judged the defendant (Menck) an infringer.

General Talking Pictures v Western Electric Co. (1938),[21] a leading American case in this area, reached an identical conclusion with the one in Menck. American Transformer (AT) had been licensed by the patentee to make and vend electronic valves and amplifiers covered by a group of patents. The licence allowed AT to operate with and market the patented products only in the "home-use radio" field. Another, the "commercial-use", and probably the more profitable, field had been reserved by the licensor, this reservation placing the field just mentioned beyond the limits of AT's licence. General Talking Pictures (GTP) purchased amplifiers from AT, and it had notice at the time of the sale that the amplifiers could be used only for amateur, experimental or home reception purposes: the "home-use radio" field. When buying the amplifiers, GTP made plain to AT its intention to use the equipment in the "commercial-use" field; and, on its part, GTP knew that AT was not licensed to sell for use in that field. The Supreme Court held both AT and GTP to be infringers.[22]

3.3 Alternatives To An Infringement Action

If a patent action is brought against a purchaser or seller, he will be in a position to attack the patent's validity unless bound not to do so in a no-challenge agreement. To avoid that possibility, alternative actions to the

patent action should be considered. [23] First, there may be an action in the tort of unjustifiable interference with a contractual relationship, with damages as of right. [24] This particular tort requires proof of intent to defraud. It could be applied to the facts in the Menck case. Where fraudulent intent cannot be established, the facts of a case might still be actionable as an interference with a contractual relationship, though not with damages as of right. [25] These alternatives to the patent action are mentioned again when Regulation 67/1967 is discussed in Part 3, section 2 of this chapter.

4 NATURE OF LIMITS TO A PURCHASER'S LICENCE

British Mutoscope Co. v Homer (1901) [26] concerns the seizure of a patented product on the licensee's premises under the operation of a distress for rent issued by the landlord. In an obiter dictum, Mr. Justice Farwell, speaking of restrictions affecting a purchaser's use or disposition of the patented product, remarked that these restrictions would not be <u>contractual</u>: they would be "incident to and a limitation of the grant of the licence to use". If they were broken, there would be no grant at all. Without a grant, the user would infringe the patent. Similar such convoluted statements appear in a dozen or so cases dealing with the effect of limiting a licence. All seek to justify allowing a patent action for enforcing restrictions on the use or disposition of patented products by sub-purchasers. But why cannot, or perhaps should not, licence limitations be contractual ? What lies behind the judicial attitude towards licence limitations ?

The main aim of this case law seems to be the enhancement of the patent right, undoubtedly out of a belief that the patent system serves a worthwhile purpose. On the other hand, forcing patentees, or their licensees, to resort to their patent rights if they wish to control the use or disposition of property in marketed products does introduce the possibility of a challenge to validity. [27] This risk would be the price of inhibiting free use and alienability of products. It could deter the patentee, or his agent, from limiting the purchaser's licence. This gives the purchaser a measure of power against the patent.

But could licence limitations be contractual ?

Is there any theoretical block to the view that such limitations are contractual ? The view held here is that there is no block in logic or in theory to seeing licence limitations as being contractual. [28)]

One should, moreover, be quite clear on the theory of sale transactions involving patented products. For convenience, this can be broken down into three distinct though related stages:

Stage 1 The vendor holds the patentee's licence to use or vend the patented product.
Stage 2 The vendor is owner of the product and can transfer that ownership to the purchaser.
Stage 3 The vendor is the patentee's licensing agent.

As a licensee, the vendor can share in the monopoly profit from the patent. As owner, the vendor can contract to transfer his ownership in the product to a purchaser. As licensing agent, the vendor can forge a licence contract between purchasers and the patent holder.

Part 2

EXHAUSTION OF RIGHT: THE COMMON LAW DOCTRINE

Seen often as originating in the principle that no person is allowed to impose conditions which are repugnant to his grant, or that articles in communis juris should be alienable or usable free of private restraints, the rule of "exhaustion of right" has been widely adopted by the US Federal Courts. [29)] Its use in Australian common law was backed by the majority of the Australian Supreme Court in the Menck case, but the majority view was later rejected when that case reached the Judicial Committee of the Privy Council. [30)]

Typical of the many statements outlining the principle of exhaustion is one by Mr. Chief Justice Stone in US v Univis Lens Co. (1942):

> "His monopoly remains as long as he retains ownership of the patented article. /But/ the patentee may not thereafter, by virtue of his patent, control the use or disposition of the article. The first vending of an article manufactured under the patent puts the article beyond the right of monopoly which the patent confers". [31)]

At that stage, the patentee obtains or is in a position to

obtain the reward due him for his patent. As regards the marketed product, the patent is exhausted. The first vending is

> "a vehicle for transferring to the buyer ownership of the invention with respect to that article". 32)

Thereafter, the patent having been exhausted in the first proper marketing, the purchaser has no need of a licence to use or market the article.

1 CONSEQUENCES OF EXHAUSTION OF RIGHT

The main consequence is that the patentee can no longer resort to the patent action to control a use or disposition of property in the properly marketed product. The same consequence would, of course, obtain under our domestic law when an unlimited licence to use or vend the patented product is granted, whether expressly or impliedly. Under the doctrine of exhaustion, the patentee, or his agent, as vendor, is no less free than he is without the doctrine to take a contractual promise from the purchaser regarding his subsequent use or disposal of the marketed product. And if a court would award him damages or an injunction to remedy a breach, threatened or actual, of this essentially personal interest, the patentee loses only the immunity which patent coverage sometimes is seen to afford restrictions from an action for infringements of the antitrust laws, or from rules calling for registration of restrictive agreements.

The subpurchaser whose limited licence is seen not to import a <u>contractual</u> restriction or contractual restrictions could, according to our domestic law, be faced with a patent action were he to exceed his licence for the product. Quite obviously, exhaustion of the patent precludes the patent action as a means of enforcing restrictions on the use or disposal of the marketed product by the subpurchaser. Having neither a patent action nor a contractual action with which to enforce restrictions, the patentee would have to turn to statute law or to Equity for support for his claim to control over a subpurchaser's use or marketing of the marketed product.

The restrictive covenant is a creature of Equity. But, in the Menck case, the Privy Council denied that restrictive covenants might "run with goods, because the goods

are patented". [33] The weight of the judicial authority on which the Council had come to rely was against that view. On the other hand, the same authority did not favour the doctrine of exhaustion. Thus, what finally emerged from Menck was the implied licence theory that is still with us: all purchasers need the patentee's licence to use or vend a patented product, but a licence, which could be limited by notice given at the time of purchase, would be implied from a sale of the product by the patentee, or by another with the patent holder's consent. Limitations of the purchaser's licence would not be contractual.

2 OPERATIVE BASE FOR EXHAUSTION IN AMERICAN LAW

First sale, rather than first vending, is usually seen in US trade law to effectuate an exhaustion of the patent right. [34] Vending is wider than sale, and includes the leasing and hiring of patented products. The first sale must be a proper sale. An innocent purchaser who cannot trace his purchase to a proper sale is, for all innocence, still no less an infringer against the patent, and must, therefore, either invalidate the patent right in any infringement proceedings or pay the patentee a toll to exhaust the patent, if he will accept a toll from the infringer. [35]

3 EXCEPTIONS IN AMERICAN LAW

The General Talking Pictures case, the facts of which have already been given above, is an exception to the rule that the patent is exhausted on a first sale by the licence. There, the patents were, quite obviously, not exhausted by AT's sale, because the defendant was judged an infringer against the patent and the patentee held entitled to enjoin the defendant's alienation of the amplifiers. But, then, the sale to GTP could be regarded as "improper". Moreover, the limitation in AT's licence was quite valid under the antitrust laws, it being within the scope of the licensor's patent. Another, more recent case which creates an exception to the doctrine of exhaustion is Tripoli Co. v Wella Corp. (1970). [36] There, the circuit court granted an injunction in a patent action to restrain the resale of products to non-professional cosmetic users. The patentee's desire to protect both itself against product

liability claims and the public against non-professional application of its product justified the resale restriction.

4 AMERICAN ANTITRUST POLICY

It seems nowadays to be antitrust policy, rather than the principle of free use and alienability, that is raison d'etre for the doctrine of exhaustion. [37] Indeed, it was from cases brought under the Sherman Act that the doctrine began to emerge. Under the US antitrust laws, restrictions in a simple patent licence which fall within the scope of the licensed patent(s) escape or are immune from "per se" prohibition. Yet, exhaust the patent right by a first proper sale, coverage from "per se" prohibition is lost so far as restrictions on the use or disposition of the marketed product by its purchaser are concerned. However, there is little doubt that the Federal Courts have been inclined at times to ignore the "per se" rule when convinced that a restriction or practice serves the public good, as in the Tripoli case mentioned above. The case must be a pretty strong one, though, before the courts will give way on "per se" prohibition. For instance, in US v Glaxo Group Ltd. (1969), [38] the district court condemned as a per se violation of the Sherman Act a restriction on the bulk resale of patented drugs. Prior permission from the patentee was needed to resell in bulk. The court dismissed as a justification the patentee's claim that the restriction was designed in the public interest to maintain uniform standards of health and safety.

Part 3

EXHAUSTION OF RIGHT: THE COMMUNITY LAW DOCTRINE

This doctrine applies within the field of application of EEC law. Beyond that field, which must be understood and defined by reference to the objectives of the Rome Treaty, the Community doctrine of legal exhaustion is inapplicable.

1 ARTICLES 30 - 36 EEC

These provisions are aimed at the liberalization of trade between Member States of the Common Market. They prohibit quantitative restrictions on exports, imports and goods in transit, and measures having equivalent effect to such restrictions. However, such restrictions and measures

can be introduced by a Member State when they are necessary for, inter alia, the protection of industrial and commercial property, although they are not to be a means of abritrary discrimination or a disguised restriction on trade between Member States. [39] In the case of a patent, then, when may restrictions or equivalent measures be introduced ? To answer that question, one must first know what is comprised in the patent of invention, in order that steps may be taken to protect the substance of the right.

As the Court of Justice put it in the Parke, Davis case, the essence of the patent of invention is

> "the exclusive right to use an invention with a view to manufacturing industrial products and putting them on the market for the first time, either directly or by granting licences to third parties, as well as the right to oppose infringements".
>
> (Emphasis added) 40)

Thus, restrictions or equivalent measures may be introduced to trade between Member States where they are necessary for the protection of the essence of the patent as described. There would, therefore, be no justification under Article 36 for restrictions or equivalent measures designed for the protection of the patent holder's position when the rights have already been exhausted by a proper marketing of products on the common market. Should products be improperly marketed, then, of course, the essence of the property would remain to be protected as against an import of those products to the UK market.

2 ARTICLE 85 EEC

The doctrine is relevant in the context of Article 85, for if patent rights are exhausted contracts designed to restrict the competition of exports can no longer be justified by appealing to the necessity of protecting those rights.

> "Contracts having as their object the grant of manufacturing or sales licences for a patented product are not in themselves necessarily incompatible with the competition rules of the Treaty. If however in view of the overall conduct of the parties and the economic and legal context in which these agreements are intended to operate, it can be concluded that these contracts are serving as the basis for a practice aimed at

> partitioning national markets, without it being possible to justify it by reference to the protection of rights which are the specific purpose of the patent in question, that can be reflected in the evaluation of the lawfulness of the contracts themselves which make possible or at least facilitate such practices". 41)

And it is in fact reflected in Commission Regulation 67/1967 which evaluates the lawfulness of exclusive agreements to resell patented products, or distribute patented products, within the Common Market. 42)

In Article 1, the regulation declares the inapplicability of Article 85(1) to

> agreements to which only two undertakings are party and whereby
> (a) one party agrees with the other to supply only to that other certain goods for resale within a defined area of the Common Market; or
> (b) one party agrees to purchase only from that other certain goods for resale; or
> (c) the two undertakings have entered into obligations, as in (a) and (b) above, with each other in respect of the exclusive supply and purchase for resale.

Goods are "certain" under the regulation when they are identifiable by special characteristics which enable consumers to demonstrate their preferences. Those party to the agreements covered in the regulation may come from the same Member State and the agreement(s) may be concerned with resale within that State. Agreements caught by Article 85(1) which comply with the conditions in the regulation benefit automatically from an Article 85(3) exemption. They do not, therefore, have to be notified by the Commission.

The automatic exemption is lost, however,

> where the contracting parties make it difficult for intermediaries or consumers to obtain the goods to which the contract relates from other dealers within the common market,
> in particular where the contracting parties exercise industrial property rights to prevent dealers or consumers from obtaining from other parts of the common market or from selling in the territory covered by the contract goods to which the contract relates, which are properly marked or otherwise properly placed on the market.

Such an exercise of rights is denounced in the preamble to the regulation as abusive, for being designed "to create absolute territorial protection". Such protection is the bête noire of the Commission's nightmares. But so much should not be read as implying that absolute territorial protection of a distributor is prohibited 'per se' by Community law. Indeed, that is quite far from the truth when, as in Cadillon v Hoess Maschinenbau (1971), only a trivial or insignificant market share is absolutely protected.

If not properly placed on the common market, then, contract goods could be excluded from his marketing territory by the holder of an exclusive licence to market such goods in the United Kingdom without his exercise of the national patent rights being abusive in the sense indicated. For example, if A licenses B under a French patent to manufacture and market the patented goods in a territory exclusive of the United Kingdom (where he has already exclusively licensed C under a parallel patent to market the patented goods), assuming the territorial restriction is valid under Article 85(1), C could legitimately exercise his patent rights to defend his territory against imports of contract goods marketed improperly by B in breach of his licence restriction. Marketing in breach of a validly restricted licence should not exhaust parallel patent rights covering the marketed goods. The automatic exemption would continue to operate.

Besides through the exercise of industrial property rights, intermediaries and consumers can be prevented through other means from obtaining the goods to which the contract relates. "Unfair competition" actions like those mentioned earlier as alternatives to a patent action could be prosecuted for the protection of a territory. To counter a possible resort to such actions, Regulation 67/1967 withholds the automatic exemption where the contracting parties

> "exercise other rights or take other measures to prevent dealers or consumers from obtaining elsewhere goods to which the contract relates or from selling them in the territory covered by the contract".

A taking of "other measures" would include a refusal to deal,

or discriminating against intermediaries. [43]

3 THE COMMUNITY PATENT CONVENTION

This convention, referred to in an earlier chapter, [44] was concluded between the Member States of the European Economic Community, and its aim is to define the effects within the Community of the European Patent (E.P.). The E.P. is a creature of a separate convention, the European Patent Convention (E.P.C.), which applies in European countries both within and beyond the territory of the EEC. The E.P.C. establishes a European patent system, and its aim is to rationalize and simplify procedures for granting patents, and to offer businessmen the possibility of obtaining an examined E.P. with just one application. The E.P. will have the effect of a national patent in the Contracting States and, when granted, will, in principle, be subject to the domestic laws in each Contracting State. The E.P. applicant will have a choice in the matter of which Contracting States a E.P. should be granted for. But, in the case of applicants from the Member States of the EEC, were such a choice available to those applicants, it could have been so exercised as to distort competition and create barriers to the free movement of goods on the common market. Thus, there arose a need for a second convention, the Community Patent Convention.

The aim of the C.P.C. is, to quote the EEC Commission,

> "to bring about free movement of patented goods in the Common Market and also to bring about equalization of competitive conditions in that sector. These twin purposes will be achieved by eliminating the restrictions resulting from territoriality of national rights of protection".

In order to attain the stated aim and avoid fragmentation of the market, the national patents of the Member States are combined in the C.P.C. to form a single patent, the Community Patent (C.P.). This means that the E.P. can be granted only in respect of all the Member States together and not for some of them only. The C.P. will have the same effect in all the Member States, and it will lapse, be transferred, or be revoked only as a single entity. Rights conferred under a C.P. will be governed solely by the provisions of the C.P.C.

In seeking to abolish territorial limits for the marketing of patented goods, Article 32 CPC prohibits the division of the Common Market into national markets.

> "Protected products must be able to move freely after the owner of the patent has put them on the market in any part of the Community. This rule applies to products marketed by the holder of a contractual licence or a licence of right".
>
> (EEC Commission)

Article 78 CPC applies the same principle in cases where the right of protection does not arise from a C.P. but from one or several national patents that belong to one owner or to persons who are tied to him economically. This provision, however, merely restates the doctrine of exhaustion which, for nearly a decade, has applied under the Rome Treaty to the marketing of patented products under parallel patents.

Part 4

CONCLUSION

It is a rule of our common law that, to use or market in this country products which are subject to another's patent, their owner needs that other's licence. That the patent holder's licence is required for what otherwise would infringe his patent rights is an old, well-tried rule of our domestic law. Under our common law, patent rights are not exhausted by the first proper marketing. The nearest to exhaustion of rights that our common law knows is the unlimited licence to market or use the patented product. If there are limits to a purchaser's licence, those restrictions are not contractual. They must, therefore, be enforced through the patent action, so leaving the patent exposed to the possibility of a challenge to its validity in the absence of a no-challenge contract binding the purchaser.

Exhaustion of the patent right, as a principle of property law, springs from the view that ownership in chattels should pass free of equitable servitudes. To that principle there may be added a more general, less legal view favouring exhaustion on the basis that the patent holder should be allowed only one bite of the apple, and that bite when he first markets the patented product. To permit the patentee to tax dealings in the product beyond its first

proper marketing - to permit him as many bites of the apple as he can arrange - is said to be inequitable. Exhaustion of rights does equity both to the patent holder's interests and to the interests of consumers.

As a principle of trade law, exhaustion of right frees the trade in patented products from artificial barriers that otherwise would inhere in judicial remedies for the patent action, and consequential administrative actions. Liberated through the doctrine of exhaustion from measures having effects equivalent to quantitative restrictions on exports and imports, patented products have unhindered access to the national markets of the Member States of the Common Market. This enhances competition, both quantitatively and qualitatively. Free trade and unrestricted competition are at the foundations of a common market.

Notes

1 Section 130(1).

2 E.g., see judgment of Mr. Justice Roberts in US v Dubilier Condensor Corp. (1933) USSC 289 US 178.

3 E.g., Minnesota Mining Mfg. Co. v Geerpres Europe Ltd. (1973) FSR 138.

4 Strictly speaking, there is no such creature as a truly "parallel" patent owing to differences in standards of patentability between many patent-issuing countries.

5 Crossley Vaines on "Personal Property", 1962 edition, pages 128-136; Port Line Ltd. v Ben Line Steamers (1958) 1 AER 787; on the availability of injunction to restrain the breach of a person interest, see Jackson on "Principles of Property Law", 1967 edition, page 389.

6 Dunlop v Selfridge (1915) A.C. 847.

7 Maximum resale price maintenance can still be enforced under our domestic restrictive trade practices legislation against any purchaser with notice.

8 National Phonograph Co. of Australia v Menck (1908) 7 CLR 480, at 538 (Australia).

9 Badische Anilin u. Soda Fabrik v Isler (1906) 23 RPC 180.

10 E.g., Belvoir Finance v Stapleton (1971) 1 QB 210, at 219; the innocent purchaser would have an action against the seller under the Sale of Goods Act 1893, as amended, for breach of an implied condition as to "right to sell"; Microbeads A.G. v Vinhurst Road Markings (1975) 1 WLR 218, commentary by W.R. Cornish, JBL, April 1975, page 142; consider also section 62(1), Patents Act 1977.

11 E.g., Heap v Hartley (1889) 5 RPC 603.

12 Apart from the 1977 Act see: Frearson v Loe (1878) 9 Ch. D. 48; and, e.g., Skee Ball Co. v Cohen (1922) USCC 286 F. 275.

13 Isler case, as at note 9 supra.

14 "...where an importer imports into this country articles made abroad, but in accordance with a British patent, for the purpose of distributing and selling them in this country, he quite plainly is using and exercising the patent, and he thereby infringes the patent the moment he introduces them into this country": Pfizer Corp. v Ministry of Health (1965) 2 WLR 387, at 411 (per Lord Upjohn).

15 E.g., Incandescent Gas Light Co. v Cantelo (1895) 12 RPC 262.

16 USDC 169 F.Supp. 1. The limitation here was judged prohibited per se under the antitrust laws. Agreements or practices are prohibited per se "because of their pernicious effect on competition and lack of any redeeming virtue". They are "conclusively presumed to be unreasonable and therefore illegal without any elaborate enquiry as to the precise harm they have caused or the business excuse for their use". Per se prohibition "also avoids the necessity for an incredibly complicated and prolonged economic investigation into the entire industry involved, as well as into related industries, in an effort to determine at large whether a particular restraint has been unreasonable - an enquiry so often wholly fruitless when undertaken": Northern Pac. Rly. Co. v US (1958) USSC 356 US 1.

17 28 RPC 229, commentary by Hogg at 28 LQR 73 (1912); also Sterling Drug v Beck (1972) FSR 529.

18 E.g., Dunlop Rubber Co. v Longlife Battery Depot (1958) RPC 473.
19 E.g., Columbia Gramophone Co. Ltd. v Murray (1922) 39 RPC 239.
20 Isler case, as at note 9 supra.
21 USSC 305 US 124.
22 By reasoning back from this, it is valid to suggest that, being improper, the first sale by the licensee did not exhaust the patent action.
23 See generally "Competitive Torts (Interference with Contractual Relations)", 77 Harv.L.Rev. 888, at 959 (1964).
24 E.g., National Phonograph Co. v Edison Bell Co. (1908) 1 Ch. 335.
25 D.C. Thomson & Co. v Deakin (1952) 2 AER 361; BMTA v Salvadori (1949) 1 AER 208.
26 18 RPC 177.
27 See chapter 13, this thesis.
28 See appendices to this thesis, page 215.
29 Chafee on "Equitable Servitudes on Chattels", 41 Harv. L.Rev. 945 (1928).
30 Menck case, as at note 8 supra; see further the Canadian "Working Paper on Patent Law Revision" (June 1976, Canadian Department of Consumer & Corporate Affairs), pages 112-115, 141-142, and 204-206.
31 "But quite obviously the article is not carried outside the monopoly in the sense that a chair may be carried outside a room; no phenomenon susceptible to empirical validation is involved": Baxter on "Legal Restrictions on Exploitation of the Patent Monopoly", 76 Yale L.Jo. 267, at 280 (1966).
32 USSC 316 US 214.
33 The judgment of the JCPC was handed down by Lord Shaw, who also handed down the judgment in the (now-discredited) Lord Strathcona Case (1926) A.C. 108 to the effect that restrictive covenants might "run with" unpatented chattels in the hands of their owners.
34 Is the right to exclude from "use" also exhausted by a first sale ?
35 E.g., in Aro Mfg. Co. v Convertible Top Replacement Co. (1964) USSC 377 US 476, the Ford Motor Co., without the patentee's licence, practised an invention covered by a combination patent. Those purchasing from Ford were regarded as infringers, even though they were purchasers for a domestic user only. Thus, those, like Aro, who repaired the invention could also be held to have infringed the patent.
36 USCC 425 F.2d 932.
37 Gibbons on "Field Restrictions in Patent Transactions: Economic Discrimination & Restraint of Competition", 66 Columbia L.Rev. 423 (1966).
38 USDC 302 F.Supp. 1.
39 See, e.g., B. Harris on "Application of Article 36 to Intellectual Property", 1 ELRev. 515 (1975-76); W. van Gerven on "The Recent Case Law of the Court of Justice Concerning Articles 30 to 36 of the EEC Treaty", 14 CMLRev. 5 (1977).
40 Parke, Davis & Co. v Probel (1968) CMLR 47.
41 A.G.'s submissions in Centrafarm v Sterling Drug Inc. (1974) 2 CMLR 480, commentary by W.R. Cornish, JBL, January 1975, page 50.
42 See generally, Alexander on "Article 85 of the EEC Treaty and Exclusive Licences to Sell Patented Products",

5 CMLRev. 465; Dam on "Exclusive Distributorships in the US and the EC", 16 The Antitrust Bulletin 111 (1971); Mailaender on "Le Reglement D'Exemption De Categories D'Accords D'Exclusive", Cahiers de Droit Européen (No. 1), 1968, page 38; Alexander on "La Licence Exclusive Et Les Regles De Concurrence De La CEE", Cahiers de Droit Européen (No. 1), 1973, page 3; for commentary on the new draft regulation in this area, see V. Korah, JBL, October 1977, page 369.

43 See above, page 194, section 3.3

44 See chapter 8, this thesis, page 101-102, notes 8,9, and 10.

GENERAL CONCLUSION

"The old order changeth,
yielding place to the new".
(Tennyson)

Certain components of the new antitrust order for patent licensing are already quite definite in EEC law and policy. Other components have been published in draft form. When the complete new order is enacted in the promised EEC regulation on patent licensing agreements, it is likely to come down fairly heavily against the licensing agreement which evidences no likely compensating benefits (in the form of economic or technical progress) for the public detriment inherent in its anticompetitive effect. By comparison, our old domestic legal order for patent licensing agreements allowed the patent holder an almost unchecked hand when licensing his patents, thus, in a sense, equating with the public interest the essentially private interests of licence parties. No such equation is implicitly assumed in EEC competition law.

Indeed, in that law, the balance is tilted, and being tilted further, in the direction of competition which is undistorted by private agreements that advance a sectional or party interest in the field of patent exploitation. The draft patent licensing agreement released by the EEC Commission in January 1977 represented quite a revolution in EEC patent antitrust thought. The priesthood of patent affairs, possibly seeing in that regulation the thin end of a mean-looking wedge, began heaping generally mild abuse on the originators of the draft. Typical of comment hostile to the draft regulation is that of the Director-General of the CBI who is reported to have said: "Those in charge of competition policy, for example in the Common Market, have got patent licensing in a vicious grasp and are in danger of throttling it to death"(Financial Times, 3/6/77). Another, rather more wild statement attributed to a CBI official was that "the proposed regulation would put an end to all patent licensing". That kind of talk is really quite nonsensical. Compared with US patent antitrust law, the draft regulation is still pretty mild stuff. There is no convincing evidence

that the far harsher attitude of US antitrust law towards restrictive licensing agreements, backed up by heavy fines, a treble damages action, and possible imprisonment for the law breakers, has throttled patent licensing to death. Though it may have harmed the pockets of patent lawyers. It is open to question whether the industrialist, as distinct from lawyers advising industry, would have many complaints about the basic philosophy behind the proposed draft.

APPENDICES

ANTITRUST IMMUNITY FOR PATENT LICENCE RESTRICTIONS: THE PATENT COVERAGE CONCEPT

A useful introduction to the matter for discussion here lies in the following extract from the Canadian "Working Paper On Patent Law Revision" (June, 1976). The Working Paper, dealing with activities which constitute excessive anticompetitive use of patent rights, observes:

> "In general, undue injury to competition in the marketplace may arise through use of patents in two different respects. The power of a patentee under the patent right to withhold access to an invention may be so influential, either during its normal term or by reason of effects that persist after its expiration, that it impairs the ability of the marketplace to operate in its otherwise normal fashion. Under these circumstances the mere existence of a patent right may serve to enhance or entrench the monopoly position of the patentee in the marketplace beyond the limits contemplated in adopting the patent law. This situation may partly be met by the compulsory-licence provisions of the proposed draft law which make licences available in the public interest where industry is unfairly prejudiced by lack of access to an invention.
>
> A patent right may also be used as a bargaining instrument to influence or control conditions in the marketplace lying outside the scope of the monopoly contemplated under the law. It is this latter abuse, associated with the right to license, that has generally attracted the most attention in considerations directed at reconciling the patent and competition laws. One of the main issues which must be considered in determining the boundaries of fair business practice in respect of the use of patent rights is the extent to which patentees may bargain with their right to license an invention.
>
> One method of defining a reasonable boundary to be imposed on licensing negotiations might be to decide that any act which allows the patentee to expand his monopoly beyond the scope of his patent grant should be considered an offence. Alternatively, any attempt by the patentee to limit activities not falling within the power of prohibition under the patent might be considered an offence. .....
>
> An alternative proposal [is to list] provisions which arguably should be prohibited in licensing arrangements as attempts at unreasonable extensions of the monopoly grant.... Consideration of whether provisions of these types should be expressly prohibited... requires an individual cost-benefit analysis of their impact on the competitive market

> mechanism, on the one hand, and their effect on the patent system as an incentive instrument, on the other hand. One test which could be applied might be to evaluate whether such practices are necessary in order to ensure that the patent right still serves as an adequate incentive instrument. If a practice significantly enhances the motivational force of the patent right, then this should be balanced against the costs of permitting such practice. If the privilege of conducting such practices is not of major relevance to persons who might otherwise be expected to be influenced by the patent right, then some other justification will have to be found for allowing a departure from maximum free competition". 1)

In at least two legal systems that come to mind - in the United States and in Germany - there are delineated through the scope of the patent method islands within, or upon, which certain licence restrictions are immune from antitrust prohibition or avoidance. The EEC Commission itself once adhered to the view that limitations of the patent holder's exclusive right of prohibition would not bring the licensing agreement within the field of application of Article 85(1). No appreciable restriction of competition was seen as likely to arise from the mere withholding of permission to do what otherwise was prohibited by the patent right. This method of exempting licensing practices from the prohibition in Article 85(1) sought to ease the costly administrative burden - judging the legality under Article 85 of thousands of licensing agreements - that otherwise would have needed shouldering in the early days of EEC competition policy development by a relatively inexperienced staff. 2)

The administrative burden having eased somewhat and great experience having been gained by the EEC Competition Directorate in the field of patent licensing agreements, the scope of the patent method has been discarded in practice by the Directorate. Indeed, the head of the section responsible for the supervision of patent licensing practices has gone as far as to write in a recent book:

> "The theory of the scope of the patent is incompatible with the requirement of uniform validity for Community law; for the content of the protection rights is determined by each national law. Therefore Community law would undergo a varying degree of restriction in the scope of its application in each Member State. Each Member State would be free also to change the scope of Community law subsequently by changing the scope of its industrial protection rights. In other words, national law supersedes Community law. The only reason why this theory is still seriously advocated is that its supporters close their eyes to the consequences of their views". 3)

In a footnote to the foregoing opinion, the same writer mentions that the scope of the patent theory has been raised by most German writers to an axiom of legal logic. Anticipating what has yet to be discussed, the opinion held here is that the legal "logic" upon which the scope of the patent theory is based is defective.

So far as our own domestic restrictive trade practices statute is concerned, the scope of the patent method has not been adopted. Instead, our domestic law has opted for a statutory formula which exempts, rather than immunises completely against antitrust action, certain licence restrictions. Licensing agreements with registrable restrictions do not have to be registered with the Office of Fair Trading when said restrictions fall completely within the statutory formula. However, when a licence agreement whose registrable restrictions fall beyond the statutory exemption formula has, in compliance with the Restrictive Trade Practices Act 1976, been registered, those restrictions, whether "limitations" or not, have no automatic immunity from prohibition and avoidance under the Act. At least two writers, though, would contest the view just expressed with respect to "limitations". Their opinion is that there are beyond the ambit of the 1976 Act all licence restrictions falling within the scope of the patent. Or, to coin the words of one of them, licence restrictions that arise from the existence of the patent are not within the intention behind the 1976 Act. 4) The "logic" underlying their view is that which is offered as underlying the scope of the patent theory in German law. It can, therefore, be no less defective than its German parent. The aim in the following discussion is to expose that deficiency, and to highlight other inconsistencies that would arise were the scope of the patent theory to be introduced by judicial amendment to the 1976 Act. It is rather odd that the scope of the patent theory should be advocated for our domestic law when other legal systems are ridding themselves of its illogicality and its harmful consequences.

Part 1

OBLIGATIONS WITHIN PATENT COVERAGE

The antitrust theory of the scope of the patent immunity for certain licence restriction finds its roots in the exclusive rights that the patent system confers on inventors who disclose their patentable inventions. These rights are comprised in the patent and actionable through the tort of infringement. It will be remembered from the opening chapter of this thesis that a patent gives its holder not the (positive) right to make, use or market the invention himself, or to authorise others to do so, but the (negative) right to exclude or enjoin others from doing so. Thus, a licence obligation which is positive in essence - which requires the doing of some act - would be wholly inconsistent with the patent prohibition.

1 First Steps With The Theory

In domestic law, licences under a patent do not have to be coextensive with the exclusive right of the

patent holder. If he should license another to make, use or market the invention subject to his patent, the patentee may grant that other a limited authority. And so long as the latter remains within the boundaries of his permission or licence, he is immune from the patent holder's action for infringement of his patent rights. 5) When the licence is coextensive with the patent, there are no boundaries whose crossing could justify an infringement action. Moreover, and quite obviously, the outer theoretical limits of a licence cannot exceed the patent itself. If the patent should be exceeded, statutory or common law rights are infringed.

A licence which is limited to some rights short of the full right of action for infringement could be seen to have left a "logical" remainder of patent rights in the licensor's hands - rights which would entitle him to an infringement action in the event the limitations in the licence are exceeded. Arguably, that right of action vests the licence limitations with the "in rem" nature of the patent right itself.

Consistent with the "logical" remainder action for infringement, the licensor could pursue through an action in tort the marketing of a patented product at a price or prices other than the one stipulated by the licensor. 6) Here, the licensor may be seen as having reserved to himself the right to market the patented product at any price other than the one(s) stipulated, his patent giving him a right to enjoin the marketing of the patented product at any imaginable price.

Again, there is encompassed by the patent a right to prevent the patented product being marketed to or by a particular person who does not have the patentee's licence. That follows from the patentee's right to exclude "in rem" from the field covered by his patent. Since he can do the greater, it might be seen to follow that the patent holder is entitled to license for the lesser and thereby control the licensee's customer's for the patented goods. 7) To exceed the control clause is to invade the "logical" remainder of the licensor's rights and, in domestic law, risk an action for infringement.

On the foregoing basis it would be allowable for the patent to be conceived in licensing and for the purposes of an infringement action not as a single indivisible right but as one divisible by the holder. It could, in other words, be seen as a right of many parts, each part taking its nature from the whole, rather like pieces of ice from a greater block which are no less ice merely because they are mere pieces.

But this rather neat theory about licence limitations, or restrictions, is defective in the light of property theory and of logic. The apparent symmetry breaks down under test.

2 Common Law Contract Theory And Logic In Relation To Licence Limitations

To begin with, it is well established in our common law that only the person furnishing consideration for another's promise can enforce that promise. In other words, all share in a bargain who furnish consideration for the promises exchanged. There is no consideration in a promise

to abide by, or execute, what is already required by statute or by contract law. 8)

At this point, it is appropriate to mention again the opinion of our domestic courts regarding the nature of a licence limitation. The oft-expressed opinion of the courts is that a licence limitation is not contractual. 9) It is conceivable that this opinion has been prompted by the aforementioned rule of consideration, though without doubt other elements had a hand in its shaping. But how tenable is that opinion as a matter of legal logic ?

When subjected to logical analysis, the opinion becomes far less tenable. To begin with, there is nothing to contest in the view of the patent as a collective right of exclusion: the patent prohibits all manufacture and all marketing of the invention by everyone, apart from the patent holder's agents. Thus, the greater right may conveniently be said to include the lesser rights of exclusion, since "all" includes "some". It is, however, axiomatic that "some" is not "all". And what the patent prohibits is "all" (which includes "some"). Conversely, the patent does not prohibit "some" but not "all". This may be illustrated by a simple example. Suppose there is a legal rule which stipulates that a quorum must comprise ten persons. It is perhaps trite to add that five persons cannot comprise that quorum. Clearly, though, "ten" includes "five". Yet, "five" but not "ten" cannot constitute the stipulated quorum.

If a limitation in a patent licence is tested in that way, it falls within the notion of "some" but not "all". Clearly, it is "some" but not "all" of what the patent action prohibits. It could, therefore, be contractual.

3 Property Theory And Notice Of Limitations

Logic, at least, is capable of showing how defective is a view that obligations implicit in the practice of confining a licensee to certain acts within the patent prohibition are really restrictions which inhere in the greater right of exclusion. But there is a further string which can be added to the bow of defeasance. It is the requirement in our domestic law that, to be enforceable, limitations in a licence must be notified to the licensee at the time he accepts his licence. Likewise, terms are unenforceable as part of a contract unless they are brought to the offeree's attention before the contract is formed.

As a general rule, the patent can be enforced against persons who have no prior notice of its existence at the time they utilise or practise the invention, or purchase the patented product. This quite obviously contrasts with the rule for the enforcement of a licence limitation. 10) Because it is a right "in rem", the patent is enforceable without prior express notice being given of its existence. 11) Thus, limitations in a patent licence do not have the "in rem" nature of obligations in the patent and cannot, therefore, be seen as arising from the existence of the patent action. Even in theory, they do not form "part(s)" of the greater right.

4 Inherent Restrictions

Much fostered by German legal theorists, the inherent

restriction theory is simply another way of expressing the theory of the licence obligation within patent coverage. The inherent restriction inheres in the greater right whereby competition in or through use of the invention may be prohibited. Because it is seen to inhere in the very existence of the greater patent restraint, the inherent licence restriction is mechanically argued as being incapable of restricting competition to a degree greater than what has already been restricted by the existence of the patent action. Since, moreover, it is believed to inhere in the existence of the patent action, the limitation is argued to lie beyond the existence of agreements. 12) This is an extremely robotic way of thinking about matters in the realm of practical affairs. It is defeasible on the basis of logic alone.

5 Propositions Derived From Theoretical Misconceptions

5.1 Domestic Restrictive Trade Practices Law

So far, at least two writers have advanced the view that the concept of "restriction", as defined in the Restrictive Trade Practices Act 1976, does not embrace licence restrictions which arise from the existence of the patent. 13) The 1976 Act, they say, touches only restrictions or obligations that arise from an agreement or arrangement. Their view is advanced on the basis of a finding by one court that, although it was accepted in an agreement by the parties, an obligation laid down in a statute fell beyond the scope of the restrictive trade practices legislation. The case which involves that finding is Re. British Waste Paper Association's Agreement (1963). 14)

The relevant facts of this case are as follows. The Association's agreement had been registered under the 1956 Act. It contained standard descriptions for the various grades of waste paper. The standard itself required that every standard grade of waste paper should be supplied free of wax and other contaminants. It could be avoided only by special agreement. As regards the standard, which, of course, imposed an obligation on Association members, the court found that it did not constitute a "restriction" within the meaning of the 1956 Act (now the 1976 Act). It therefore lay beyond the scope of the requirement in the Act that registrable restrictions be justified in the public interest. The court based its finding here on a belief that, had they sold the waste paper contaminated with wax or another substance, Association members would probably have breached the condition implied in contracts for the sale of goods by section 14(1) or (2), Sale of Goods Act 1893. It was probable, therefore, that the standard found in the Association's agreement existed, as a matter of statute law, apart from that agreement, in section 14(1) or (2). Absent it from the agreement, the standard would probably have existed in the 1893 Act.

But can this finding form a reasonable basis for advancing the view stated above about the inherent restriction theory being part of our domestic law ? Only by ignoring fundamental differences between the patent action and section 14(1) or (2) could the court's finding in the Waste Paper case be used as a foundation for that view. Unlike the patent

action which imposes an obligation on all except the patent holder, section 14(1) or (2) imposes an obligation on all sellers of goods without exception. No one person has the right described in the section exclusively, for all have it equally who are buyers of goods, the right being implied by the statute into every contract which is subject to the Act. Another fundamental difference between the patent and the condition implied by section 14 is that the former is property while the latter is part of the sale contract. The right of action in section 14 exists against the seller, and not against persons generally. There is, despite those differences, one point of basic agreement between the patent and the right given to buyers by section 14. Neither depends for its enforcement on notice being given to those affected by the right of action of the existence of that right. In contrast to the patent right and the right in section 14, the right given by a licence limitation is a creature of express prior notice to the licensee. Even if the aforesaid differences are not seen as destroying the basis for the inherent restriction theory in domestic law, its deficiency lies in the logic of the patent quite apart from the problems it poses for the rules of consideration.

But the deficiency in the view contested here does not mean the Waste Paper ruling cannot be applied to obligations in patent licensing agreements. Say, for instance, a licensee is prohibited in the licensing agreement from utilising an invention covered by an unlicensed patent. 15) Absent the licensing agreement, the unlicensed patent would itself prohibit utilisation of the invention it covers. The restriction in the licensing agreement would, therefore, in reality, arise from the unlicensed patent. Said restriction could not, however, be said to inhere in the licensed patent(s), for quite clearly it does not.

5.2 EEC Competition Law

It is, in the main, German legal writers who have contended that licence limitations are beyond the field of application of Article 85(1) because the restrictions they create arise not from agreements but from the patent itself. As Oberdorfer, Gleiss & Hirsh put that contention:

> "Article 85(1) does not apply to restraints upon the licensee within the legal scope of protection under municipal law, because the restriction of competition does not exist by virtue of agreements but by virtue of the exclusive right of the owner". 16)

But within the scope of the patent as they see it would fall essentially positive obligations: obligations which are inconsistent with the essential "in rem" nature of the patent action.

> "The duty to obtain raw materials from one particular source does not, however, fall within the framework of Article 85(1) <u>if the purchase from a third party would indirectly constitute an infringement of the patent</u>. The latter question, again, must be determined in accordance with national law. The case here postulated is one in which in reality the restriction is still

> covered by the scope of the protection and therefore outside the operation of Article 85(1)". 17)
>
> (Emphasis added)

This particular approach to tying obligations did not, however, commend itself to the Commission when it was delivering its now-defunct opinion in the Notice on Patent Licensing Agreements (1962). It did not share in the opinion that the action whereby the breach of a licence obligation might be redressed should be the sole determinant of the patent's scope in antitrust law. Indeed, determining the patent's antitrust scope in the field of licence restrictions by reasoning back from the form of action allowed for redressing the breach of a licence restriction, or from the availability of a particular remedy, is not unlike concluding that ten is five plus five rather than four plus six, for no reason other than the fact of ten. Clearly, that is a defective way of reasoning. What should determine the patent protective scope for licence obligations in antitrust law are the likely effects for the economy.

Part 2

OBLIGATIONS BEYOND PATENT COVERAGE

An obligation beyond the scope of the patent may be put simply as an obligation which seeks to deprive the patent licensee of some right not already abstracted from him by the licensed patent itself. Thus, an obligation is not within the scope of the licensed patent if it prohibits the licensee from utilising the subject matter of an unlicensed patent, or from utilising an unpatented product or process. It is possible, nevertheless, using logic, to extrapolate the patent action so as to bring within the protective coverage for antitrust law purposes licence obligations which are inconsistent with the negative "in rem" quality of the patent.

1 Logical Extrapolation Of The Patent

Possibly the most original analysis of patent logic was undertaken by Mr. Powell in 1917. In a quite brilliant analysis, he demonstrated how, by logic, the patent right could extrapolated so as to bring within its immunity coverage from antitrust prosecution almost any licence condition, whether consistent or not with the "in rem" characteristic which is essential to a property species. 18) Indeed, writing his path-breaking economic analysis of the patent monopoly some 50 years after Powell's analysis, 19) Professor Baxter goes so far as to assert that

> "A promise by the licensee to murder the patentee's mother-in-law is as much 'within the patent monopoly' as is the sum of 50 dollars".

That is, of course, as a matter of logic.

Clearly, quirks of logic should not become of sole arbiter of antitrust (in)action. As Powell himself wrote, the question of

"whether the result of holding the right divisible along the lines in issue would be consistent or inconsistent with the objects which the patent statute was passed to promote [should not] be resolved by any inexorable logic".

The tool which should be used is

"not the syllogism but a practical judgment about practical consequences".

2 Obligations Undertaken By Licensors

First principles say that the patent confers on its holder a right to exclude <u>others</u> from manufacturing or marketing the patented product. If the patentee should exclude himself by agreement from exploiting the licensed patent, the obligation on him would fall beyond the scope of that patent. It is within the object of, for instance, an exclusive licensing agreement that the licensor is excluded from exploiting the licensed patent on the licence field. And, as in Pfotzer v Aqua Systems (1947), a formal sole licence may be effectively exclusive in the company of other clauses in the licensing agreement. Its possession of patents, remarked the US circuit court in Pfotzer,

"did not give the Aqua Company any immunity under section 1 of the Sherman Act, for it restricted its freedom to make and sell the patented articles and that freedom it derived from the common law, not from patent law". 20)

Part 3

CONCLUSION

The antitrust theory of the scope of the patent gives immunity to licence restrictions from prohibition, or avoidance, under the antitrust laws. The reason for according the immunity may be to allow patentees to contract for restrictions which are reasonably adapted for extracting reward from the patent monopoly. Or the immunity may be reasoned on the basis that, having the right to prohibit all use or marketing of his invention, the patentee must be seen to have the lesser right, that is, to license his invention on any term or condition best suited to his plans for exploiting the patent monopoly. 21) Yet, again, the immunity may be granted as a purely administrative convenience. Where the immunity prevails, its effects on the economy are ignored.

Legal systems that give immunity from antitrust prosecution to licence restrictions 'within the scope of the patent prohibition' may confine that immunity to so-called "simple" licences. Put another way, cross-licences with restrictions which, in a simple licence, would be immune from the antitrust laws for being within the scope of the patent, may not be immune from antitrust infringements. The EEC Commission's 1962 Notice excluded from the opinion therein cross-licences and package licensing. 22)

The scope of the patent concept is usually theorised in most legal systems on a basis that the patentee has a right of prohibition, a right "in rem" to exclude.

Where, absent the licence, a patentee by virtue of his patent action could prevent something being done, the act subject to his patent action is within the scope of his unlicensed patent. It is seen by some to be entirely logical, therefore, that if said act should be expressly prohibited in a licensing agreement, the restriction it raises is due to the patent and not to the agreement. Unfortunately, there are no limits under this kind of "logic" to obligations or restrictions which might be seen to fall within the scope of the patent. And all that aside from the opinion here which holds the "logic" about licence restrictions within the patent's scope to be fundamentally deficient.

Our domestic restrictive trade practices statute, the Restrictive Trade Practices Act, 1976, gives no immunity from prohibition in the "public interest" to registered patent licence restrictions which, in theory, might be said to fall within the scope of the patent. Indeed, it is the duty of the Restrictive Practices Court to declare as contrary to the public interest any restriction caught by the Act in an agreement registered under the Act, save where the restriction falls within the category of restrictions to be "disregarded" for the purposes of applying the Act. Parties to the agreement may justify a restriction within the scope of the Act by taking it through one or more of the several "gateways" to the public interest. 23) Parliament could consider an amendment to the 1976 Act, possibly by directing that an 'inherent restriction' in a patent licence be disregarded by the Court, thereby removing the need to justify it in the public interest. At present, however, an inherent restriction (or licence limitation) must be regarded as prohibited unless justified by the parties to the registered, or registrable, agreement. No decision in our domestic law gives any reason which would support the contrary.

Notes

1 Pages 155-160; "But the criteria defining what constitutes use of patent rights sufficient to merit prohibition on grounds of competition policy have generally been left to be established under the Combines Investigation Act": Working Paper, page 155.

2 See the EEC Commission's Notice on Patent Licensing Agreements (1962); also R. Jaume on "Lizenzvertraege und Wettbewerbsregeln", 12 WuW 775 (1972).

3 Johannes on "Industrial Property And Copyright In European Community Law", 1976 edition, page 12, and note 35.

4 Cunningham on the "Fair Trading Act", 1974 edition, page 257; also Korah, JBL, January 1977, page 80.

5 National Phonograph of Australia v Menck (1911) 28 RPC 229 (JCPC); Incandescent Gas Light Co. v Brogden (1899) 16 RPC 179.

6 E.g., Dunlop Rubber Co. Ltd. v Longlife Battery Depot (1958) RPC 473.

7 Menck Case, note 5 supra.

8 E.g., Collins v Godefroy (1831) LR 6 Ch. 239, 242.

9 E.g., Brogden Case, note 5 supra; Menck Case. Several American courts have said that infringement actions should not be brought for the breach of licence limitations. The proper action was seen as lying in contract: R. Ellis on "Patent Licences", 1958 edition, discusses the caselaw on this point.

10 See the cases as at note 5, supra.

11 But as regards enforcement of the patent through an action for damages, see section 62, Patents Act 1977.

12 Oberdorfer, Gleiss & Hirsch on "Common Market Cartel Law", 1971 edition, page 20. For criticisms see: Adelman & Juenger on "Field-Of-Use Licensing" ("The Fallacy Of Inherency"), 50 New York U.L.Rev. 273, at 288 (1975); Buxbaum on "Restrictions Inherent in the Patent Monopoly: A Comparative Critique", 113 U.Pa.L.Rev. 633 (1965).

13 As at note 4, supra.

14 2 AER 424.

15 Prestcole Corp. v Tinnerman Products (1959) USCC 271 F. 2d 146.

16 As at note 12, supra.

17 Consider also Incandescent Gas Light Co. v Cantelo (1895) 12 RPC 262; section 44, Patents Act, 1977.

18 "The Nature Of A Patent Right", 17 Columbia L.Rev. 663 (1917).

19 "Legal Restriction On Exploitation Of The Patent Monopoly", 76 Yale L.Jo. 267 (1966).

20 USCC 162 F.2d 779.

21 Cantelo Case, note 17 supra.

22 On exceptions in US antitrust law, see, e.g., Neale on "Antitrust Laws Of The USA", 1970 edition, page 302.

23 "We see also that, because a patent confers a recognised and lawful monopoly, the tests applied by the Restrictive Practices Acts on the subject of the 'public interest' would have to be materially relaxed for any investigation into 'public interest' in relation to patent licences and assignments": Banks Committee on the British Patent System, Cmnd. 4407 (1970). This seems to admit the conflict theory about patents and competition law.

SOME BASIC ECONOMICS: ELASTICITY OF DEMAND

TAKEN FROM: D.B. Suits on the "Principles of Economics", 1970 edition.

1 WHY IS DEMAND ELASTIC ?

Leaving aside for the moment the question of why people appear to be more sensitive to the prices of some things than they are to the prices of others, let us explore a more fundamental question. Why is demand elastic at all ? Why, virtually without exception, does a reduction in the price of a commodity lead people to buy more of it ?

If we ask a housewife why she buys more at lower than at higher prices, she is likely to say that she can "afford" more at the lower price. But what, exactly, does she mean ? How is it that a family with a 15,000 dollar income can "afford" a new car when it costs 2,000 dollars, but not when it costs 3,000 dollars ? The answer is, of course, that the family has many claims on its income. In addition to a car, it needs food, clothes, books, medicine, insurance, and so on indefinitely. Spending money on one of these things necessarily means not spending the same money on something else. The true cost of a purchase is not the actual dollars given up for it, but the opportunity cost represented by the sacrificed power to buy something else instead. To say we can "afford" something means only that we would rather have that particular thing than any of the other things that the same money could buy.

Effective expenditure of income requires some kind of budgeting. Some families draw up formal budgets, detailing the monthly expenditure pattern that will make the most of their incomes. Other families budget by an informal process based on managing the family's purchases. In either case, proper budgeting means seeing to it that each purchase is worth its opportunity cost; that no trivial desires are satisfied at the cost of failure to satisfy a more serious need.

1.1 The Margins Of Consumption

One reason that demands are elastic is that choices reflected in family budgets are not, in general, between having something or doing without it altogether. We do not choose food instead of clothing. Rather we must choose whether we want a little more food instead of a little more clothing, or we must choose whether we want a little better quality of food instead of a little better quality of clothing, and so on. The question is not whether the family is going to buy steaks or shirts, but whether the family is going to buy a few more steaks or another shirt. The steaks, shirts, and other goods that enter this comparison are not those in the "centre" of the family budget, so to speak, but those on its "edges" or "margins", where small amounts can be shaved off or small additions can be made. The quantities involved in these small changes are referred to as marginal quantities of the goods in question. If a family is buying six shirts a year, the budgetary question is whether a seventh shirt would be worth the extra steaks that

could be bought instead. The seventh shirt and the extra steaks are marginal quantities.

In these terms, the opportunity cost of acquiring the marginal quantity of one good is the marginal quantities of other goods that must be foregone. We do not compare the usefulness of shirts in general with steaks as a whole. We compare the marginal shirt with the marginal steaks. Proper budgeting then means that all marginal expenditures must be worth their opportunity costs.

A change in the price of a commodity changes its opportunity cost. For example, at a price of 10 dollars, an extra shirt requires the sacrifice of 10 dollars worth of extra steaks, books, neckties, or other things. At a lower price the purchaser can have the extra shirt and still have some of the extra steaks, books, or whatever he wants. The opportunities sacrificed to the shirt are less valuable than before. Some purchasers who did not want the extra shirt at 10 dollars because the opportunity cost was too high will buy when the cost is reduced.

1.2 Diminishing Marginal Utility

Another reason that people tend to buy more of a commodity as its price declines is that, in general, the more of any good a family consumes, the less importance is attached to increasing its consumption. Expensive goods are reserved for high-priority uses. As their prices come down they are applied to uses of less and less importance. For example, in some parts of the world, poor mountain villages are 2 or 3 miles from the nearest water, and all water must be carried in small quantities by donkey. Because of its high cost, water is reserved for important purposes: cooking, drinking, essential washing. If additional water were available, people would wash clothes more frequently, bathe occasionally, and shave more than once a month. In a modern American city, in contrast, water is freely used for cooking, drinking, washing, sanitation, and even for lawn sprinklers, decorative fountains, swimming pools, and drinking fountains, where it often runs all day.

What is true of water applies generally to all goods and can be expressed in several ways. As the consumption of a good increases, marginal quantities are employed for less and less "valuable" purposes. The marginal units are put to "lower-priority" or "less essential" uses, or used to satisfy less "intense" wants. In economic analysis, concepts like the "value" or "priority" of use, the "essentiality" or "intensity" of the want satisfied by marginal quantities of a good are summarized in the term marginal utility. Thus situations like water consumption are described as exhibiting diminishing marginal utility.

Because marginal utility diminishes, that is, because additional quantities must be put to lower-priority uses, unless their opportunity cost is lowered by price reductions families will not be willing to purchase them. If the price rises, the good is forced out of low-priority uses. The rate of consumption declines and marginal utility rises.

1.3 Differences In Tastes And Incomes

A third important reason that demands are elastic

is that families differ in their income and in their preferences for different goods. One family attaches great importance to having a new car every year. Another keeps the car 10 years, preferring to spend their income on more expensive vacations or a better house. When the price of the car falls, however, the latter family may replace the car every 5 years, doubling their annual rate of purchase. Differences in income are probably even more important. At very high prices, the opportunity cost of a new car to even a modest-income family is inadequate housing, poor diet, and lack of medical care. When the price is lowered, the sacrifice becomes correspondingly smaller and permits the family to buy. Each reduction in the price of cars puts new cars within the reach of families with lower incomes, and increases the annual quantity purchased.

2 Elasticity Of Demand For Different Types of Goods

The elasticity of demand for particular items depends on the nature of the consumer needs they satisfy. Necessities have inelastic demands because most people resist cutting their purchases when prices rise, and they often have little use for more when prices declines. The demand for luxuries, on the other hand, tends to be more elastic. Luxury items disappear from the budgets of many families when their prices rise, and price reduction puts them within the reach of more people who are eager to have them.

2.1 The Substitution Effect Of Price Changes

It is rare that a good provides a unique service or satisfaction. Most often there are large groups of goods, all of which serve much the same purpose. Such goods are "substitutes" because they can replace each other in the family budget. Fountain pens, ball-point pens, and fibre-tipped pens, pens with cartridge refills, plastic pens, and metal pens are all interchangeable for most purposes, and can be used to serve the same, or very similar ends. Slacks and sports coats are substitutes for suits, and a jacket can substitute for an overcoat. Iron, steel, aluminum, and glass cooking utensils are substitutes for each other, and stainless steel can be used instead of silverware on the table. There are, of course, all degrees of substitution. A fibre-point pen, for example, is not a perfect substitute for a ball-point pen when carbon copies are wanted, but for most purposes one will do as well as the other. Different brands of the same commodity probably represent the closest substitutes, but commodities as different as air travel and season tickets to local football games are substitutes insofar as both are recreation.

Lowering the price of a commodity tends to increase its use at the expense of its substitutes. This is known as the substitution effect of the price change. The strength of the substitution effect depends on how easily a commodity can be substituted for others. Since altering the price of a commodity with close substitutes exerts a strong substitution effect, such goods tend to have highly elastic demands. A reduction in the price of one attracts a large proportion of customers away from the other, now more ex-

pensive substitutes, while an increase in its price easily drives customers away. Altering the prices of commodities that have no close substitutes exerts only a weak substitution effect, and such commodities tend to have inelastic demands.

The demand for commercial laundry service is relatively elastic. As a substitute, many housewives do their own washing at home if they have the equipment or employ the services of coin-operated machines if they do not. The resulting demand elasticity has been estimated to be 1.02. In contrast, dry cleaning done at home is not a close substitute for commercial service, and the elasticity of demand has been estimated to be only 0.45.

2.2 Aggregation And The Substitution Effect

An important aspect of the substitution effect is that the elasticity of demand depends on how broadly commodities are defined. When we deal with great aggregates like "food" or "clothing", we expect relatively inelastic demands. Buyers have few substitutes to turn to when food or clothing prices rise and often have little use for extra consumption when prices fall. The more narrowly a commodity is defined, the more close substitutes it will have for most of its uses. If instead of food in general, we confined our analysis to meat, we expect to find a more elastic demand because of the available substitute sources of protein. The elasticity of the demand for beef is even higher, since pork, lamb, or poultry can easily be eaten instead. Sirloin steak has even more substitutes and is even more elastic in demand.

The most narrowly defined commodities are different brands or makes of products that are in essence almost identical. The demand for toothpaste may be relatively inelastic, but a particular brand of toothpaste, sold in competition with a very large number of substitute brands, will have highly elastic demand. The elasticity of demand for automobiles has been estimated to lie somewhere between 0.6 and 1.0, but the evidence suggests that the elasticity of demand for any particular make of car is close to 4.0. In other words, if the average price of all new cars declines by 10%, the total number of new cars sold tends to rise by something between 6 and 10%, but if one manufacturer, say, Ford, should reduce the price of its cars by 10%, while the prices of substitutes produced by American Motors, Chrysler, and General Motors remained unchanged, Ford's sales would rise by about 40% at the expense of its competitors. As we shall see, high elasticity of demand for the products of individual business firms is of key importance in industrial pricing and competition.

2.3 Complementary Goods And Elasticity

Some commodities are not used alone, but as part of a total package in which they are combined with others in more or less fixed proportions. Gasoline, for example, is rarely used by itself, but it is consumed in combination with motor oil, tyres, and other items essential to the operation of an automobile. Commodities that are used together in this way are called "complements".

In a sense, complements are the opposites of substitutes. When consumers buy more of one substitute, they

usually buy less of another, but when they buy more of one complement, they usually buy more of the others that go with it. For this reason the demand for any one commodity in a group of complements tends to be relatively inelastic. The important thing to the buyer is not the price of the individual commodity, but the price of the entire package. The elasticity of demand for the complete package of complements might be 2.0, but if the price of one complement makes up only 25% of the total, a 1% reduction in its price lowers the price of the total package only 0.25%, and increases the quantity purchased by only 2 x 0.25, or 0.5%. In other words, the elasticity of demand for one complement member of a group of complements is equal to the elasticity of demand for the total package multiplied by the proportion of the price of the component to the total cost.

Gasoline, motor oil, and tyres are 3 components in a package required to operate a car. If the price per mile driven is 0.015 dollars for gasoline, 0.015 dollars for oil, and 0.010 dollars for tyres, the cost of gasoline is only 37% of the 4% per mile operating cost. Even if people responded to a reduction in the cost per mile with a demand elasticity of 1.0, the elasticity of demand for gasoline would be only 0.37 x 1.0, or 0.37.

ROCHE PRODUCTS' SUBMISSION ON COMPETITION FROM NON-REFERENCE DRUGS

TAKEN FROM: U.K. Monopolies Commission Report On The Supply Of Chlordiazepoxide And Diazepam, 11 April 1973, paragraphs 102 - 110.

We asked Roche Products to indicate the nature and extent of competition with the reference products, including products which, although not themselves reference products, were considered to be therapeutically similar. The company submitted that the reference products are in competition with other drugs besides those classified as tranquillisers. Roche Products' reply consisted of some 900 pages in five volumes supported by certain published material. As we have been provided by the company with a total of some 1,200 pages dealing with the matter of competition from alternative products, it is not practicable here to do more than indicate the main arguments put forward by Roche Products on this point.

The company identified a large number of products which, it argued, were in some way in competition with the reference drugs. As a first step the company identified the therapeutic uses (25 in all) to which the reference products had been put by doctors (although the company stressed that only a small proportion of these uses had been the subject of promotion by the company). The next stage is to identify other groups of drugs (38 in all) which are also put to one or more of the foregoing 25 therapeutic uses by doctors. Lastly, the company attempted to identify all the drugs falling within the 38 drug groups. As a result of this process over 600 products were found and listed.

The company produced a chart to show which of the 38 drug groups may be used for each of the 25 therapeutic uses. Thus the benzodiazepine group (which includes the reference drugs and some non-reference drugs) may be used for all 25 purposes, the barbiturate sedatives for 24, the phenothiazines for 21, and so on. 16 drug groups, comprising 242 drugs, are shown as being in competition with the reference products for less than four of the therapeutic uses to which the company says the reference products are put.

In addition to the products listed, Roche Products said that it suspects that there are approximately 1000 other products competing with the reference products, manufactured by small concerns but available only in limited geographical areas. It has not taken these into account as competitors. Nor has it taken into account that many of the milder conditions, for which the reference products are used, may be treated by 'over-the-counter' products not obtained on a doctor's prescription. It regarded competition from these products as significant. Other preparations which it considered as commercially important and competing with the reference products were diuretics and corticosteroids; again these have been excluded.

The company referred to the safety of the benzo-

diazepines as a further factor affecting competition. It has pointed out that barbiturates are now responsible, through suicide and accident, for a large number of deaths each year. By comparison, it says that the reference products are virtually free from this risk. Indeed, it adds that there are experts in the field of toxicology who believe that no single patient has yet died from the effects of chlordiazepoxide taken by itself, unless there was some other complicating factor.

Roche Products concluded that in the broad range of indications for which the reference products are prescribed by doctors there were at least some 600 competitive products. In no case, it maintains, was one of the reference products the only readily available therapeutic agent and in most instances there were numerous alternative products. However, it argued that the cost of therapy with the reference products 'may be regarded as being at the inexpensive end of the spectrum rather than the reverse. Indeed, the inexpensive nature of therapy with the reference products may be one reason for this success'. It said that if a qualitative test of acceptability, efficacy and the absence of side effects were taken into account, the reference products appeared in a very favourable light. From this point of view, the company told us, other drugs could not easily compete with the reference drugs, with daily dosage costs clearly amongst the lowest when compared with competitive products.

The company told us that although it regarded the reference products as a 'major advance' in the terms used by the Hinchliffe Report, and an outstanding development, it did not regard the reference products as unique, although it agreed that they were subject to less than the normal degree of competition from run-of-the-mill products. However, two large American concerns, the company said, were introducing competitive benzodiazepines and this would affect the market in the future.

The company has also shown the value of annual sales in 1970 of the 618 products which it argues are in competition, including the reference drugs. We have summarised this information as follows:

	I	II	III	IV
Sales of £5m and over	1	6,372	10.8	0.1
Sales between:				
£1 and £5m	9	17,081	29.0	1.4
£0.5m and £1m	11	7,598	12.8	1.7
£0.4m and £0.5m	8	3,557	6.05	1.1
£0.25m and £0.4m	23	7,257	12.3	3.7
£0.1m and £0.25m	65	9,951	16.9	10.4
£1000 and £0.1m	300	7,124	12.1	48.7
Sales of less than £1,000	81	27	0.05	13.1
Sales for which no figures are given	118	-	-	19.5
Sales for which no figures are available for 1970	2	-	-	0.3
	618	58,967	100.0	100.0

[I:'Number of Products'; II:'Value of Sales'; III: '% by Value'; and IV:'% by Number']

On the basis of the company's argument, the reference drugs accounted for 13.4 per cent of the value of sales and one drug methyldopa (Aldomet), used in the treatment of hypertension, for 10.8 per cent of total sales of nearly £59m. Of the non-reference benzodiazepines, Mogadon (marketed by Roche Products) accounted for sales of about £1.4m, and Serenid (Wyeth's oxazepam) for sales of £372,000. The company conceded that of the 600 or so products which it argued were in competition with the reference products a number were not commercially serious competitors.

FISH FINGERS IN EVERY PIE

TAKEN FROM: 'Sunday Times Business News', November 14, 1976. A commentary on the U.K. Monopolies Report On The Supply Of Frozen Foodstuffs.

What could possibly prevent /Birds Eye/ becoming the IBM of the sub-zero larder ?

The short answer was, and still is, competition. Certainly Birds Eye had a long start, and big reserves. But when a market is expanding as quickly as this one, with mouth-watering profits to nibble at, someone will find both a will and a way. Lyons had a go and retired hurt. Nestle from Switzerland and Findus from Scandanavia decided it was well worth a whirl. Ross, the Grimsby fish people, found their own way to drive in a wedge. After some of the others ran into trouble, Imperial, the diversification-seeking tobacco giant, put its own enormous resources to work.

That certainly got a lot of new labels into the trade. But in itself it might not have been enough. Monopoly, with only one big contender, is clearly the worst situation, but oligopoly, with a few of them carving up the market at will, is almost as bad.

For a time it looked as though that was what we were getting. "Findus and Ross Foods have until recently been unwilling to sell at prices above those of Birds Eye for fear of losing sales, yet have felt unable to undercut Birds Eye's prices to any significant extent because of Birds Eye's cost advantages and of uncertainties as to the likely response of Birds Eye to such a price cut". In other words, stalemate all round, and crinkle chip eaters of the world just hang on to your purses.

But somehow it did'nt quite work out like that. While we were all bemoaning the lack of initiative in British business, the death of the profit incentive and the stifling effect of the large corporation, a whole new freezer-based industry was taking shape before our very eyes.

Was there restricted choice for the housewife, as the big boys fought, with discounts, loans, threats and special offers for their share of the grocer's limited refrigerated space ? Then suddenly there was a rash of "freezer centres" with all the space and choice in the world. Was there a boring sameness about all those mixed veg, chicken bits and filleted fish ? Then all at once there was a proliferation of exotic specialists.

Was there no escaping from the pricing policies of the big three ? Contract freezing firms, and refrigerated transport firms sprang up to create a new "own brand" trade, whereby every supermarket chain or corner shop could get into the game.

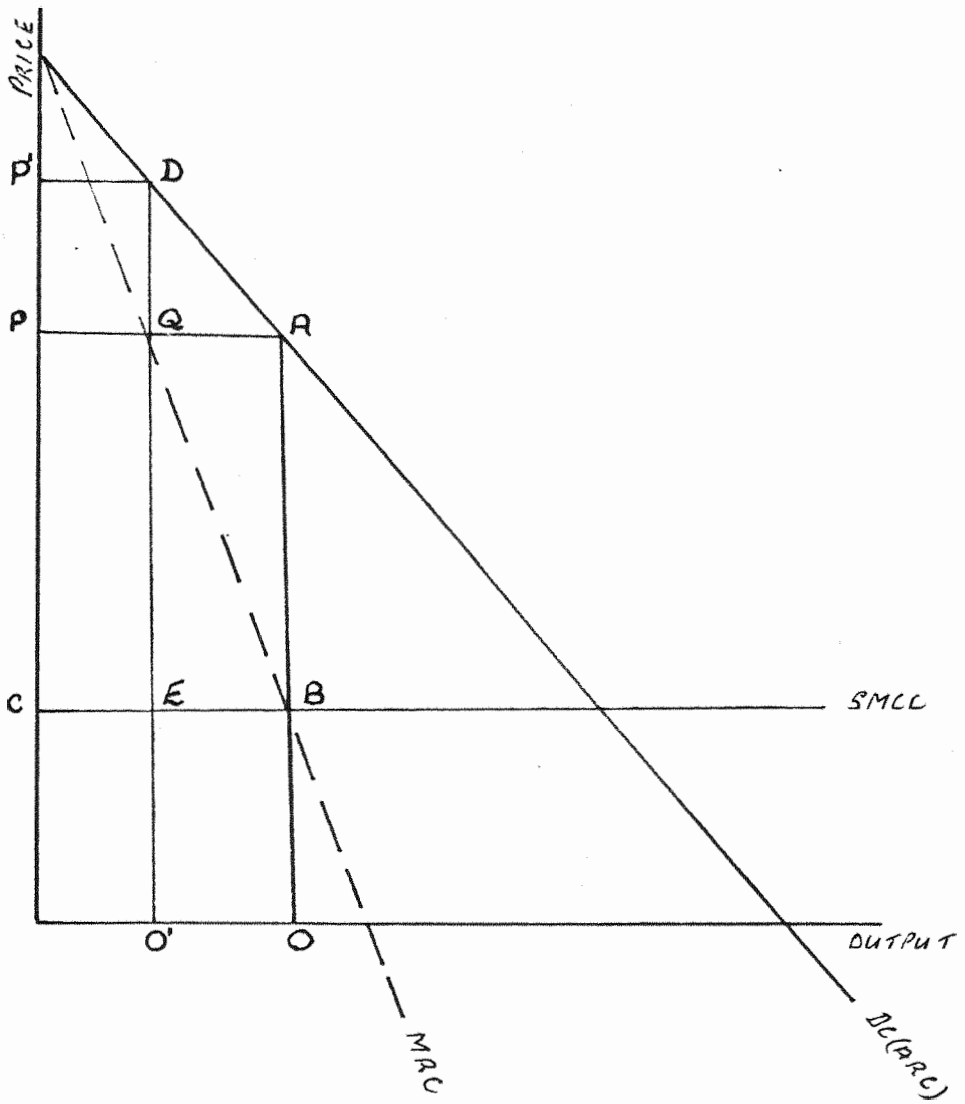
The truth is that frozen food, once a tightly held preserve, is now about as close as you can get these days to an open market. Even adding in all Unilever's other activities in this line - MacFisheries, Wall's meat and ice-cream, Mattessons, Woods and Marine Harvest - it took the Commission a great deal of mathematical ingenuity to establish that the group has more than the 30% of the trade which constitutes even a technical monopoly.

And even then it found remarkably little to criticise. Effectively the net product of its 119 page reflections is one single recommendation - that Birds Eye should drop its practice of giving discounts to grocers willing to reserve space in their freezer cabinets. Even that will be effective only if all their major competitors agree to drop it too. In my children's derisive phrase for inadequate punishment: "slap wristies". I shudder to think what it all cost.

THE EFFECT ON ROYALTIES OF FIXING AN OUTPUT FLOOR OR PRICE CEILING

The demand curve for the product is DA. A monopolist would maximize his profits by setting the price at the intersection of SMCC (short-run marginal cost curve) and MRC (marginal revenue curve) for any given market. In other words, maximum profits are forthcoming when an increment of output adds as much to revenue as to cost. Nobody is presumed to purposely spend an extra £1 to get an extra ninety pence.

The patent holder would like the price to be P and the royalty revenue to be PABC (at royalty rate P-C). With the maximum price set at P, the output will be O and the patentee can squeeze the maximum monopoly benefit from the licensee. No reduction in output will be possible. Being a submonopolist, the exclusive licensee would include the royalty P-C in the cost, thereby pushing SMCC up to PA. To maximize his profits, the licensee would sell at P', reducing his output to O' and his royalty payments to PQEC, an area smaller than PABC.



PROFIT MAXIMIZATION THROUGH PATENT TYING ARRANGEMENTS

Useful Introductions:

1. Some Basic Economics: Elasticity Of Demand, page 222.
2. J.S. Bain on "Price Theory": Chapter 9 (Price Discrimination), 1952 edition.
3. Alchian & Allen on "University Economics": Chapter 8 (Price Discrimination) and Chapter 20 (Derived Demand for Productive Resources).

References

1. Bain, as above at 2.
2. Bowman on "Tying Arrangements & the Leverage Problem", 67 Yale L.Jo. 19 (1957).
3. Burstein on "A Theory of Full-Line Forcing", 55 Nw.U.L.Rev. 62 (1960).
4. Baxter on "Legal Restrictions on Exploitation of the Patent Monopoly", 76 Yale L.Jo. 267 (1966).

GENERAL INTRODUCTION

In the jurisprudence of patent licensing law, the view is met, not infrequently, that tying arrangements rightly are, or should be, illegal because they are an extension of the patentee's legal monopoly to the tied (unpatented) product (consider the dicta of Romer, LJ, in Huntoon Co. v Kolynos (1930)). But how valid is this view of the tying agreement ? In what sense, if any, could it be said that tying "extends" the patent to the market in the tied product ? If a tying agreement aims not to restrict competition in unpatented products or processes but simply to extract the full economic reward from the patent monopoly, might the practice not be seen as properly incidental to the economic exploitation of that monopoly ? Is prohibiting tying agreements, or at least controlling them to the extent that the full potential profit in the patent monopoly cannot be extracted, not depriving the patent holder of some of what is promised him for disclosure of his trade secret ? It is through answering these questions that the economic rationale in support of tying agreements as reasonably incidental to the patent monopoly will be explained.

A tying agreement would, in theory, be indispensable to the economically perfect exploitation of the patent monopoly only under variable-proportions complementarity. When X (tying product) and Y (tied product) are fixed-proportions complements the price of X cannot be raised above the joint (X & Y) profit-maximising price without affecting the demand for Y. A similar effect would obtain in respect of the price of Y. The patentee (A) could not, by tying Y to X, gain beyond what is theoretically inherent in his patent. Increasing the price of Y beyond the profit-maximising point for X & Y would lower the demand for X and effectuate a fall in profits.

As fixed proportions complementarity does not persist in the man-made world, raising the price of X may increase the demand for its free complement Y. (Examples of

immutable proportions can be found in the physical world: like atoms in steady state, for instance, always have the same number of electrons orbiting the nucleus). Where there is an increase in demand for Y when the price of X is raised, interchange (or substitution) is occurring. Further increases in the price of X when Y is readily obtainable on the open market will lead to increased interchanging of X with Y, until eventually the use of X with Y will be abandoned. In a true fixed-proportions case, tying Y to the supply of X would not be rational as the tie would add nothing to A's net income when he is otherwise able to set the profit-maximising price for X (i.e., when X is not subject to governmental price regulation).

Tying Y to X will be rational only when these complements are used in variable proportions. And even here, the practice will need to be profitable in order to be rational. In other words, if the cost of administering and policing the tying agreements exceeds their potential returns to A, tying Y to X will not be rational - unless, of course, the practice aims at some end beyond what is contemplated in the patent grant, and then the tying agreement may be illegal. Thus, a tying agreement might be presumed as being aimed at extending the patent monopoly unless the practice can be explained in terms of maximising revenue returns to the patent on X. For instance, tying might be profitable if the patentee can identify substantially different demands for his invention. A tying agreement could then be employed both to isolate the different demands for X and to price each to the patentee's maximum advantage. Consider the following.

A licenses his patent to two licensees, B and C. B uses X more intensively than C. There is no legal obligation on A to supply X without account as to its potential usefulness to a licensee. Indeed, A being a price-searching supplier out to maximise the profits from his patent on X, could schedule different prices for the different "amounts of usefulness" of X to B and C. Those who use X more intensively than others could be asked to pay a higher price. Under this system, almost every unit of X will be sold efficiently - or, put another way, the exchange will waste far fewer units of X. Thus, A's desire for greater returns to his patent encourages, albeit indirectly, its most efficient use.

By asking B and C to pay for X in proportion to its usefulness to their respective needs, A causes X to be used more efficiently than if its cost had borne no relation to its usefulness. A tying agreement might allow A to discriminate profitably. The tied product (Y) would act merely as a "meter": a unit of Y passing through A's control system would "count" a unit of X. If, however, the proportions of X to Y could still be varied by the user, obviously an X-count would be inaccurate to whatever degree variation remained practicable. And if cheating were likely, a discriminatory tying agreement could be highly unprofitable. The counting theory assumes, therefore, an ability both to determine with considerable accuracy the proportions of X to Y and to prevent cheating with respect to the use of X.

1 THE PRICE DISCRIMINATION HYPOTHESIS

Maintenance of a system of discriminatory pricing

of the patented invention, rather than extension of the patent monopoly to the tied (unpatented) product, may be what a tying agreement aims at. The essential conditions for the practice of price discrimination have been identified by Bain as

> "(1) the ability of the seller to segregate buyers into groups or submarkets in a meaningful fashion so that he can enhance his profits by charging different prices in the two submarkets, and
>
> (2) his ability to prevent - or the existence of natural circumstances which prevent - the retransfer of goods from the lower- to the higher-priced submarket.
>
> Both conditions are necessary. The first is probably found rather frequently, the second less frequently".

A doctor, for example may charge the rich more than the poor for an exactly similar operation. That is an obvious feature of our present health service in this country - though it is by no means an undesirable feature of medical practice. Legal practitioners are known also for engaging in price discrimination. Electricity charges may vary according to whether or not current is used "on" or "off" peak; and the ordinary household tends to be discriminated against in favour of industrial users. Discriminating monopoly is practised only if the goods or services sold in the low-price market cannot be profitably transferred to the high-price market. If, say, well-dressed persons were charged a higher price for a good or service, either badly-dressed would practise profitable arbitrage or all customers who were aware of the discrimination would dress badly. Thus, the basis of discrimination must be carefully chosen. A person's address or occupation may be an indicator in the practice of discrimination.

The patentee, to the extent he has an economic monopoly in his patent, may have a fertile field for sowing the seeds of profitable discrimination. If he can hive off, so to speak, the different markets for the invention from each other, keeping them apart by patent rights or contractual rights, the patent holder, or his agent, can charge a different price in each market, thereby maximising his profits, or at least with that end in view. As between two (or more) markets, the most profitable price will always be lower in the market <u>where demand elasticity is the greater</u>.

> "[The] price discrimination hypothesis seems to say: tying arrangements will be used by firms facing customers who are fundamentally different from one another in the sense that their demand curves for the tying goods differ. If their demand curves have substantially identical elasticity, there would be no economic rationale for tying arrangements"(Burstein).

The hypothesis here needs further qualification: the producer of the tying goods must <u>not</u> be selling the tied goods to others <u>above</u> the <u>going market price</u>. When the going price

of Y (tied product) exceeds its marginal cost of production, the market in Y is not perfectly competitive. But, then, no markets are perfectly competitive. Indeed, perfect competition is unworkable. In markets characterized by conditions of oligopoly, invariably the price of Y will exceed its marginal cost - a state of price equilibrium is built on producers' fears that cutting prices will lead to negative profitability. Anyway, if Y otherwise is priced above its going market price, it becomes impossible for the patentee (A) to extract the full potential profit from his patent by means of a tying agreement. In such circumstances, therefore, tying Y to X can have an effect only on the general market in Y. In this sense, the patent on X, when it is the subject of a tying agreement, is being extended to the market in Y. No longer could the agreement be said simply to aim at discriminatory pricing of patented X.

Allowing henceforth as the price of Y to others its going market price, tying Y to X would permit A to charge different rates to users with different demand elasticities for the tying product: to discriminate between the different users of X. Would-be price discriminators must be warned, however, that, to quote Professor Bowman,

> "Neither the creation nor the maintenance of separate markets is a costless operation. For discrimination to be practicable it must be achievable at costs which are reasonable in the light of potential profits. The most likely product candidates for discrimination, therefore, are those which do not lend themselves to resale from low-price buyers to high-price buyers. The existence of a patent provides no automatic means of overcoming these difficulties; but certain kinds of licensing arrangements in particular circumstances do provide means which make price discrimination economically feasible".

Price discrimination allows the patentee to maximise

> "the return ascribable to the differential advantage the patent affords".

While a tying arrangement can kill two birds with the one shot:

> "If the patentee attempted to sell [X] at different prices to different users, however, he would have encountered two problems. To determine in advance how intensively each buyer would use [X] would have been difficult; to prevent those who paid a low price from reselling to those who paid a high price might have proved impossible. A tie-in would resolve these difficulties"(Bowman).

It would permit the patentee to measure intensity of demand for the tying good on the basis of use of the tied good. Returns to the patent could be maximised through this practice. There are, however, certain pricing rules which must be observed. Professor Baxter puts them as follows:

> "In the most typical case the monopolist selects a tied product [Y] which users with inelastic demands for the tying product [X] consume in greater quantities

> than do those with elastic demands. He then sells the tying product to all at a lower price than would otherwise maximize his returns and sells the tied product at a price exceeding its marginal cost and, presumably, its market price. In theory, at least, a reverse tie-in is equally effective. The monopolist sells the monopolized product at a higher price than would otherwise be appropriate and simultaneously commits himself to supply the user's requirements for a second product at a price below market value, the second product being one consumed in greater quantities by users with elastic demands for the invention. The effective price of the monopolized product is thus reduced to users with greater demand elasticity".

2 THE DISCRIMINATION HYPOTHESIS AND SECTION 44, PATENTS ACT 1977

If caught by section 44(1), a tying agreement is void unless the supplier, or licensor, can prove the matters set out in section 44(4) of the 1977 Act, that is, can prove the offer of a reasonable alternative contract, and so forth. How practicable is profitable price discrimination in the light of section 44(1) ? Would not the licensee who is asked to pay, or who realizes he is paying, above the going market price for Y opt for the reasonable alternative contract ? Conceivably, on being asked to pay in accordance with the discrimination hypothesis, the licence applicant could opt for the tying agreement well knowing that cheating over purchases of the tied product will be difficult for the licensor to detect. But, for that very same reason, the licensor will rule out a tying agreement. And the risk of cheating on a large scale will increase in proportion to the number and the size of the markets with respect to which the discrimination is being practised.

Y, therefore, will usually be supplied at, perhaps less frequently below, its going market price. Monopoly-extension is a less credible hypothesis in that case. A monopolist is normally described as a person who can give less while charging more. Can A in reality be regarded as monopolizing Y when, under the tying agreement, he charges B the going market price for it ? And even when he charged B <u>in excess</u> of Y's going market price, only in a somewhat distorted sense could A be regarded as a "monopolist" with respect to supplying Y for use with X. This "monopolization" of Y is entirely incidental to A's real objective: the <u>economically perfect</u> exploitation of his patent monopoly.

What, then, of tying conditions that are not caught by section 44(1): could these facilitate profitable price discrimination ? Superficial enquiry, particularly of differential royalty clauses, suggests that profitable price discrimination might be practicable as regards conditions or agreements beyond the purport of that section. Some protection against that possible practice inheres in the possibility that said conditions could constitute an "abuse of the patent monopoly" within the meaning of the Patents Act 1977, section 48. They could, moreover, fall within the

field of application of Article 86 EEC, or that of Article 85 EEC.

3 INTEGRATED METERING DEVICES

According to the discrimination hypothesis, the sole reason for tying Y to X is to meter the value being drawn or derived by the licensee(s) from the patent on X and to permit the licensor to charge accordingly. In cases where a contract involves the supply of patented machinery, an alternative to tying by contract for the purpose of maximising profits is to incorporate or integrate the metering device into or with the machinery. It is unlikely that this would be regarded in law as an extension of the monopoly since "no Y" would be involved in the transaction. The possibilities for circumventing the meter will be an important factor here. This problem - possible theft of use of X - will be less controllable when machinery is sold rather than leased.

A lease subject to cessor if the meter should be tampered with might permit profitable discrimination. On the other hand, the problem of lessees cheating the meters, and the attendant cost of policing meters and machinery, could become prohibitive. (Enquiry into ways of avoiding metering devices without infringing the patent(s) on a machine is within this writer's own experiences). Electricity meters were, in the past, very susceptible to cheating by the technically minded. And, in the face of large-scale cheating, many hire-car firms abandoned charging on a per-mile basis. Self-drive hire-car firms that still charge on that basis usually install fairly tamperproof metering devices in their hire-cars. Some such firms are now turning to electronic devices integrated with the hire-car's ignition circuit in their attempts to beat cheating.

4 THE SUBSTITUTION-BLOCKING HYPOTHESIS

The price discrimination hypothesis discussed above rests for its validity and rationale on there being (1) substantially <u>different</u> demand elasticities for the tying product, and (2) a power to fix the proportions of tying product to tied product. If the demand elasticities are substantially <u>similar</u> or identical, the discrimination theory cannot be used to rationalise tying on the basis of revenue maximisation from the patent monopoly. There is, however, another hypothesis for rationalising tying on that basis. This is the substitution-blocking hypothesis. By blocking substitution or interchange of inputs (X & Y) to the (Z) endproduct manufacturing process, or some other process, that is, by fixing proportions of X to Y when otherwise these could be varied, a tying agreement may permit an economically perfect exploitation of the patent monopoly. In other words, the agreement may permit A, the patent holder, to draw or derive the maximum potential inherent profit from his patent on X.

Only where the use of X is a cost would input-substitution be conceivable, bearing in mind here that even the most extensive use of his invention is always costless to the patent holder. Any increase in the cost of X to a licensee may lead to variation in the "production-mix" and

create a problem for A, who is out to maximize his profits from the patent on X.

> "The very existence of monopoly power in an intermediate product prevents the monopolist from realizing all of the profit potential inherent in that power, since monopoly pricing of the input will cause distortion of the production technique (in all but the special case of zero elasticity of substitution). Furthermore, the very existence of substitution possibilities will in general prevent the monopolist from facing the competitive producers of the final product [Z] with production costs high enough to <u>force</u> them to charge a price for [Z] equal to 'monopoly price' for [Z]. At least these statements hold in the absence of auxiliary mechanisms" (Burstein).

In blocking substitution of Y for X, a tying agreement would, while draining the full potential profit from the patent on X, prevent distortion of the (Z) production technique: would secure, at a price, of course, use by the licensee (B) of a technologically efficient production-mix. Substitution-blocking designed to drain the full potential profit from the patent on X calls for both (1) the supply of Y at a price above its going market price and (2) the supply of X at a price below what otherwise would be appropriate. The proportionality of these prices will itself be dictated by marginal costs of production. When B is induced or forced to produce Z by what is, to A, the optimum production-mix, no further possibility remains for substituting Y for X.

If there are more than just two inputs consumed in the production of Z - say, Z is an amalgum of inputs U,V, W,X & Y - effective substitution-blocking will require a selection to be made between these inputs of a tied input (Y) against which the other inputs (U,V,W) could not be readily substituted. Again, Burstein:

> "There would be no point in concentrating a partial force on inputs that are strongly complementary with [X] (rivets and riveting machines, cans and can-closing machines, etc.), assuming [X] is only used by industry [Z], since <u>perfect</u> complements, for example, would be treated as comprising a single package; a rise in the price of one ingredient only implies a rise in the price of the package. .... The ideal tied product would be one which is not 'too' inelastic in demand and which is not highly complementary with [X]. In fact, if the producer of [X] could tie an input which could not be substituted against, he might be able to achieve all of the theoretical potential profits open to him".

The scope for substitution-blocking tying agreements aimed at maximising returns to the patent monopoly is severely limited in our domestic law by section 44, Patents Act 1977, the reasons here being as described above for discriminatory tying agreements similarly aimed. There is,

however, another way whereby substitution can be prevented and returns to the patent maximised. That way lies in the endproduct royalty.

5 ENDPRODUCT ROYALTIES

As stated above, monopoly pricing of input X can, over time, lead to a reallocation of resources consumed in the production of Z. To block reallocation, A, if it were possible, would conclude a tying agreement with B. By blocking substitution, such agreement would effectively monopolize the endproduct Z. In other words, the agreement would extend A's patent to Z. The commonly concluded endproduct royalty is also a substitution-blocking device.

> "Plainly, the licensee cannot substitute against his own output other than by restricting it and raising his prices just as a monopolist would. Under the endproduct royalty structure, the licensee pays nothing for incremental use of the invention in the production of any given product. And through royalties the patentee may drain off the full monopoly potential inherent not in the invention but in the unpatented endproduct to which the invention is only one of many inputs" (Baxter).

After allowing that the endproduct royalty structure would be socially desirable in a limited sense, Professor Baxter continues:

> "If the patentee bases his royalty on the incremental use of input [X], the consequence is partial monopolization of endproduct [Z] and an inefficient production recipe which under-utilizes [X] and consumes [U,V,W,Y] in proportions, though not necessarily in absolute amounts, in excess of optimality. If through vertical integration, or tie-in, or a sales percentage royalty, the patentee blocks the substitution effect, the consequence is that [Z] is monopolized to an even greater degree, and all inputs are under-utilized although in an efficient production recipe. Since one or other of these evils necessarily attends the patent monopoly, is there a rational basis for a general choice of one over the other ? I believe that a general choice in favour of greater [Z] output is appropriate".

(The reasons for Professor Baxter's choice are set out in his thesis).

It is conceivable here that endproduct royalties could be abusive of the patent monopoly, and/or infringe Article 85(1). Forcing the under-utilisation of an input, or inputs, could distort competition on the general market in such input(s).

PROFIT MAXIMIZATION THROUGH PATENT TYING AGREEMENTS: SIMPLE MODELS FOR FIXED AND VARIABLE PROPORTIONS COMPLEMENTARITY

TAKEN FROM: Bowman on "Tying Arrangements & The Leverage Problem", 67 Yale L.Jo. 19 (1957), at page 21, note 9, and at page 25, note 18.

1 PRODUCTS USED TOGETHER IN FIXED PROPORTIONS

Example: One bolt and one nut.

Suppose the price of bolts is set by a monopolist and the price of nuts is set by competition, tying the sale of nuts to the sale of bolts would not increase the monopoly profit. Every increase in the price of nuts, even if the monopolist could produce them as cheaply as competitors would require a reduction in the price of bolts by a compensating amount. If the monopolist acted otherwise, he would be creating a situation which reduced his total monopoly return. This conclusion follows when one and only one price for the combination of one bolt and one nut can be set. Then, setting the price of one component will maximise monopoly profit. Thus, if the cost of producing a bolt or a nut is 1 penny - 2 pence for both - and the demand for the combination is as shown in the following tables, the maximizing price for the nut-bolt combination can be demonstrated.

If a monopoly in both products is assumed:

Price: one nut plus one bolt	Demand: one nut plus one bolt	Revenue	Cost	Total Profit
0.06 P	1000	£ 60	£ 20	£40
0.05 P	2000	£100	£ 40	£60
0.04 P	3000	£120	£ 60	£60
0.03 P	4000	£120	£ 80	£40
0.02 P	5000	£100	£100	£ 0

If nuts are competitively sold, then an equally large profit can be made merely by fixing the bolt prices:

Bolt Price: nuts sell for 1 penny	Bolt Demand: nuts sell for 1 penny	Bolt Revenue	Bolt Cost	Bolt Profit
0.05 P	1000	£50	£10	£40
0.04 P	2000	£80	£20	£60
0.03 P	3000	£90	£30	£60
0.02 P	4000	£80	£40	£40
0.01 P	5000	£50	£50	£ 0

Thus, in this fixed proportions situation, a monopoly of bolts if nuts are competitive is as good as a monopoly of nuts and bolts. If nuts are not competitive, the bolt monopolist has an interest in making them so, but no tie-in is required to achieve a lower price for nuts.

2 PRODUCTS USED TOGETHER IN VARIABLE PROPORTIONS

The distinction between this example and the foregoing "counting" example resolves itself into this question: does a monopoly over the tied product, or part of it, add any profit over what could be achieved by manipulating the price of the tying product, in the absence of control over the tied product. If two products have interrelated demands - either substitutes or complements - a seller can realize more aggregate profit from setting the two prices together than by setting the two prices independently. Having both monopolies under one management can be better than having the monopoly of [X] when [Y] is competitive. When the demand interrelationship between two products is complementary and the proportions of use between the two products are inseparable for the purposes of discrimination, a tie-in allows the monopolist of the tying product to become a monopolist of the tied product for all its uses which require the tying product. In contrast, the counting case maximizes, when prices are set and complementarity exists, only by transforming a variable proportion market into a number of separable fixed proportion markets. If, with product complementarity, the tied product has no use except with a patented tying product, then the tie-in can achieve a result which is indistinguishable from that which would exist had the patentee been granted a patent on both the tying and the tied. The following example illustrates the use of a tie-in to restrict competition (or create a monopoly) on the relevant market in the tied product. [Note: the foregoing statement should have seen as relevant the endproduct market rather than the tied product market].

Suppose that patented product [X] is a new product which is useful only with a second unpatentable product. In its turn, the latter product is useful only with the former. Suppose further that either product [X], the patented product, or [Y], the unpatented product, costs 20 pence to produce no matter how many are made. Now assume that product [Y] will sell competitive at 20 pence. The following table (1) gives demand conditions calling for a 40 pence price for [Y]:

Price of [X]	Demand for [X] when [Y] is at 20 pence	Total Revenue	Total Cost	Profit
0.55 P	500	£275	£100	£175
0.50 P	1000	£500	£200	£300
0.45 P	1500	£675	£300	£375
**0.40 P	**2000	£800	£400	**£400
0.35 P	2500	£875	£500	£375
0.30 P	3000	£900	£600	£300
0.25 P	3500	£875	£700	£175

If the complementary relationship between [X] and [Y] is such that every 5 pence increase in the price of [Y] decreases by 100 the amount of [X] that may be sold, and that every 5 pence increase in the price of [X] decreases by 200 the amount of [Y] that can be sold, then the two discrete

monopoly prices which maximize returns for both products (assuming only one non-discriminatory price for each can be set) can be calculated once the demand for [Y] at a particular price for [X] is given. Assume, therefore, that when [X] is priced at 40 pence the demand for [Y] will be as follows (table 2):

Price of [Y]	Demand for [Y] with [X] priced at 40 pence
0.55 P	200
0.50 P	700
0.45 P	1200
0.40 P	1700
0.35 P	2200
0.30 P	2700
0.25 P	3200
0.20 P	3700

At the competitive price of 20 pence, 3700 of product [Y] can be sold when product [X] is priced at 40 pence. The holder of the patent on product [X], by insisting that none of the [X] product will be sold except on condition that all [Y] used with [X] will be purchased from him, and by lowering the price of [X] to 35 pence and raising the price of [Y] to 35 pence, can substantially increase his monopoly profit. Monopoly profit prior to the tie-in was £400, as indicated in table 1. Tying the sale of product [Y] to [X] and selling each at 35 pence makes possible the sale of 2200 of [X], netting £330, and 2400 of [Y], netting £360, totalling £690.

[Note: For criticism of the conclusions here see Markovits on "Tie-Ins, Leverage, and The American Antitrust Laws", 80 Yale L.Jo. 195 (1970), at page 311 (Appendix C).

For further discussion see Bowman on "Patent & Antitrust Law", 1973 edition].

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