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Abstract

This Article considers how far high technology industries give rise to Community antitrust law questions that are new and limited to or characteristic of those industries. Originally, this Article was to discuss the Community antitrust law experience of the issues raised at the U.S. Federal Trade Commission ("FTC") hearings and in the FTC report on innovation competition ("FTC Report"). Not all of the issues considered by the FTC, however, have arisen in Europe to such an extent that makes it worthwhile to consider them, and some issues have arisen or are arising in the European Community that have not been considered by the FTC. This Article, therefore, is limited to Community issues, issues characteristic of high-technology sectors, and, primarily, issues of law and not of economics. This Article, therefore, does not repeat the many points in the FTC Report that would certainly be accepted by the European Commission ("Commission") and probably also by the Community courts, but that have not yet clearly arisen in the European Community.

ARTICLES

EUROPEAN COMMUNITY ANTITRUST LAW: INNOVATION MARKETS AND HIGH TECHNOLOGY INDUSTRIES

*John Temple Lang LL.D**

Computers' . . . cultural impact probably won't be as great, and cannot be as bad, as that of TV.[1]

There is no necessary connection between great science and great business opportunities: the general theory of relativity has yet to be turned into a money-spinner.[2]

INTRODUCTION

The phrase "high technology industries" is usually understood to mean telecommunications, aerospace, biotechnology, computers and computer software, and related industries. This Article considers how far high technology industries give rise to Community antitrust law questions that are new and limited to or characteristic of those industries. There are many industries today that use telecommunications for transferring information or that use powerful computers either in production or design processes or in the end product itself, but are not popularly thought of as high technology industries and that do not seem to raise any special or characteristic antitrust issues. These latter industries are largely outside the scope of this Article.

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* Director in the Competition Directorate General - European Commission; Professor, Trinity College Dublin. A version of this Article will appear in 1996 FORDHAM CORP. L. INST. (Barry E. Hawk ed., 1997). Opinions expressed are purely personal.

1. James Fallows, *Caught in the Web*, N. Y. REV. BOOKS, Feb. 15, 1996, at 14, 18.

2. Survey of Biotechnology and Genetics, ECONOMIST, Feb. 25, 1995, at 4.

innovation competition[3] ("FTC Report"). Not all of the issues considered by the FTC, however, have arisen in Europe to such an extent that makes it worthwhile to consider them, and some issues have arisen or are arising in the European Community that have not been considered by the FTC. This Article, therefore, is limited to Community issues, issues characteristic of high-technology sectors, and, primarily, issues of law and not of economics. This Article, therefore, does not repeat the many points in the FTC Report that would certainly be accepted by the European Commission ("Commission") and probably also by the Community courts, but that have not yet clearly arisen in the European Community.

A. *Features of High Technology Industries*

There are thirteen important features of high technology industry that this Article discusses.

- One Important Feature is the speed of technological change. In computers, software, biotechnology, information technology, telecommunications, and television ("TV"), technological change is much more rapid than in most other industries. In telecommunications in particular, the combined effects of digital transmission, fiber optics, microelectronics, and wireless telephony have enormous implications, especially when combined with the liberalization of regulatory regimes in the European Community. Product life cycles are often short. This often means important first mover[4] advantages, which may in turn create a need for interim antitrust measures.
- Due to technological change, research and development ("R&D") is extremely important for all companies in these sectors, and all companies need to spend very large amounts of money on R&D. In some industries, the initial fixed costs of production, including R&D, are vastly greater than the marginal cost of additional units of production. This raises complex issues concerning predatory pricing. It also increases the importance of patents.
- A third feature is the technical sophistication and the

3. ANTICIPATING THE 21ST CENTURY: COMPETITION POLICY IN THE NEW HIGH-TECH, GLOBAL MARKETPLACE, A REPORT BY THE FEDERAL TRADE COMMISSION STAFF (1996) [hereinafter ANTICIPATING THE 21ST CENTURY].

4. First movers are the first firms into a market. *Why first may not last*, ECONOMIST, Mar. 16, 1996, at 65.

complexity of the goods and services in high technology industries and the processes used to produce them. These goods include dual-use goods which are suitable for both military and civilian purposes.
- As a result of the speed of technological change, R&D, technical sophistication, and the complexity of goods, patents and know-how are extremely important. Furthermore, in the field of biotechnology, scientific knowledge, which is not patentable and which is more basic than anything normally described as know-how, is particularly important.
- In high technology sectors, regulatory issues are important in the European Community. Apart from competition law, questions arise as to what extent, if at all, these sectors should be regulated either by the European Community or, insofar as this may be useful or possible, by the national authorities of the Member States. In telecommunications, liberalization and the end of the national monopolies are creating scope for competition and the need to apply antitrust law more fully.[5]
- Another important feature is that previously separated operations are becoming integrated and previously integrated tasks are becoming separated from one another. For example, in 1993 and 1994, it was thought by industry analysts that the video game, computer, and cable TV industries would come together. More recently, analysts have concentrated on the Internet and World Wide Web, on the coming together of "content providers," and the means of distribution of their films, videos, books, and programs, and on the convergence of TV and interactive personal computer technologies. The boundaries between upstream and downstream markets are changing. Telephone, cable broadcasting, and computer companies are all coming into the same series of new related markets.

5. Article 90 had already been used. Treaty Establishing the European Community, Feb. 7, 1992, art. 90, [1992] 1 C.M.L.R. 573, 629 [hereinafter EC Treaty], incorporating changes made by Treaty on European Union, Feb. 7, 1992, O.J. C 224/1 (1992), [1992] 1 C.M.L.R. 719, 31 I.L.M. 247 [hereinafter TEU]. The TEU, *supra*, amended Treaty Establishing the European Economic Community, Mar. 25, 1957, 298 U.N.T.S. 11, 1973 Gr. Brit. T.S. No. 1 (Cmd. 5179-II) [hereinafter EEC Treaty], *as amended by* Single European Act, O.J. L 169/1 (1987), [1987] 2 C.M.L.R. 741 [hereinafter SEA], *in* TREATIES ESTABLISHING THE EUROPEAN COMMUNITIES (EC Off'l Pub. Off. 1987). *See* Herbert Ungerer, *EU Competition Law in the Telecommunications, Media, and Information Technology Sectors*, 19 FORDHAM INT'L L.J. 1111, 1111-17 (1996); 1995 FORDHAM CORP. L. INST. 456 (Barry Hawk ed., 1996).

Railway and cable TV companies are using or planning to use their optical fiber networks for telecommunications purposes. Where the boundaries of markets are legally important, as in the case of the essential facilities antitrust principle, it is essential for antitrust lawyers to understand these changes and their significance.

- These industries are also characterized by many functional service relationships between companies as buyers and suppliers of infrastructure. These relationships, which often involve a high degree of dependence, give rise to legal questions of access, exclusivity, and foreclosure, as well as access charge policies and interconnection issues that are usually thought of as regulatory rather than antitrust issues. They also give rise to the possibility of day-to-day minor discrimination and resulting controversies. This means that companies are often reluctant to make formal complaints against other companies with which they need to maintain working relationships. This may make it necessary for the Commission to begin procedures on its own initiative when normally it prefers to act only on complaints.
- Some high technology industries, notably telecommunications, include companies that still have monopoly rights in some areas, in particular voice telephony, that would enable them, unless constrained by law from doing so, to cross-subsidize and exclude competitors from competitive markets.
- High-tech markets are characterized by complex relationships, due in part to the number of different kinds of companies that may be involved in any given situation. For example, in cable TV there are the companies that own the transmitters and satellites, program producers, advertisers, and cable-owning companies, as well as viewers and competitors of any or all of these companies. There are also companies such as sports organizations, stadium owners, and Olympic committees that own the right to broadcast sport events, and film studios with portfolios of films.
- It is sometimes said that in these markets innovation may be more important than prices, in particular where the market itself is emerging and wholly new products or services are coming into existence. It is, however, important to be clear. In these markets, price is often less important than the technical or other advantages of the product. These advantages are usually due to an innovation, which

is likely to be a recent innovation because all or almost all the features of these products are changing. But, it is not innovation as such that constitutes the advantage, and one cannot assume that any innovation is always and automatically an improvement or is better than a competitor's product that has not changed in the same respect. It is unlikely that there is any precise or useful statistical relationship between R&D expenditure of different companies in the same industry and their relative market shares at a later time. As it is their position relative to one another that is important for antitrust law, simply measuring the total R&D spending does not seem to help. In the software industry, for example, what seems to be crucial is to have programers who know how to produce the next product that the market will need or will buy.

- In information-based industries, the value of products or services is often affected by the number of companies or individuals participating in the network or system. Examples given in the FTC Report are "automatic teller networks, computer operating systems, facsimile communication protocols, word processing programs, video game systems, spread sheet programs, cable TV systems, and office e-mail."[6] This leads to a need for standards or interface definitions. As the FTC pointed out, this may require antitrust scrutiny of procedures for admitting or excluding participants and the dominance of companies controlling the system, network, or interface standard. This issue has arisen in the European Community.
- High technology industries share some features with other industries that are important. These include the great size of some of the companies, the huge amounts of money involved, high entry barriers in some areas, many strategic alliances, short product life cycles, great inequality between the sizes of some competitors and, for some products and services at least, that the markets will be worldwide in the future or are becoming so already.
- That in some industries, for example media, there are companies with world-wide activities, does not prove that the markets are world-wide. In the European Community, the markets for TV, radio, and newspapers are essentially national, for a series of linguistic, cultural, social, and commercial reasons and they will almost certainly con-

6. ANTICIPATING THE 21ST CENTURY, *supra* note 3, vol. 1, ch. 1, at 14.

tinue to be national. In some industries, for example, pharmaceuticals, partly separate national markets continued to exist at least until 1995 due to national regulatory policies, companies' behavior, or both.

- In one important high technology industry, telecommunications, as part of the Community's liberalization program, the Commission has published guidelines on the application of EEC competition rules in the telecommunications sector.[7] This Article does not analyze those guidelines in detail, but refers to many of the guidelines. The guidelines also illustrate how closely antitrust and regulatory issues are linked in this industry and, to a lesser extent, in other high-tech industries.

B. *High Technology Industries in the European Community*

It is important to remember something else about high-tech industries in the European Community:

> European firms have been bad at getting into new high-tech industries. Europe's high-tech firms are feeble in comparison with American ones. Only two of the top 20 software firms are European. Staid bankers are suspicious of revolutionary ideas. Venture capitalists have no one to sell their investments to. In a world where small, even symbolic stakes give bankers or founding families a great deal of say in the management of firms, it is often impossible to get outsiders to invest.[8]

This fact, combined with the fact that there is less public discussion of antitrust economics in the European Community than in the United States, has caused this Article to be very different from the FTC's Report. The conclusions are similar, but I will not discuss antitrust economics as much as the FTC Report. This is also because there is much less antitrust litigation in the European Community than in the United States. More cases are brought to antitrust authorities than to the courts, and this means that the intellectual development of antitrust law is

7. Guidelines on the Application of EEC Competition Rules in the Telecommunications Sector, O.J. C 233/2 (1991). *See generally* Ungerer, *supra* note 5 (discussing liberalization of telecommunications law in the European Community). The Commission is also publishing a notice on access in the telecommunications industry.

8. *Le D(acute)efi Americain, again*, ECONOMIST, July 13, 1996, at 20. Uncertainty over the legal position of biotechnological inventions in the European Community has probably also delayed and discouraged investment.

largely in the hands of the antitrust authorities. Because European Community antitrust authorities are mostly understaffed and overworked, intellectual development is driven by cases and not by studies or formal discussion of antitrust economics.

C. *Legal Issues Raised by High Technology Industries*

Some of the most important legal questions in EC antitrust law characteristically raised by high technology industries are:

- Is future market power more effectively measured by comparing R&D expenditure than by measuring present market shares?
- Are the boundaries of present markets and the degree of substitutability of products or services involved likely to change in a way that is significant for antitrust assessment?
- Do the features of whatever market is relevant in any particular case mean that dominance and market power is more or less stable than it would otherwise be?
- Is it useful to speak of a separate market for R&D, or is a large and successful R&D activity merely an important competitive advantage to be taken into account when assessing dominance?
- In what circumstances are selective pricing and cross-subsidies by dominant companies unlawful?
- What are the criteria for joint dominance and abuse of a joint dominant position in a rapidly changing market?
- Is the concept of an essential facility useful in connection with horizontally integrated companies?
- How does competition law regulate access to membership of networks?
- When, if ever, is it right to regard scientific knowledge as an essential facility in the biotechnology industry?
- Is it necessary to develop new categories of abuse of dominant positions, contrary to Article 86 of the EC Treaty?[9]
- Where is the right place to draw the boundary between antitrust law and regulation of industries for non-competition objectives?

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9. It is generally agreed that it is unlawful for a dominant enterprise to use, for its own purposes, information it gets from providing a service to one of its competitors. But this kind of misbehavior does not fit neatly into the three traditional categories of exploitative, anticompetitive, or exclusionary and reprisal abuses. It is probably best regarded as exploitative, taking unfair advantage of a dominant position. See John Temple Lang, *Abuse of Dominant Positions in European Community law, Present and Future: Some Aspects*, *in* 1979 FORDHAM CORP. L. INST. 25, 43-65 (Barry Hawk ed., 1980).

- What kind of behavior is predatory if the marginal cost of additional production is almost zero?

This Article does not, and could not, do more than analyze some aspects of the problems that are specific to high-tech industries. It could not resolve them all or discuss them all exhaustively.

In addition to these special issues, high technology industries also raise some constitutional issues, discussed in Part IV of this Article, and some more general issues of EC antitrust law in a particularly acute way. These include:

- intellectual property and antitrust law;
- justifications for refusing access to essential facilities;
- Article 90 of the EC Treaty;
- interim measures and first mover advantage;
- the relationship between EC antitrust law and national regulatory measures;
- how far cooperation, that would otherwise be considered anticompetitive, is justified when dealing with a monopolist or monopsonist;
- how best to prevent dominant companies, whose facilities their competitors must use, from using the information they can obtain to compete with those using the dominant companies' facilities;
- how far standard-setting bodies, with or without governmental participation, fall under Article 85 and when standards are permissible under Article 85(3);
- how to protect intellectual property rights to material that can now be easily reproduced, namely material and information on the Internet, CDs, and CD-ROMs;
- what duties Community law imposes on dominant buyers;
- framework agreements between competitors that outline arrangements for cooperation between them that are not supplemented by specific detailed agreements on particular R&D projects;
- what the rights of third parties are if the parties to an exempted agreement breach a condition or obligation imposed on them; and
- whether, and if so how far, traditional collective arrangements for payment of royalties, particularly performing rights societies, collection societies, and the like, should be permitted or are suitable in multimedia.[10]

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10. New technologies also raise some basic issues of national law, such as whether

Because many of these issues arise in new or different ways, they often need to be resolved by reference to first principles of antitrust law and antitrust economics.

Unfortunately, the European Court of Justice ("Court") has not clarified these issues and not all EC lawyers understand these issues well. Differences of opinion are understandable, but there is an unnecessary degree of intellectual confusion on some of these issues, partly because some lawyers have their own agendas or their own fixed ideas.[11] Because high technology industries raise new kinds of antitrust problems or old problems in new ways, they place considerable demands on lawyers' fundamental understanding of the basic principles of antitrust law. They also tempt complainants' lawyers to make what are really regulatory policy arguments under the guise of antitrust law.

All of the economic issues arising in high-tech industries identified in the FTC Report have arisen or are certain to arise in the European Community. They are, however, discussed in this Article only insofar as there is Community case law or practice addressing an issue or insofar as the situation in the European Community is different from that in the United States.

I. *THE CASE LAW OF THE COURT OF JUSTICE THAT IS RELEVANT TO HIGH-TECH INDUSTRIES*

In general, the case law of the Court of Justice and the

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new kinds of media are "broadcasting" and as so fall under the jurisdiction of the German Länder or under German Federal jurisdiction.

11. In any rapidly changing industry in which there are unresolved antitrust issues, there are naturally lawyers whose arguments on behalf of their clients would not be generally accepted. There are also in the European Community a small number of lawyers who believe in what is called the Freiburg Theory of Competition Law, because it was popular in that city in the 1950s. In short, this theory posits that a restriction of competition exists only when companies undertake commitments that limit their freedom of action. According to this theory, companies could freely exchange price information or use the same sales company as long as they were careful to avoid making any commitment to do so. This view would deprive the words "concerted practice" and "or effect" in Article 85 of the EC Treaty of most of their meaning. These views are worth mentioning here only because they are so fundamental that when they are brought into any discussion based on antitrust principles, confusion is likely to arise. The theory finds no support in the case law of the Community Court in Luxembourg, and is incompatible with the case law addressing the words of Article 85, referred to above, which those who believe this theory do not hesitate to say is wrong. Nor, as far as I know, does the theory resemble any rules of national law in EC Member States, except perhaps the U.K. Restrictive Practices Act which is universally regarded as over-formal, legalistic, and unsatisfactory.

Court of First Instance, at least in the area of EC antitrust law, has not given rise to particular issues concerning the features of the high technology industries listed above. One would expect the Court of First Instance to enquire thoroughly into these issues when they arise before it, but there are few indications in the case law of how they would be decided. It is worth, however, making several comments about the case law of the EC courts:

- The Court of Justice showed, in the *AKZO* judgment[12] on predatory prices, that when it has to deal for the first time with a question of fundamental importance in antitrust law, it does so with great care and thoroughness and reaches results that are generally accepted as sound. The first and second *Wood Pulp* judgments[13] on extraterritorial application of EC antitrust law are also examples of the Court of Justice's careful and balanced consideration of fundamental issues;
- In its judgments on the Commission's general measures under Article 90 on telecommunications terminals and telecommunications services, the Court of Justice dealt with many of the basic problems of liberalizing those markets in the European Community;[14]
- The importance of confidential information is so great in high-technology industries that it is likely that questions about confidentiality will arise increasingly often in connection with them;[15]
- In *Commercial Solvents*,[16] the Court of Justice had to consider the argument that Commercial Solvents did not really have a dominant position because experiments had been carried out that suggested that the raw material could be produced by an alternative process. The Court

12. AKZO Chemie BV v. Commission, Case C-62/86, [1991] E.C.R. I-3359, [1993] 5 C.M.L.R. 215.

13. Re Wood Pulp Cartel: Ahlström Osakeyhtio and Others v. Commission, joined cases 89/85, [1988] E.C.R. 5193, [1988] 4 C.M.L.R. 901.

14. France v. Commission, Case C-202/88, [1991] E.C.R. I-1223, [1992] 5 C.M.L.R. 552; Spain v. Commission, Case C-271/90, [1992] E.C.R. I-5833; see Italy v. Commission, Case 41/83, [1985] E.C.R. 873, [1985] 2 C.M.L.R. 368 [hereinafter British Telecom].

15. See, e.g., BPB Industries and British Gypsum, Case C-174/94, [1995] E.C.R. I-865, [1996] C.M.L.R. 601; Atlantic Container Line and Others, Case T-395/94R, order dated Mar. 10, 1995.

16. Istituto Chemioterapico Italiano SpA and Commercial Solvents Corp. v. Commission, Joined Cases 6-7/73, [1974] E.C.R. 223, [1974] 1 C.M.L.R. 309 [hereinafter Commercial Solvents].

of Justice brushed the argument aside, saying that it did not involve a commercial production process;

- Appeals from the Court of First Instance to the Court of Justice are, at least in theory, on points of law only. So only insofar as the special features of high-tech industries can raise points of law will it be possible to bring them before the Court of Justice;[17]
- The Court of Justice has recognized that Article 36 of the EC Treaty applies to both a Member State's internal security and its external security and that the export of dual-use goods, which are capable of being used for civilian and military purposes, to a country that is at war may affect the security of a Member State;[18] and
- The Court of First Instance, in 1996, annulled the Commission's decision authorizing European Broadcasting Union ("EBU")/Eurovision System.[19] This was an individual exemption for the statutes of the EBU, an association of national radio and TV companies. The agreement was for joint exclusive acquisition of TV rights to sports events. Competition between them was avoided and their negotiating position strengthened. The Commission identified certain benefits, of which the exchange of the TV signal was the most significant. There was competition from independent broadcasters.

In *Métropole Télévision v. Commission*, the Court of First Instance stated that the EBU rules for the admission of members were not objective and precise enough to be applied in a uniform, non-discriminatory manner.[20] Also, the Commission had given too much weight to the public service nature of some of the broadcasting companies, though the special exemption for services of general economic interest[21] was not applicable, and

17. Questions referred to the Court of Justice under Article 177 of the EC Treaty also can only be questions of law, not fact.

18. Fritz Werner Industrie v. Germany, Case C-70/94, [1995] E.C.R. I-3189; Leifer, Case C-83/94, [1995] E.C.R. I-3231; *see* EEC Treaty, *supra* note 5, art. 223-24; Commission v. Greece, Case C-120/94 R, order dated June 29, 1994.

19. Commission Decision No. 93/403, O.J. L 179/23 (1993) [hereinafter EBU Eurovision].

20. Métropole Télévision v. Commission, Case T 528/93, [1996] 5 C.M.L.R. 386 (Ct. First Instance) [hereinafter Eurovision]. The Court cited Metro Grossmärkte, Case 26/76 [1977] E.C.R. 1875, [1978] 2 C.M.L.R. 1. This case is important because Metro was clearly not dominant.

21. EC Treaty, supra note 5, art. 90(2), [1992] 1 C.M.L.R. at 629.

their public service nature was not enough to justify their acquisition of exclusive rights.

It is worth noting several points in *Métropole Télévision.* First of all, it is essential that a group creating privileged and less-privileged companies must have clear membership criteria and apply them uniformly. The Court of First Instance clearly thought that they had not been applied in this way and said that only if the membership criteria were precise would it be possible to determine whether they were indispensable. Secondly, merely having a public service task or purpose does not justify any privilege or preferential treatment not directly and necessarily linked to the task. Furthermore, failure to apply membership admission criteria in a non-discriminatory manner means that Article 85(3) does not apply and it is not merely a ground for claiming compensation. This confirms that the Commission may impose a non-discrimination obligation for membership or access as a condition under Article 85(3), even in the absence of dominance. Finally, the judgment does not mean that a buying cartel must be open to all companies or to all companies that meet its membership criteria; its criteria might be capable of being fulfilled by so many companies that it could not be authorized at all because it would have too much power. Its membership criteria must be written so as to achieve the economies of scale or other advantages sought, but not to make possible unnecessary anticompetitive effects. If an open-ended cartel has a size limit, whatever it is, then membership on a first-come basis is inherently discriminatory, because sooner or later a line must be drawn to exclude an applicant who is as well qualified as the existing members.

A. *Intellectual Property Rights*

The Court in its *RTE-ITP* judgment[22] on TV programs, clearly stated that intellectual property rights cannot be used in all cases as a defense against an argument that a company has abused its dominant position. In *RTE-ITP,* the Court relied on three relatively simple arguments. The first argument was that

22. Radio Telefis Eireann and Independent Television Publications v. Commission, Magill, Joined cases C-241/91P & C-242/91P, [1995] E.C.R. I-743, [1995] 4 C.M.L.R. 718 [hereinafter RTE-ITP]; see Temple Lang, *Defining Legitimate Competition: Companies' Duties to Supply Competitors and Access to Essential Facilities,* 18 FORDHAM INT'L L.J. 437, 449-54 (1994).

the TV monopolies' refusal to provide basic information to the Magill magazine about their TV programs, relying on copyright law, prevented the appearance of a new product that the monopolies do not produce themselves and for which there was a potential consumer demand. Secondly, the TV monopolies claimed no justification for the refusal as a result of the activity of TV broadcasting or in publishing TV magazines. Thirdly, the Court found that the TV monopolies reserved for themselves the secondary or related market of the weekly TV guides. This judgment does not and could not resolve all of the issues that arise when EC antitrust law and intellectual property rights meet, but it demonstrates that at least in some circumstances antitrust law takes precedence.[23]

The *RTE-ITP* judgment[24] can and probably should be regarded as simply continuing the line that the Court of Justice had established in earlier cases.[25] This consisted of two rules. First, mere refusal by a dominant enterprise to license an intellectual property right is not, in itself, contrary to Article 86 of the EC Treaty. Second, refusal is an abuse if it is combined with some other additional element of abusive conduct, such as excessive prices, arbitrary refusal to supply, or failing to supply spare parts that are needed in order to force consumers to buy new products to replace the old ones. This way of looking at the *RTE-ITP* judgment explains its brevity, as the Court simply referred to its previous case law. The Court was simply saying that in this case there were two "additional" elements and no justification for the refusal. If this is the correct way to read the judgment, which would explain why the Court did not consider it necessary to comment at length on the Advocate General's arguments, the *RTE-ITP* judgment does not significantly alter the law, and either preventing the emergence of a new product objectively needed by consumers or reserving a second complementary market to the dominant companies[26] would be enough,

23. *RTE-ITP*, [1995] E.C.R. at I-743, [1995] 4 C.M.L.R. at 718.

24. *Id.*

25. Volvo AB v. Erik Veng (U.K.) Ltd., Case 238/87, [1988] E.C.R. 6211, [1989] 4 C.M.L.R. 122.

26. *See* Hugin Kassaregister AB v. Commission, Case 22/78, [1979] E.C.R. 1869, [1979] 3 C.M.L.R. 345; *cf.* Eastman Kodak v. Image Technical Serv. Inc., 504 U.S. 451 (1992); MCI Communications Corp. v. AT&T Co., 708 F.2d 1081 (7th Cir.), *cert. denied*, 464 U.S. 891 (1983).

in the absence of specific justification, to make the refusal to license contrary to Article 86. The Court was saying, in effect, that the Advocate General was wrong to say that the TV stations were merely refusing to license, because that ignored the two other effects. This reading also shows why the Court of Justice felt itself to be so close to the reasoning of the Court of First Instance.[27] All this means that the key question, if there is no other "abusive conduct" involved, is whether plaintiff's product or service is in a second market distinct from the market in which the intellectual property right primarily operates, so that the plaintiff's product or service is not merely the kind of product or service primarily protected by the right. The Court could, therefore, be saying that the market for comprehensive TV magazines is distinct from the market for magazines limited to a single station or, as the judgment suggests,[28] that TV broadcasting was the primary market and the "market of weekly TV guides" was a "secondary" market which the stations were not free to monopolize. This is, however, open to the criticism that under the relevant national laws the copyright was not in the TV programs as broadcast but in the printed advance lists of those programs, and this is why the *RTE-ITP* judgment remains controversial. The best way to summarize the judgment, therefore, may be to say that the refusal to license is contrary to Article 86 if it is combined with or is the means of committing abusive conduct that has effects other than those that would be caused in the market primarily protected by the intellectual property right, by the mere refusal itself. The significance of the phrase "abusive conduct" seems to be twofold: first, the behavior or effects in question do not necessarily need to constitute an abuse in themselves without or irrespective of the refusal to license; and second, the remedy is, therefore, not merely to end the effects but to require a compulsory license.

27. Case T-69/89, [1991] E.C.R. II-485, [1991] 4 C.M.L.R. 586 (Ct. First Instance) [hereinafter RTE]; British Broadcasting Corporation and BBC Enterprises Ltd. v. Commission, Case T-70/89, [1991] E.C.R. II-535, [1991] 4 C.M.L.R. 669 (Ct. First Instance) [hereinafter BBC]; Independent Television Publications Ltd. v. Commission, Case T-76/89, [1991] E.C.R. II-575, [1991] 4 C.M.L.R. 745 (Ct. First Instance) [hereinafter *ITP*].

28. *RTE-ITP*, [1995] E.C.R. at I-824, ¶ 56.

B. *The Commission's Decisions*

The Commission's decisions summarized briefly below will be understood more easily if they are introduced by saying that many of them raise issues imposed on companies with large market shares concerning access to essential facilities, joint ventures between parents in markets that are complementary (whether horizontally or vertically), membership of standard-setting groups, and obligations not to discriminate. The industries involved in most of these cases are pharmaceuticals, media, telecommunications, and computers. In several media cases, mergers or joint ventures between dominant content providers and dominant carriers, broadcasters, or satellite or cable companies have been prohibited. What in the United States are called innovation markets have been considered several times recently, in particular in pharmaceutical cases. Out of the five mergers prohibited outright by the Commission under the Merger Regulation since it came into force in 1990, three have been in the media sector. In the European Community, there have been no general rules keeping separate the telephone, cable, and broadcasting industries, although there have been telecommunications monopolies and broadcasting monopolies.

Few of the Commission's decisions in high technology industries show any novel or unusual features from an antitrust law viewpoint. The summary that follows calls attention essentially to the recognition by the Commission of some of the special features of these industries. If it were thought desirable that Community antitrust law should adopt substantially altered approaches for these industries, they are not yet visible. In fact, many of the cases involve issues arising from new technologies rather than sophisticated technologies. The fact that an industry is sophisticated does not mean that every antitrust case arising in it raises sophisticated antitrust issues.[29]

Commission decisions in high technology industries are now more and more preceded by a large number of comments from competitors and others with interests opposed, to a greater or lesser extent, to those of the parties to the agreements in question (*i.e.* there were twelve third parties represented at the MSG hearing). This was not the case in the past. One would

29. *See, e.g.* Commission Reg. No. 3423/82, O.J. L 360/30, (1982); *British Telecom*, [1985] E.C.R. at 873, [1985] 2 C.M.L.R at 368.

expect a greater degree of sophistication to result. Most of the cases summarized below date from 1990 or later. Only a few earlier cases are important for the purposes of this Article.

1. Telecommunications, Media, and Electronics Cases

a. *IGR Stereo Television-Salora*

In the *IGR Stereo Television-Salora* case in 1981,[30] the patents needed for making TV sets specially equipped for stereo reception of Germany TV were held by IGR, a company owned by all the firms manufacturing color TV sets in Germany. IGR granted licenses to these manufacturers, but decided to license non-members only after a certain date and for a limited number of sets. IGR then used its patent rights to prevent Salora, a Finnish company, from supplying stereo TV sets to two large mail order firms in Germany. Salora was, therefore, being prevented from supplying any of the special sets at a time when the new stereo sets were being launched on the German market. Salora requested interim measures that the Commission has the power to order in appropriate cases.[31]

IGR agreed to grant licenses immediately and provide them free of restrictions as to quantity.

The points to note are:

- TV sets with other types of stereo receivers would not have been compatible with German TV transmission;
- Under Article 85 of the EC Treaty, IGR and its members would not have been permitted to shut Salora out of the German market while exploiting it themselves. If necessary, the Commission would have ordered compulsory licensing by IGR;
- IGR and its members may well have been in a joint dominant position and, thus, under Article 86 of the EC Treaty. There was no competition between them in the relevant

30. IGR Stereo Television, COMMISSION OF THE EUROPEAN COMMUNITIES, ELEVENTH REPORT ON COMPETITION POLICY 1981, at 63-64, § 94 (1982) [hereinafter IGR]. *Cf.*, United States v. General Electric Co., 115 F. Supp. 835 (D.N.J. 1953).

31. Camera Care Ltd. v. Commission, Case 792/79 R, [1980] E.C.R. 119, [1980] 1 C.M.L.R. 334; Ford Werke v. Commission, Joined cases 228-229/82, [1984] E.C.R. 1129, [1984] 1 C.M.L.R. 649; ORTIZ BLANCO, EUROPEAN COMMUNITY COMPETITION PROCEDURE 283-93 (1996); John Temple Lang, *The Powers of the Commission to Order Interim Measures in Competition Cases*, 18 COMMON MKT. L. REV. 49 (1981); John Temple Lang, *Procedure in Community Competition Cases - Some Recent Developments*, *in* XI INTERNATIONALES EG-KARTELLRECHTSFORUM 94, 94-97 (1986).

respect.[32] Even if that was so, the practical result would have been the same, in the circumstances of this case, under Article 85;

- If IGR had been a joint venture owning any other essential prerequisite for participation in the market, the result would have been the same: the fact that the prerequisite was a patent did not influence the outcome;[33] and
- Although in general there is no duty to supply under Article 85, there is a duty when a discriminatory refusal has sufficiently serious anticompetitive effects.

b. *Corning-Optical Fibers*

In the *Corning-Optical Fibres* decision,[34] the Commission authorized joint venture agreements between Corning, which invented optical fibers for telecommunication, and several cable producers. The Commission considered that the principal restrictions on competition were due to the relationship between the joint ventures, each of which was to produce and sell optical fibers and each of which was licensed by Corning. The joint ventures, therefore, brought together companies with strong positions in the cable market with one company with a strong position in the optical fibers market. The joint ventures were dependent technologically on Corning. The agreements, however, were exempted because they made possible a quick conversion to optical fibers and optical cables. Competition from within and outside the European Community would continue. Users would benefit from the availability of new products at lower prices. A detailed analysis was made of the indispensability of the various clauses.

c. *X/Open Group*

The Commission's *X/Open Group* decision[35] concerned an agreement to set up an open industry standard by selecting existing interfaces for use with AT&T's Unix. Competition was restricted because both the criteria and the procedures for admit-

32. John Temple Lang, *European Community Antitrust Law and Joint Ventures Involving Transfer of Technology*, *in* 1982 FORDHAM CORP. L. INST. 203 (Barry Hawk ed., 1983).
33. John Temple Lang, *Trade Associations and Self Regulation under EEC Antitrust Law*, *in* 1984 FORDHAM CORP. L. INST. 605, 650-62 (Barry Hawk ed., 1985).
34. Commission Decision No. 86/405, O.J. L 236/30 (1986).
35. Commission Decision No. 87/69, O.J. L 35/36 (1987).

ting new members meant that membership was not open to all interested companies. Members would be able to implement standards before they were publicly known, and non-members would be, therefore, at a competitive disadvantage. The Commission, however, accepted that the agreement would ultimately encourage independent software houses to develop application programs. Much weight was given to the parties' intentions to make their results available as quickly as possible and to the fact that users would become less dependent on hardware manufacturers for their applications software.

There are two points worth noting about X/Open Group. First, the exemption was given for only four years from the date of the decision. Second, conditions were imposed to ensure that the Commission was informed if membership was refused.

d. *Alcatel/ANT*

In *Alcatel Espace/ANT*,[36] the Commission authorized an research and development specialization and marketing agreement on space electronic equipment in the field of civil radio, broadcasting satellites, and data transmission via satellites. Alcatel is a manufacturer of communication equipment and systems and ANT was a leading German company in telecommunication technology. Their combined turnover was less than that of several other European manufacturers and much smaller than some non-European companies. It is important to note that the authorization did not extend to any extensions in the scope of the agreement. In addition, the Commission stressed that Community manufacturers were competing only at the subsystem level, while for example, manufacturers in the United States, where the number of space projects was higher than in the European Community, were producing complete satellites.

e. *Konsortium ECR 900*

In *Konsortium ECR 900*,[37] the Commission authorized Alcatel, Nokia, and AEG, to introduce a pan-European public digital cellular mobile telecommunications service called GSM. Several factors influenced the Commission. European phone net-

36. Commission Decision No. 90/46, O.J. L 32/19 (1990); see Alcatel/Teletra, O.J. 122/48 (1991).

37. Commission Decision No. 90/446, O.J. L 228/31 (1990).

work operators had agreed on the interfaces for the system. The buyers were the network operators, and there were a number of other European suppliers. The invitations to tender from the telecom administrations had set tight deadlines, and the partners could not have met them separately. Nor could the partners have financed the cost in a short time.

f. *Screensport-European Broadcasting Union*

In *Screensport-European Broadcasting Union*,[38] the Commission refused to allow an agreement that would have eliminated competition in sports broadcasting between some of the public broadcasting companies ("Eurosport") and Sky TV, owned by Rupert Murdoch's News Corporation. The agreement would have provided much greater access to sports programs for members of Eurosport, including programs obtained through EBU. Other commercial sports channels would have had much less favorable arrangements. Eurosport would have strengthened the negotiating position of its members and would have distorted competition in cable TV in favor of Sky. The ill effects on competition outweighed the benefit of a new transnational sports channel. An alliance between members of the EBU and their principal competitor was not indispensable. Sky was going to broadcast many sports events anyway. This case is linked to the *Eurovision* case.[39]

g. *Eirpage*

In *Eirpage*,[40] the Commission authorized, subject to conditions, an agreement between the Irish Telecommunications Company ("ITC") and Motorola to set up a joint venture for a paging system interconnected to the public telecom network. The parent companies' skills were complementary. Motorola had experience with equipment and paging services, and ITC had the communications network. Paging devices are smaller, more convenient, and cheaper than mobile phones and send messages one-way only; they are a different market. The parent companies were potential competitors. The deal was to set up a paging service that covered rural areas not previously covered,

38. Commission Decision No. 91/130, O.J. L 63/32 (1991).
39. Commission Decision No. 93/403, O.J. L 179/23 (1993).
40. Commission Decision No. 91/562, O.J. L 306/22 (1991).

and these benefits could not have been obtained as quickly or to the same extent without the joint venture. Motorola by itself would not have been as concerned with ensuring country-wide coverage or maximum compatibility with the existing phone system, so consumers in less populated areas benefitted from the cooperation. It was a public service issue.

There are several points worth noting. First, Telecom was required to make available to Eirpage's competitors all the facilities it was giving to Eirpage on the same terms. Second, subscribers' contracts were for one year only, so they could switch. Furthermore, the paging market was directly influenced by developments in portable radios and mobile phones although they were separate markets. Finally, in an Article 85 case, the Commission once again imposed a condition obliging the parent companies of a joint venture to give its competitors similar treatment in the future, without proof of a dominant position and without proof that either parent had already discriminated in favor of the joint venture.

h. *Astra*

In its *Astra* decision,[41] the Commission refused an exemption for an agreement on marketing and provision of TV broadcasting services by satellite between British Telecom and SES, a company set up to operate satellites. The agreement restricted competition in the markets for satellite transponder capacity and for uplink services, sending signals up to satellites. The two companies were direct competitors in both markets. The Commission said the arrangements were not indispensable and that the agreements produced no benefits and required the parties to notify companies with which they had made contracts that they were free to terminate or renegotiate them.

i. *Auditel*

In *Auditel*,[42] the Commission prohibited a joint audience-measurement system that was to be used in Italy exclusively to avoid "rating wars" and resulting arguments over rates charged for advertising. The Commission did not allow the parties to be

41. Commission Decision No. 93/50, O.J. L 20/23 (1993). This decision is on appeal.
42. Commission Decision No. 93/668, O.J. L 306/50 (1993).

prohibited from using figures from other sources. The restriction was not indispensable to obtain the advantages the system could provide, and too much competition would have been eliminated. The decision was adopted to clarify the legal position for the future.

j. *Infonet*

The Commission approved an agreement called Infonet[43] between the French, German, Spanish, Belgian, and Dutch Telecom enterprises and MCI and several other non-European telecom corporations. Infonet provides global network services on a one-stop-shop basis, including data communications, electronic mail ("E-mail"), electronic data interchange, and videotex services. Its data communications services are operated on the basis of an international packet switched network constructed largely with lines leased from its members. The Commission obtained undertakings from the European telecom enterprises not to cross-subsidize or discriminate in favor of Infonet and against its competitors and to deal with Infonet on an arms-length basis. Recording and reporting obligations were imposed accordingly.

k. *BT/MCI*

In the *BT/MCI* decision,[44] the Commission authorized British Telecom ("BT") to take a twenty percent share in MCI and a joint venture that would be exclusively represented in the European Community by BT. The aim was to provide global "value-added" telecommunications services to world-wide companies. These include virtual network services, high-speed data services, and intelligent network and traveler services. A number of other large companies were beginning to supply these services. The joint venture restricted competition between the parent companies. As is often the case, the parent companies had different motives; MCI wanted to maintain and extend its position especially in the Americas while BT wanted to become a world-wide provider of value-added and enhanced telecom services and needed a partner, particularly in the United States. The Com-

43. Commission Notice, O.J. C 7/3 (1992); COMMISSION OF THE EUROPEAN COMMUNITIES, XXIID REPORT ON COMPETITION POLICY 1992, at 416 (1993).

44. Commission Decision No. 94/579, O.J. L 223/36 (1994). COMMISSION OF THE EUROPEAN COMMUNITIES, XXIVTH REPORT ON COMPETITION POLICY 1994, at 102-04, §§ 156-60 (1995).

mission concluded that the joint venture would inject new services into the world market much faster than either parent company could separately. The Commission added that it was important to have a full range of services available quickly. It was crucial to the approval that both parties guaranteed access to their networks to third parties on a non-discriminatory basis.

l. *Olivetti-Digital*

The Commission authorized agreements between Olivetti and Digital[45] for production of components for computer systems. The Commission stated that the relevant markets were those for reduced instruction set computer technology ("RISC") and for the computer system products incorporating it. Olivetti committed itself to use Digital's technology and to make substantial purchases from Digital. Olivetti, however, had no RISC technology, and its five year commitment did not restrict competition more than is inherent in any choice of a temporary partner and supplier. The effect was to make Olivetti a competitor in RISC products without limiting Digital's freedom to exploit its technology in the European Community. The deal was approved because it allowed a more rapid dissemination of Digital's advanced RISC technology and because there were other RISC technologies available.

m. *MSG Media Service*

MSG Media Service[46] concerned a joint venture to handle payment-financed digital pay-TV, cable, or satellite. Pay-TV requires a decoder to enable subscribers to receive the encrypted programs for which they are paying, conditional-access technology, and a subscriber management system. Decoders require substantial investment. Because most households in the European Community still have analog TV sets, they need converters that allow the new digital signal to be received in analog form. The combined decoder and converter were to be in a set-top "box." In Europe, the encryption systems are proprietary. The Commission explained that cable TV is a separate market and refused to consider cable, satellite, and terrestrial frequencies as

45. Commission Decision No. 94/771, O.J. L 309/24 (1994).

46. Commission Decision No. 94/922/EC, O.J. L 364/1 (1994) [hereinafter MSG Media Service].

a single market because of the technical and financial differences between them. The Commission considered that the proposed joint venture would create "a durable dominant position" in Germany in the market for technical and administrative services, and this would create a dominant position for Bertelsmann, a book and sound recording group, and Kirch, a film and TV program producer, with the German Telecommunications monopoly Deutsche Telekom ("DT") in the pay-TV market. DT's position as a cable network operator would also be strengthened. The merger was prohibited, and the parties did not appeal.

Points to note about the MSG Media Service case are:

- The case is a good example of a proposed alliance between a state telecommunications enterprise, a TV and film company, and a book, sound recording, and music publisher in a national market;
- The combination of complementary companies would have foreclosed future and emerging markets and greatly raised barriers to entry for competitors;
- Pay-TV was considered a market separate from both public TV, financed through fees and advertising, and free-access TV, financed by commercial advertising. Pay-TV involves a relationship between viewers and the program suppliers, and commercially financed TV is based on the links between the program supplier and advertisers. The Commission's decision expressly said that this distinction might become blurred in the future;[47]
- Digitalization allows a huge increase in transmission capacity, from some thirty channels to approximately 200 channels.[48] This will allow new payment-financed special interest channels to emerge;
- Digitalization combined with encoded cable or telephone networks allow the development of interactive TV services such as pay-per-view and video-on-demand, as well as home banking and shopping, and teleteaching, which would be separate markets;
- The Commission stated that "a monopoly in a future market that is only just beginning to develop should not necessarily be regarded as a dominant position" within the Merger Regulation;[49]

47. *Id.* at 6, § 32.
48. *Id.* at 6-7, § 33.
49. *Id.* at 10-11, § 55.

- One of the main concerns was the barrier to entry created by the development of a standard for encryption and decoding for digital TV by a company that, due to the merger, would be involved in downstream activities. Decoders are so expensive that it is not likely that a household will want to pay for two in the future. MSG's proposed undertakings on decoders were not enough to deal with this;
- Digital encrypted TV, thus, involves significant first mover advantages;
- In response to the argument that the parties could not undertake the investment involved separately, the Commission said that DT, Bertelsmann, and Kirch could have done so and that two mobile telephone system operators had set up in Germany;
- The pay-TV market would lead into the markets for interactive higher-value services. DT's network was the only channel currently available for interactive TV;
- A combination of the strengths of DT, Bertelsmann, and Kirch would have made it almost impossible for a competitor to enter the market;
- By jointly operating the pay-TV structure with the leading German pay-TV suppliers, DT would strengthen its position as a cable network operator. Each partner by the agreement would eliminate the risk of competition from the others; and
- Behavioral undertakings were considered insufficient to avoid the creation or strengthening of a dominant position.

n. *International Private Satellite Partners*

The *MSG Media Service* decision contrasts with the Commission's negative clearance decision to allow the creation of International Private Satellite Partners.[50] This was a joint venture of a number of partners to provide international business telecommunications services to multinational companies on a one-stop-shop "end-to-end" basis, to operate satellites for this purpose, and to offer spare capacity on the market for bulk satellite transmission. The Commission said that no partner alone could meet the requirements or undertake the investment. The Commis-

50. O.J. L 354/75 (1994); COMMISSION OF THE EUROPEAN COMMUNITIES, XXIID REPORT ON COMPETITION POLICY 1993, at 133, § 217 (1994).

sion noted that the joint venture would be a new competitor in the telecommunications market previously reserved to companies holding exclusive rights.

o. *Microsoft Consent Decree*

In 1994, the Commission and the U.S. Department of Justice negotiated jointly with Microsoft and obtained an undertaking[51] and a consent decree in identical terms. Microsoft undertook not to make licenses of more than one year's duration, not to impose minimum commitments on licensees, and not to use "per processor" licenses requiring payment of a royalty on every computer containing a particular processor, regardless of whether it was shipped with pre-installed Microsoft software. "Per system" licenses, royalties payable on every computer in a particular model series, are allowed only if licensees are clearly free to buy non-Microsoft products without paying royalties to Microsoft. Existing licenses not fulfilling these requirements were not to be enforced, and could be terminated by the licensees, as in the *Astra* decision.[52]

p. *Nordic Satellite*

In 1995, the Commission prohibited the Nordic Satellite Distribution merger.[53] This was a joint venture between Kinnevik, a private Swedish conglomerate with strong TV, media, and telecom interests and the Danish and Norwegian state-owned telecom companies. The joint venture would have provided transponder capacity to broadcasters, operated cable TV, and transmitted satellite TV to the Nordic market. All transponder capacity on the two main competing satellites was already utilized, neither had a special interest in the Nordic area, and broadcasters would be likely to reduce their use of one of the satellites. Because of its links with Kinnevik as a major distribu-

51. O.J. L 53/20 (1996); COMMISSION OF THE EUROPEAN COMMUNITIES, XXIVTH REPORT ON COMPETITION POLICY 1994, at 364-65 (1995). See John Temple Lang, *Air Transport in the EEC - Community Antitrust Law Aspects, in* 1991 FORDHAM CORP. L. INST. 287, 368-89 (Barry Hawk, ed., 1992) (detailing legal effects of undertakings in Community law).

52. *See supra* note 41 and accompanying text (describing *Astra* decision).

53. Commission Decision No. 96/17/EC, O.J. L 53/20 (1996), COMMISSION OF THE EUROPEAN COMMUNITIES, XXVTH REPORT ON COMPETITION POLICY 1995, at 173-74 (1996).

tor and because the joint venture would control Nordic cable TV networks, the Commission concluded that it would have a dominant position on the market for satellite TV transponder services for Nordic viewers. Kinnevik would also get a dominant position on the market for distribution direct to home of satellite pay-TV. Vertical integration did not offer technical progress sufficient to outweigh the effects on competition. Undertakings offered by the parties were not considered sufficient, among other reasons because several of them were too difficult to enforce. The vertical integration meant that the positions of the parties in various markets would reinforce each other. In particular, their positions in the downstream cable TV networks and distribution markets would reinforce the dominance on transponders by deterring potential competitors from broadcasting from other transponders into the Nordic area.

There are several notable points in the Nordic Satellite case. First, like *MSG Media Service*, the problem concerned excessive vertical integration which was considered likely to lead to the exclusion of competitors at all levels. Vertical links between companies that are dominant at different levels, in this case, production and transmission of TV programs, are always going to be looked at critically. Second, like *MSG Media Service*, the parties would have had control over decoding equipment in private homes, which would have created serious barriers to entry for other competitors. Third, it was a significant case of involvement of telecommunications companies in the TV sector. Fourth, the efficiency defense, as in *MSG Media Service*, was explicitly rejected.

q. *RTL-Veronica-Endemol*

Another important recent case in which the Commission prohibited a merger was *RTL-Veronica-Endemol*.[54] RTL and Veronica are broadcasting companies, and Endemol produces TV programs. The Commission looked at three related markets, TV broadcasting, advertising on TV, and producing Dutch TV programs. The joint venture would reach an audience market share equal to or greater than the public broadcasting companies, would probably generate at least sixty percent of TV advertising,

54. RTL-Veronica-Endemol, O.J. L 134/32 (1995), COMMISSION OF THE EUROPEAN COMMUNITIES, XXVTH REPORT ON COMPETITION POLICY 1995, at 174-75 (1996).

and would be able to counteract the actions of competitors. The joint venture had agreed to take a minimum quantity of programs from Endemol. "A participation of 23% in a company that is active in a downstream market has to be seen as a strategic participation, rather than a financial one,"[55] especially when combined with representation on the board of the joint venture. Endemol would, thus, be able to foreclose access by other program producers to the largest broadcaster in the Netherlands. Not surprisingly, the merger was prohibited, although some undertakings were offered.

The parties later modified their plans, and the Commission finally approved them.[56] Endemol had withdrawn from the joint venture and joined a consortium setting up a new sports channel. Under the new arrangements, RTL would receive sixty five percent of the joint venture and Veronica would receive thirty five percent. The joint venture gave undertakings to operate what had been a general interest channel in the future as a news channel that would become a pay-TV channel generating its revenue from viewers or cable operators. This would make the part of the market previously cared for by that general interest channel available to competitors and reduce the joint venture's share of the Dutch TV advertising market.

r. *ETSI Interim Intellectual Property Rights Policy*

The *ETSI Interim Intellectual Property Rights Policy* case[57] concerned the intellectual property rights arrangements developed by the European Telecommunications Standards Institute ("ETSI"). The application of a Community standard could be made impossible if the standard incorporated proprietary technology and the owner of that technology was not willing to license it to the manufacturers of products complying with the standard. In the area of telecommunications, Community standards must be used in connection with the mutual recognition for type approval of terminal equipment and for public procurement procedures by telecommunications operators. Equipment manufacturers would be foreclosed from the market if licenses

55. RTL-Veronica-Endemol, O.J. L 134/32 (1995).
56. Commission Decision No. 96/649/EC, O.J. L. 294/14 (1996).
57. COMMISSION OF THE EUROPEAN COMMUNITIES, XXVTH REPORT ON COMPETITION POLICY 1995, at 131-32 (1996).

for such technology were not available. In order to reduce the risk of the development of standards being wasted, ETSI adopted a policy requiring that members would agree in advance to allow their intellectual property rights ("IPRs") to be included in a given ETSI standard, unless the IPR owner had identified any IPR it wished to withhold within a fixed period; this is the "licensing-by-default" obligation. In addition, the policy contained a number of provisions regarding the terms of the licenses to be granted unless the licensee agreed to grant cross-licenses.

Under pressure from the Commission, ETSI modified its policy so that ETSI members were obliged to use "reasonable efforts" to inform ETSI in a timely manner if they become aware of IPRs being developed in a given standard. If a member is unwilling to grant licenses, ETSI will seek a viable alternative technology, and if no alternative is found, work on that standard will cease. Members will merely be required to explain in writing the reasons for refusing to license. Once ETSI becomes aware of any IPRs in a particular standard, it will ask the owner, member or non-member of ETSI, whether it is prepared to grant irrevocable non-exclusive licenses on fair, reasonable, and non-discriminatory terms and conditions. A refusal to do so may lead to the non-recognition of the standard in question. There are, thus, no provisions relating to compulsory or automatic licensing or to specific licensing terms.

s. *Siemens/Italtel*

In *Siemens/Italtel*,[58] the Commission authorized the merger of the Siemens subsidiary for the manufacture of telecommunications equipment and the manufacturing subsidiary of the STET group in telecommunications equipment. STET controls the Italian public telecom operator, Telecom Italia.

Initially, the Commission considered that the proposed operation raised both horizontal and vertical issues in the markets of public telecommunication equipment. Horizontally, the joint venture would hold a substantial share of the public switching and transmission equipment market in Italy because Italtel's sales were basically restricted to Italy. Vertically, the Siemens/Italtel joint venture would be partially owned by its major cus-

58. *Id.* at 172-73.

tomer. Finally, the Commission took into consideration the fact that the markets for telecommunications equipment were being transformed. In particular, the Commission considered the potential for technological developments to make significant changes, the effects of standardization and public procurement legislation in opening up national markets, and the liberalization of telecommunications services and, in particular, telecommunications infrastructures that will lead progressively to a world-wide market for public telecommunications equipment.

In mobile communications, a Community standard, the liberalization of services, and the liberalization of infrastructures, has resulted in a European, if not world-wide, market for the supply of telecommunication equipment. In relation to the vertical link, any benefits that could arise from Telecom Italia granting privileges to the joint venture would be shared with Siemens. Siemens would have gained direct influence only over the equipment supplier, Italtel, and would have had no influence over the buyers, the telecom operator, Telecom Italia, or over its parent, STET. STET gave assurances that it would not interfere in the purchasing policy of Telecom Italia, in particular with regard to the choice of suppliers, and that there would be a clear separation between the management of Telecom Italia and the companies of the Italtel group.

t. *Atlas Phoenix/Global One*

The Commission's decisions on *Atlas Phoenix/Global One*[59] are its most elaborate so far. The Commission approved the strategic alliances between France Telecom, Deutsche Telecom, and Sprint-Global One, under Article 85(3) as structural cooperative joint ventures.[60]

The new joint venture, Phoenix, is to enter the markets for corporate telecom services, traveler services (services for individuals away from their home base, for example, calling card services and selected data and communications system software services) and carrier services (transmission capacity). Both France Telecom and Deutsche Telecom still have certain monopoly

59. *Id.* at § 57; Commission Decision No. 96/547/EC, O.J. L 239/23 (1995) [hereinafter Atlas Phoenix/Global One]; *see* Eucom/Digital, COMMISSION OF THE EUROPEAN COMMUNITIES, XXIID REPORT ON COMPETITION POLICY 1993, at 121-22 (1994).

60. Atlas Phoenix/Global One, O.J. L 239/23, at 39-41, 50-51 (1996).

rights in France and Germany, respectively. The Commission prohibited them from discriminating in favor of Phoenix and against any competitors of Phoenix needing services from them. The decisions came into force only when the first competitors were licensed to provide telecom infrastructure in competition with France Telecom and Deutsche Telecom. The decision includes elaborate and detailed requirements against discrimination, cross-subsidization, and bundling of reserved and non-reserved services and sets forth accounting and auditing requirements to prove compliance with the substantive obligations.

2. Pharmaceutical, Chemical, and Biotechnology Cases

a. *Becton Dickinson/Cyclopore*

In 1993, the Commission approved an agreement between Beckton Dickinson and Cyclopore.[61] Cyclopore is closely linked to the University of Louvain and produces thin membranes based on a patent license from the University. Becton developed a technique to weld these membranes into tissue culture products for culturing mammalian and insect cells in vitro. The Commission allowed reciprocal exclusive buying and selling obligations for five years, after which Cyclopore is free to sell membranes to other buyers.

b. *Pasteur Mérieux-Merck*

In a decision on vaccines, *Pasteur Mérieux-Merck,*[62] the Commission authorized a research and development joint venture and some related agreements between two European pharmaceutical companies. The principal restrictive effects were on potential competition and on third parties who would be licensed in the future only through the joint venture. The companies are two of the three leading vaccine producers world-wide. The Commission authorized the agreements on the grounds that the only alternatives would have involved multiple partners and been less satisfactory. In a long and detailed decision, the Commission concluded that an exemption should be given for twelve years.

61. COMMISSION OF THE EUROPEAN COMMUNITIES, XXIIID REPORT ON COMPETITION POLICY 1993, at 160, § 241 (1994).

62. Commission Decision No. 94/770/EC, O.J. L 309/1 (1994) [hereinafter Pasteur Mérieux-Merck].

Pasteur Mérieux-Merck is particularly notable on two accounts. First, the Commission, rightly or wrongly, gave weight to the likelihood of future competition from other sources, in spite of the short-term restrictions. This was crucial to the authorization. (This was an exemption under Article 85(3), and so could not be given permanently). Second, the joint structure would be the first entity with access to the technology needed to develop certain new multivalent vaccines, so that the availability of these new vaccines in Europe would be accelerated.

c. *Exxon-Shell*

In *Exxon-Shell,*[63] the Commission gave a ten year exemption for a joint venture to produce linear low-density polyethylene which would continue to be produced by both parent companies. This would be the first plant of its kind in the European Community and should lead to customers converting to this product, a reduction in the customers' use of raw materials, a reduction in their costs, and a diminished production of plastic wastes. The Commission insisted on considerable flexibility in the operation of the joint venture, and there were reasons for believing that there would continue to be competition between the parents in the sale of the product, because of different raw material costs for each parent and because of separate marketing. The parties together had only twenty-two percent of the Community market.

d. *Shell-Montecatini*

In *Shell-Montecatini,*[64] the Commission agreed to the setting up of a joint venture that would have created dominant positions in the world market for licensing the technology for producing polypropylene and in the West European market for polypropylene itself. More than two-thirds of the world production used one or other of the two parent companies' technologies, and the other technologies were not considered adequate. The Commission considered that the parties would have one-third of Community polypropylene production, competitors

63. Commission Decision No. 94/322/EC, O.J. L 144/20 (1994) [hereinafter Exxon/Shell].

64. Commission Decision No. 94/811/EC, O.J. L 332/48 (1994) [hereinafter Shell-Montecatini].

were relatively weak, the parties were also in several other polypropylene joint ventures, and the joint venture would own the technology. The Commission, however, approved the arrangement on the basis of two undertakings. Montedison's technology activities would not be put into the joint venture but would remain under the sole control of Montedison and would operate independently with sufficient resources to finance R&D. Also, Montedison would withdraw from its production joint venture with Petrofina and simultaneously keep its activities and know-how entirely separate from those of the new Shell-Montecatini joint venture. It is worth noting that the Commission objected because the new joint venture would have controlled both of the principal technologies. Keeping one technology under the sole control of one parent would not normally be sufficient to solve this problem. The Commission defined a relevant product market for technology.

e. *Upjohn-Pharmacia*

In *Upjohn-Pharmacia*,[65] the Commission considered R&D competition in the pharmaceutical industry. The Commission first explained that for medium sized companies, the cost of R&D and regulatory approval for pharmaceuticals are "becoming very heavy to bear."[66] Pooling resources would create "critical mass."[67] But the Commission still looked at R&D activities and concluded that although their research on solid tumors concerned the same class of compounds, they were not sure to overlap and there were competing compounds from three other large competitors. Pharmacia's compound needed several years of clinical trials before its therapeutic profile became known. Though the two companies' research on Parkinson's disease overlapped, there were at least twelve competing products under development by major companies. Therefore, neither area of R&D overlap raised competition concerns.

f. *Glaxo-Wellcome*

The Commission authorized the Glaxo-Wellcome pharma-

65. Commission Decision, Case No. IV/M.631, O.J. C 294/09 (1995).
66. *Id.* at § 25.
67. *Id.*

ceutical merger in 1995.[68] Both companies were doing research on antimigraine products, and Wellcome's new product was likely to compete with Glaxo's new and existing products. To solve the problem, Glaxo agreed to grant an exclusive license to a third party to develop and market one of the two new drugs. Two points should be highlighted. First, this divestiture was crucial. The Commission noted that other competitors were doing R&D on drugs with similar modes of action, but that these might not be on the market before the year 2000. Second, the Commission did not wish to express a view on which new product was likely to succeed, and, therefore, treated them all equally. This led it to say implicitly that if Wellcome was not successful, the disappearance of Wellcome's future product as a competitor to Glaxo was not important, but that if they were all successful Glaxo would have competition. The risk that the Commission was taking (that the competitors' products would not appear, and that Wellcome's product would be valuable) could only be dealt with by the exclusive license that Glaxo promised.

g. *The Aspen Case*

The *Aspen* case[69] involved the creation of a joint venture in the field of specialty polyethylene resins and compounds. The Commission considered whether there was any likely decrease in competition on the polyethylene technology licensing market arising from the operation. While Elf Atochem might have been a future competitor to Union Carbide ("UCC") in this market, this was judged to be so unlikely that any effects on this market were outweighed by the procompetitive effects in the polyethylene markets.

The Commission authorized a joint venture between Enichem and Union Carbide[70] in the market for polyethylene ("PE"). Enichem transferred to the joint venture, with some exceptions, its Western European manufacturing facilities and

68. COMMISSION OF THE EUROPEAN COMMUNITIES, XXVTH REPORT ON COMPETITION POLICY 1995, at 163-64 (1996); see Glaxo, C 3586, June 14, 1995, 60 Fed. Reg. 16-139 (Mar. 29, 1995); *see also* Commission Decision No. 96/478/EC, O.J. L 201/1, at § 150-52 (1996) [hereinafter Adalat].

69. Commission Decision No. 95/C, O.J. C 123/3 (1995) [hereinafter Aspen], COMMISSION OF THE EUROPEAN COMMUNITIES, XXVTH REPORT ON COMPETITION POLICY 1995, at 123-24 (1996).

70. *Id.*

sales network. UCC contributed its technological expertise, including a license to use its production process. UCC is the leading world supplier of PE production technology. The Commission examined the effects of the proposed operation on, among other markets, the market for PE production technology. The Commission concluded that the operation would not create or strengthen a dominant position in any of these markets. In the PE technology market, there are four types of PE production processes that are currently used, distinguished by the method by which ethylene is polymerized. Potential licensees for PE technology will seek licenses for low pressure processes, such as gas phase, that produce more than one product. The capability of a technology to switch production at a single plant is important for some potential licensees. UCC's technology is the leading gas-phase PE process. The Commission concluded, however, that the creation of the joint venture would not significantly improve UCC's position in the technology because Enichem's experience was only, to a very limited extent, in gas-phase technology.

h. *Ciba-Geigy/Sandoz*

In its *Ciba-Geigy/Sandoz* decision,[71] the Commission authorized a merger setting up the second largest supplier in the world of pharmaceutical products. The decision analyzed specifically "future markets," that is, products that are not yet on the market but that are at an advanced stage of development. According to the Commission:

> The Commission has to look at R&D potential in terms of its importance for existing markets, but also for future markets . . . . Insofar as research and development must be assessed in terms of its importance for future markets, the relevant product market must, in the nature of things, be defined in a less clear-cut manner than in the case of existing markets . . . . Because research and development is normally global, the consideration of future markets should therefore focus on the territory of the Community at least, and possibly on world-wide markets.

The decision later states:

> The market strength of the undertakings in research and de-

71. Adopted on July 17, 1996 (decision not reported).

velopment is difficult to estimate since success in R&D can usually be assessed only after the R&D has been completed. Nevertheless, the undertakings' existing R&D potential cannot be ignored in the competitive assessment since their future competitive strength is based precisely on such potential.

The parties are particularly strong in the biotechnology and genetic engineering fields. Their strength is based primarily on a number of cooperation agreements with and stakes in U.S. undertakings and research establishments. Through these holdings and cooperative arrangements, the parties also have access to patents in this field . . . . Little can be said with certainty about the time required to achieve results in this area [gene therapy]. Since the diseases to be treated are as a rule ones that hitherto could not be adequately treated, authorization of developed processes can possibly be given much more quickly than in the case of traditional medicinal products that merely replace ones that are already available and effective.

The parties could, as a result of these holdings, have exclusive access to a combination of broadly defined patents . . . . The patent applications cover such a wide spectrum of patent claims that, if the patents are issued with the coverage applied for or with similar coverage, their combination as a result of the merger could mean that other competitors were largely excluded from parts of this field of research (gene therapy for brain tumors . . .).

Patents rights may pose considerable entry barriers to competitors on future markets. When R&D results are marketed, a number of patents held by other undertakings must often be taken into account. Undertakings must then either find ways of marketing their R&D results without infringing other patent rights or acquire the relevant licenses. The more patents exist in a particular area of research and the wider the coverage of such patents, the more difficult the situation may be in individual cases. Particular problems may arise where individual suppliers have a combination of patents that make it difficult or indeed impossible for other suppliers to gain market access without infringing such patents. Where a merger leads to the holding of such a combination of patents, market foreclosure can result.

The parties argue that some at least of the patent applications, in particular those attributable to Chiron, are so broadly formulated that it is highly improbable that they will be granted without a more detailed specification. Furthermore, they argue, the patents attributable to Chiron, as currently specified, do not cover the treatment of brain tumors and other tumors. They therefore take the view that, even if the relevant patents are granted, the proposed merger will not lead to any combining of patents that might result in market foreclosure. Lastly, the parties object that they do not have any exclusive access to the patents attributable to Chiron.

According to information deriving from the market, any combining of the future patent rights of GTI and Viagen could block the development of gene therapies for tumors or other treatment methods by other undertakings. It is still uncertain whether this situation will actually apply. At any rate, the merger can place competitors in a worse negotiating position for obtaining a license from GTI or Chiron after the merger. Whether this worsening of competitors' negotiating positions can actually result in market dominance depends essentially on three conditions: (1) it is not certain that gene therapy will ultimately prove to be a successful method of treatment; (2) other research results may open up ways of circumventing any obstacle created by the combining of patents; and (3) the patent situation is very unclear. The parties have as yet submitted only patent applications. Patents have still to be granted.

If these three conditions become reality, the proposed merger may lead to a structural danger of foreclosure of the future market for HS-TK gene therapies for tumors The parties would then have power over other competitors' market access through the issue of licenses.

The first condition is one that applies in any examination of future markets. What it ultimately amounts to is that the market must be created before any problem can arise . . . . Even if it cannot yet be predicted whether this new method for treating tumors will actually be applied, there is nevertheless, in view of the progress being made in the research, sufficient probability to warrant protecting the market in terms of competition.

The second condition is difficult to assess in current terms. Insofar as the parties' competitors may in future be prevented from marketing their products as a result of patents, they will, in view of the large amounts of expenditure incurred on research, try to find a way of circumventing this difficulty if they cannot obtain any licenses. There is not enough information available to be able to say whether such a

> way will be found. Although any such endeavor can involve additional time and money, it cannot be excluded that competitors will search and find such ways.
>
> A key question regarding the creation of any competition problem is whether the parties will obtain patents that may have a blocking effect. This applies primarily to the blocking effect that patent applications attributable to Chiron may create for competitors of GTI in their pursuit of a competing product. The Commission's investigations have identified substantial market fears in this respect. The granting of such patents depends on two preconditions. First, the parties must assert their patent claims on the basis of a specification that includes areas of HS-TK gene therapy for tumors. This precondition is solely in the hands of the parties. To this extent, the proposed merger can pose an increased structural danger of market foreclosure. The second precondition is the actual granting of such patents, and this is not in the hands of the parties. The patent applications could of course exert some disruptive effect. Undertakings wishing to market a HS-TK gene therapy for tumors would have to bear in mind that, under certain circumstances, patents having a broad specification might be granted. They are therefore confronted with the question of whether they should carry out investment in this area at all and whether they would have seek a way of getting round any patent. Viewed in abstract terms, this could pose an obstacle to competitors wishing to gain market assess.
>
> Therefore, it cannot ultimately be said with sufficient probability that the merger will on any future market lead to the creation or strengthening of a dominant position.[72]

The companies undertook to arrange the granting of non-exclusive licenses to requesting third parties at commercially competitive terms under any European patent (and resulting national patents) based on the international patent applications, ten years from the granting of the European patents for each of these patents. The parties gave a similar undertaking in relation to Methoprene.[73]

Later in the decision, the Commission several times considered "potential competition" for products already on the market, *i.e.* new entrants, making it clear that there is a difference

72. *Id.* at ¶¶ 95 *et seq.*
73. *Id.* at ¶ 275.

between it and competition in R&D to produce future kinds of products. The Commission stated:

> Most suppliers of crop protection products are active in all sectors, i.e. fungicides, herbicides and insecticides, and have a correspondingly large R&D potential (R&D intensity: 10% and over). In suitably quick succession, new products come onto the market which supersede their predecessors. A strong market position today is therefore no guarantee at all of a strong position in the future. . . .
>
> Novartis's turnover in crop protection products worldwide will be roughly twice, and in Europe roughly one and a half times, that of its nearest competitors . . . . Novartis's R&D capacities will be correspondingly large and the number of research successes probably high. On account of the synergies in R&D that Ciba and Sandoz will achieve as a result of the concentration, Novartis will succeed in keeping its research expenditure lower in relative terms than that of its competitors. If the R&D intensity to date is maintained, the economies of scale just described will lead to an additional strengthening of Novartis's R&D potential. The suppliers of crop protection products are unanimous, however, in thinking that large capacities are no guarantee of the success of R&D projects. It can therefore only be assumed from the current trend that Novartis will maintain, and possibly even extend, the position as market leader that it has in the crop protection sector. Moreover, the Commission's investigations revealed that at least the . . . [main] competitors all have the "critical size" necessary for effective R&D activity.[74]

There are several points worth noting in Ciba-Geigy/Sandoz.

- The parties tried to rely on the argument that the patents they had applied for would not be granted in the broad terms of their applications. The Commission could not take a position on this;
- The Commission found it necessary to make a detailed assessment of the effects of probable future developments on competition, although the results were apparently inconclusive;
- Various aspects of the case were considered under "future markets,"[75] "research and development,"[76] and "new

74. *Id.* at ¶¶ 170 *et seq.*
75. *Id.* at ¶ 95 *et seq.*

products, potential competition;"[77]

- The Commission commented that products for use in stables, for registration of which plant protection authorities are responsible, takes between six months and three years depending on the Member State;[78] and
- The Commission required only licenses, not divestiture, and called for reports on the methoprene situation.[79]

3. Other Industries—Some Cases

a. *Sarabex Case*

The *Sarabex* case[80] concerned membership of the Foreign Exchange Brokers Association in London ("Association"). U.K. banks had agreed not to use non-members of the Association for certain foreign exchange transactions. The Association's members charged an agreed rate of commission. The Commission required the adoption of objective criteria for membership and a right of appeal if membership is refused. This was essentially on the lines now required by the judgment in EBU-Eurovision.[81]

b. *Aérospatiale-Alenia-De Havilland Merger*

Although aircraft production is, of course, a high technology industry, the Commission's decision to prohibit the Aérospatiale-Alenia-De Havilland merger[82] concerned turboprop planes and is based on traditional considerations about high market shares, elimination of an important competitor, becoming the only producer of an entire range of aircraft, and barriers to entry. It is, however, worth mentioning because the Commission said specifically that the merged companies would have more flexibility on price than their competitors, and they would have been able to offer favorable conditions for a particular type of aircraft when selling several aircraft of different types simultaneously. Selective pricing is not necessarily an abuse, but it may be

76. *Id.* at ¶ 170 *et seq.*, ¶ 219 *et seq.*

77. *Id.* at ¶ 214.

78. *Id.* at ¶ 216.

79. *Id.* at ¶ 280.

80. COMMISSION OF THE EUROPEAN COMMUNITIES, EIGHTH REPORT ON COMPETITION POLICY 1978, at 35-36, §§ 35-37 (1979).

81. EBU/Eurovision, O.J. L 179/23 (1993).

82. Commission Decision No. 91/619/EEC, O.J. L 334/42 (1991); COMMISSION OF THE EUROPEAN COMMUNITIES, XXIST REPORT ON COMPETITION POLICY 1991, at 367-68 (1992).

important both as evidence and as an advantage of dominance. The market was the world market, and the efficiency defense was rejected.

c. *Ford-Volkswagen*

The Commission's *Ford-Volkswagen* decision[83] is interesting not because it involved high technology, but because the Commission was willing to anticipate the future to some extent. The Commission authorized a joint venture between two of the largest Community producers of private motor vehicles to develop and produce a multi-purpose vehicle ("MPV"), a minivan. Though neither parent previously produced an MPV in the European Community, the agreement would probably not have been authorized if Renault had not already had a dominant or near-dominant position in the MPV market. When the decision was adopted, it was not expected that total sales of MPVs in the European Community would exceed 350,000 by 1995, and so the joint venture's factory, with an annual production capacity of 190,000, could not have been justified for either parent alone.

There are two notable points about Ford-Volkswagen. First, the joint venture was authorized because there was an already dominant producer.[84] An already dominant company would not normally be allowed to increase its market power on the basis of forecast market changes that were said to be likely to reduce its power in the future, unless the reduction was both certain and imminent. Second, elaborate and strict conditions were imposed.[85]

d. *The Mannesmann Cases*

Two cases involving Mannesmann show that the Commission is sometimes willing to look into the future and produce conclusions favorable to the companies. In *Mannesmann/VDO,*[86] the Commission authorized the acquisition of control of a big German manufacturer of electronic and electrical control systems for automobiles. The Commission found that Mannes-

83. Commission Decision No. 93/49/EEC, O.J. L 20/14 (1992) [hereinafter Ford-Volkswagen]; Matra Hachette v. Commission, Case T-17/93, [1995] E.C.R. II-595.
84. Ford/Volkswagen, O.J. L 20/14, at ¶ 13 (1992).
85. *Id.* at art. 2.
86. Commission Case No. IV/M.164, O.J. C 88/13 (1992) [hereinafter Mannesmann/VDO].

mann, though a large conglomerate, was not a significant potential competitor of VDO because it was no longer likely to be worthwhile to invest in non-electronic technology and there were other competitors in the electronic technology. In *Mannesmann/Hoesch*,[87] the Commission relied on the incentives and opportunities for new entrants to go into the market for steel pipes for petroleum products, in particular as the European Community was harmonizing technical standards and liberalizing public procurement of these products, among others.

These cases contrast with several cases in the airline industry. In the airline industry cases, the Commission found that an immediate and undoubted strengthening of dominance would not be sufficiently offset by the possible future effects of liberalization of air transport and had to be balanced immediately by specific measures to increase competition.[88]

e. *Crown Cork-CarnaudMetalbox*

In *Crown Cork-CarnaudMetalbox*[89] the Commission had to consider, among other issues, that the merger brought together "the two market leaders with respect to know-how, R&D, and technology."[90] The Commission said that although such a merger might have procompetitive effects due to rationalization, in this case the effect would be anticompetitive because of the barriers to entry. Aerosol cans are adapted to customers' needs and know-how is important. Know-how is a primary factor driving competition and the need for substantial know-how is one of the barriers to entry. The merger would have been prohibited, if Crown Cork had not sold several aerosol factories through a trustee, including state-of-the-art machinery.

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87. Commission Decision No. 93/247/EEC, O.J. No L 114/34 (1992) [hereinafter Mannesmann/Hoesch].

88. Air France-Air Inter, COMMISSION OF THE EUROPEAN COMMUNITIES, XXTH REPORT ON COMPETITION POLICY 1990, at 90-91, § 116 (1991); Lufthansa-SAS, Commission Decision No. 96/180/EC O.J. L 54/28 (1996) COMMISSION OF THE EUROPEAN COMMUNITIES, XXVTH REPORT ON COMPETITION POLICY 1995, at 134-35 (1996); Swissair Sabena, COMMISSION OF THE EUROPEAN COMMUNITIES, XXVTH REPORT ON COMPETITION POLICY 1995, at 65, § 143 (1996).

89. Commission Decision No. 96/222/EC, O.J. L 75/38 (1995) [hereinafter Crown Cork]; COMMISSION OF THE EUROPEAN COMMUNITIES, XXVTH REPORT ON COMPETITION POLICY 1995, at 65, 176-77 (1996).

90. Crown Cork, O.J. L 75/38 at 41, § 61 (1995).

II. *SHORT TERM BENEFITS*

The Commission is often willing to accept a joint venture or other restrictive agreement if it will bring a new competitor or a new technology quickly onto the market or create a counterweight to an existing dominant enterprise, rather than trying to force the parent companies to enter the market separately at some future date.[91] This short-term, pragmatic preference for immediate concrete results rather than less certain, long-term but potentially greater advantages is normally due to several influences. First, the European Community has had to catch up with the introduction of some new technologies and has had to integrate national markets, which usually involves some rationalization. Second, especially in industries in which there were separate companies in many Member States, some joint ventures or mergers were both necessary and desirable, either to enable a more efficient competitor to enter a new national market quickly or to allow a less efficient competitor to continue operations after a merger rather than simply disappearing entirely. The possibility of withdrawing the exemption for a joint venture after its immediate value for competition is achieved is not usually an important reason for this short-term approach. The Commission, as presently staffed, would find it harder than the U.S. Department of Justice to bring a case based on theoretical economic arguments that because the parents of a joint venture could enter the market separately in the future, they should not be allowed to enter it together now.

In theory, when the timing of benefits and costs to competition differ, they can be discounted appropriately and future benefits may be discounted if it is not certain that they will be realized. The Commission's decisions, however, do not discuss any efforts to quantify such matters.

The problem of choosing between short-term and long-term benefits sometimes presents itself acutely in those essential facilities cases in which it is theoretically possible for the plaintiff to develop its own alternative to the allegedly essential facility, but the plaintiff says it would take too long, be too unlikely, or cost too much to be a real and viable alternative. In the short-term, competition in the downstream market in which the facil-

91. *See* Temple Lang, *supra* note 32, at 244-52.

ity is needed is promoted by requiring access to be given. In the long-term, it may be that competition in the provision of the facilities in question might be promoted by forcing the plaintiff to find some way of developing its own facility. Only in one case has the Commission used the idea of ordering temporary access to an essential facility,[92] and, as the case involved interlining between airlines, it probably cannot be used to draw general conclusions. In telecommunications, it is expected that in many markets there will be a second infrastructure provider, but it is likely that the duopolists will be jointly dominant and so have certain duties to provide access.

In most respects, the Commission regards the differences between cases dealt with under the Merger Regulation and cases under Regulation 17 as merely procedural. Although on paper the substantive tests appear different, in practice the Commission treats the test under Article 85(3)(b) as a test of dominance and tries to ensure that the same or similar results are reached under both Regulations. There are, however, two important differences, Merger Regulation decisions are permanent while individual exemptions under Article 85(3) are temporary. This leads, or could lead, to a significant difference in treatment in a case in which an arrangement with short-term restrictive effects is permissible only if potential competition is realized in the future. An authorization under Article 85(3) in such circumstances might be justified because it need not be renewed and could, if necessary, be revoked. An authorization under the Merger Regulation in such a case, however, could not be justified. This, therefore, is a case, although an unusual one, in which parties are theoretically likely to have more favorable treatment under Regulation 17.

Another difference is that under Article 85 there is an explicit efficiency defense. This difference is more apparent than real because it is available only if the parties are not afforded the possibility of eliminating competition with respect to a substan-

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92. Commission Decision No. 92/213/EEC, O.J. L 96/34 (1992) [hereinafter Aer Lingus-British Midland]; Temple Lang, *supra* note 22, at 458-59, 504-06; *see* Commission Decision, Case No. IV/M.235, O.J. C 232/14 (1992) [hereinafter Elf Aquitaine-Minol] (temporary undertaking to share depots with competitors in the former East Germany). *See generally* Joseph P. Griffin & Leeanne T. Sharp, *Efficiency Issues in Competition Analysis in Australia, The European Union, and the United States*, 64 ANTITRUST L.J. 649, 661-72 (1996).

tial part of the goods or services in question and if the agreement's restrictive features are indispensable to obtain the efficiencies identified. A final difference concerns remedies. A behavioral undertaking is more readily accepted in Regulation 17 cases than in merger cases.

A. *Competition in R&D*

The practice of the Commission is to consider, when there is specific evidence about competing lines of R&D, whether a merger or agreement is likely to restrict substantially competition in R&D. This was done in *Upjohn-Pharmacia*,[93] *Glaxo-Wellcome*,[94] *Crown Cork*,[95] *Ciba Geigy-Sandoz*,[96] and *Shell-Montecatini*.[97] The Commission's reasons for doing this are essentially the same as those given by the U.S. FTC:

> First, a next generation product might not reach consumers as quickly or with the same quality or diversity as would be the case absent the transaction. Second, consumers may be deprived of likely potential price and quality competition in current or future goods markets . . . . To analyze a merger's likely competitive effects on current innovation competition itself, however, one must ask whether a proposed merger would likely change the merged firm's abilities or incentives to engage in [this] innovation competition post merger.[98]

The FTC went on to say that innovation market analysis should be used only where the innovation is directed towards a particular good and where the innovation can be associated with specialized assets or characteristics of specific firms. The Commission would be more likely to say that competition in R&D is important only where the competition between the firms in question is the leading research in the field, is directed specifi-

93. Commission Decision, Case No. IV/M.631, O.J. C 294/9 (1995).

94. COMMISSION OF THE EUROPEAN COMMUNITIES, XXVTH REPORT ON COMPETITION POLICY 1995, at 153-64 (1996).

95. Crown Cork, O.J. L 75/38 (1995).

96. Commission Decision (Eur. Comm'n July 17, 1996) [hereinafter Ciba Geigy-Sandoz] (not yet reported).

97. Shell-Montecatini, O.J. L 332/48 (1994).

98. Executive Summary and Principal Conclusions, *in* ANTICIPATING THE 21ST CENTURY, *supra* note 3, ch. 1, at 4-5 (emphasis added). *See* Thomas N. Dahdouh & Mongoven, *The Shape of Things to Come: Innovation Market Analysis in Merger Cases*, 64 ANTITRUST L.J. 405-41 (1996).

cally towards producing or improving the same product or process, and is associated with specialized R&D programs of those firms. The FTC principle is broader perhaps, but not significantly different in most situations. The Commission does not seem to consider it necessary to have as many as five or more independent substitutable R&D programs after the merger or agreement, as the FTC does. A similar competition problem could arise if a company with a successful product already on the market merges with a company with an active R&D program to produce a new product competing with the first one.

In the case of joint ventures, the Commission is already accustomed to the argument that parent companies acting rationally in their own separate interests have an incentive to align their prices with those of their joint venture selling in the same product and geographical market to avoid reducing the value of their own investment.[99] It is, therefore, natural for the Commission when appropriate to accept the argument that if a merger or agreement creates an incentive not to invest in R&D that would be likely to reduce the value of the companies' existing products or another line of R&D, the existence of this incentive will have anticompetitive effects that should be taken into account.

The Commission has not defined an "innovation market"[100] and has arrived at much the same result by using the more traditional concept of competition by two companies in R&D directed towards the same goal. The Commission also seems more likely to use this approach than a potential competition approach, implicitly considering the R&D approach more convincing, practical, and immediate. In the European Community, however, there has been much less theoretical discussion about these questions. The Commission has often accepted improved R&D as a benefit of cooperation or merger in individual cases, when appropriate. It would, therefore, be inconsistent and un-

99. Temple Lang, *supra* note 32, at 228-29.

100. The Department of Justice and Federal Trade Commission Antitrust Guidelines for the Licensing of Intellectual Property define an innovation market as the "research and development directed to particular new or improved goods or processes, and the close substitutes for that research and development." DEPARTMENT OF JUSTICE AND FEDERAL TRADE COMMISSION, ANTITRUST GUIDELINES FOR THE LICENSING OF INTELLECTUAL PROPERTY (1995), *reprinted in* 4 TRADE REG. REP. (CCH) 13,132, 20,733, 20,738 (Apr. 6, 1995).

sustainable to say that a merger or agreement could never have an anticompetitive effect on R&D. In the European Community, the real issue is not whether to do this in appropriate cases, but how to do it. The cases in which the Commission has acted against mergers likely to reduce R&D, or the incentives for R&D, have been fairly clear ones.

In passing, one difference between the European Community and the United States should be noted. In the European Community, the approval processes (until 1995 there was no Community equivalent of the Food and Drugs Administration and even now only biotechnology products must be submitted to the European Agency for Evaluation of Medicinal Products) for pharmaceutical and biotechnology products do not take as long as those in the United States. Subsequently, it would not take as long as in the United States for a substitutable product to come on the market as a result of the R&D of a third company, if there were one.

The FTC Report correctly points out[101] that a feature of situations in which a merger or agreement today is thought likely to reduce R&D soon and produce anticompetitive effects on the market later is the lapse of time between the anticompetitive conduct and its effects and that these effects will be delays or "non-events," not "events". This clearly goes back to the basic problem that it is always difficult to foresee the future, particularly so in rapidly changing, high-technology industries.

The Commission's reliance on forecasts of future market conditions may, in theory, either improve or harm the antitrust position of the parties. In the two *Mannesmann* cases[102] and in *Ford/Volkswagen*,[103] the Commission relied on probable future developments not resulting from current R&D and arrived at conclusions favorable to the parties. In *Glaxo-Wellcome*,[104] *Crown Cork*,[105] *Shell-Montecatini*,[106] and *Ciba Geigy-Sandoz*,[107] however, the Commission drew conclusions unfavorable to the parties and

101. ANTICIPATING THE 21ST CENTURY, *supra* note 3, ch. 7, at 14.

102. Mannesmann/Hoesch, O.J. L 114/34 (1992); Mannesman/VDO, O.J. C 88/13 (1992).

103. Ford/Volkswagen, O.J. L 20/14 (1992).

104. Glaxo-Wellcome, O.J. C 65/4 (1995).

105. Commission Decision No. 96/222/EC, O.J. L 75/39 (1995).

106. Commission Decision No. 94/811/EC, O.J. L 332/49 (1994).

107. Ciba Geigy-Sandoz (Commission Decision, Eur. Comm'n July 17, 1996) (not yet reported).

in each case allowed the merger only on the basis of commitments to make divestments. In practice, therefore, taking competition in R&D into account seems likely to lead to extra difficulties for mergers, because it is unlikely that the Commission would be willing to rely completely on the argument that a non-dominant third company's R&D, about which by definition the parties are not well informed, was so certain to be more successful than the combined R&D of the parties that the merger could go ahead.

B. *Speed of Technological Change and R&D*

The next question is whether, by looking at R&D today, one can be sure how far competition will be lessened, or which companies will have market power at the time when the resulting products are on the market. The connection between R&D and competition and between R&D and innovation is no clearer in the European Community than it is in North America. Several situations may arise. First, the two companies involved, or one of them, may be about to abandon R&D in the area in question, or both may be working on similar approaches to the same problem. In such a case, there is no objection to the agreement on R&D grounds. Second, the two companies are working on different approaches to a crucial problem that, when solved, will give the successful company a big advantage. In such a situation, it might be important to ensure that both lines of research continued. In this situation, divestiture of the research, if it could be done satisfactorily by a license of the accumulated know-how or otherwise, would be a necessary condition for approval. This was the *Glaxo-Wellcome*, *Shell-Montecatini*, and *Crown Cork* situation.[108]

Because economic analysis does not say much that is precise about the relationship between the level of R&D and competition or about the relationship between R&D and innovation, a case-by-case or at least industry-by-industry approach seems inevitable. Furthermore, precise "non-static" competition analysis, however attractive in theory, seems difficult in practice.

At first sight, the speed of technological change and the resulting need for R&D could have two different effects. On one hand, it might mean that collusion is more difficult and domi-

108. *See supra* notes 68, 64, 88 and accompanying text.

nance will more quickly erode than in other industries. On the other hand, it might mean that the need for large R&D expenditure is an extra barrier to entry that will protect existing dominance because of the need to build on existing R&D.

It seems necessary to distinguish between industries in which technological developments occur with relatively little R&D because the innovation requires small resources or little learning or experience and industries in which technological developments usually involve large R&D expenditure by the principal companies. The conclusion suggested is that antitrust policy should be more concerned about the latter.

It is, of course, true that even in high-technology industries some important technological developments can be made with little R&D, and, therefore, the distinction is not a clearcut one. It may, therefore, be useful to distinguish also between industries in which large expenditures on R&D is almost certain to produce substantial results provided that those involved are clever enough, like software, and industries in which it is possible sometimes to spend large sums of money without any useful results at all, such as pharmaceutical research and biotechnology. For antitrust practitioners, there is clearly no alternative to knowing the facts of the particular industry and the technology concerned.

The cases raise several essential issues. First, how certain is it that any particular technological change will occur? A generalized certainty that some important changes will occur has no operational significance. Second, how quickly will the identified changes occur? It is only after these questions have been answered that a more general question arises: in an industry undergoing rapid technological change, in which R&D is important, is it possible to forecast the future with sufficient confidence for the forecast to be the principal basis for antitrust action, using assessments of current R&D expenditure? In other words, can probable future competition be so well measured by current R&D spending that it is a better test for the future than current market power?

It is useful to clear away one point. If there is a "market for R&D," it is only if companies are selling the service of providing R&D to other companies. That is a present market for a present service, and it is not the same as the question of whether R&D

activities for the researcher's own use is a good measure of future market power.

C. *Future Market Power and R&D*

Some comments are needed regarding the idea that future market power might be better measured by looking at R&D expenditure than at present market shares:

- In EC antitrust law, market shares are not the only criteria of dominance. Other advantages and disadvantages must be taken into account if they evidence or affect market power. So it is normal and necessary to take into account technological expertise, large R&D spending, a large volume of patents or know-how, and so on;
- R&D spending is not necessarily a good measure of future market power. Not all such spending yields results, and the value of results is not necessarily proportionate to spending. In particular in the biotechnology industry, a discovery made today may not be commercially available for several years;
- To use R&D as a measure of future market power, one would need to value the company's existing know-how, perhaps based on past R&D spending, and the probability of success of its current R&D spending. This would be impossibly difficult in most cases, unless an undeniable technological breakthrough had just occurred, and not necessarily even then might it be possible;
- Even a company with little R&D spending of its own may be a licensee of a brilliant inventor, a company with a successful R&D program, or a great university. Such links might prove to be more significant than the company's own R&D. In particular in biotechnology, much R&D is carried out by small firms that license successful inventions or discoveries to big companies with the production capacity to commercialize it;
- A deep pocket to buy a new invention, or an infrastructure ready to exploit it, might be more important than R&D itself;
- Assessments of the value of R&D programs would be liable to change more radically, in the light of future technology, than other assessments of market power. Antitrust analysis should not be more mercurial than the situation requires;
- In the European Community, with its still partly separate

national markets, future market power in high-tech markets seems likely to be more influenced by existing advantages and by shrewd future alliances and strategies leading to expansion into the rest of Europe, than by wholly new discoveries or even improved production methods, although nobody can foresee the future clearly in biotechnology; and

- The margin of error in assessing the future market power of one company by reference to its R&D is already large. If one tried to compare the future market power of several companies, relative to one another, primarily in this way, the margin of error would become excessive.

Another aspect of all this is that a competition authority dealing with a case in which two or more companies have competing R&D lines must ultimately decide whether the merger or agreement will reduce duplication and increase the chances of success or eliminate competition between promising lines of inquiry. This often difficult decision is unaffected by the amounts of money being spent by either company. So is the even more difficult question: which line of research is most likely to succeed?

D. *Buyers Choosing the Product Most Likely to Be Enhanced*

Buyers of sophisticated hardware and other products often choose the product which they believe is most likely to be improved or enhanced during its lifetime in their hands. In other words, the buyers are choosing not only the product, but also what they believe, rightly or wrongly, is the supplier most likely to provide them with desirable improvements when they become available.

- Buyers might base their views on which supplier is most likely to provide enhancements on the R&D spending of the competing suppliers. But, they are just as likely to base their views on the suppliers' track records in providing enhancements or on contractual commitments to provide all enhancements when they become available.
- A buyer of sophisticated hardware would be less likely to buy the product of a supplier thought likely to replace its existing product with an entirely new product, instead of providing enhancements.
- Total R&D spending would not be a good measure of a given company's chances of providing enhancements. To

produce a more indicative answer, one would need to know if the R&D was on enhancements or an entirely new product.

E. *Caution Is Needed in Antitrust in Innovative Industries*

Apart from the difficulty of foreseeing the future, caution is essential for another reason when dealing with innovation markets. There are three identifiable strands of opinion about innovation markets. In brief, one view is that in defining the present generation of markets for products or services, it is sufficient to take into account present R&D and other innovation-producing activities that are foreseeably likely to lead to the next generation of products. A second view is that what is important is the next generation of products or services, and that antitrust decisions today should be based on the probable effects of today's agreements, mergers, or practices in the next-generation market, assessed by reference to R&D spending and expertise. A third view focuses on competition in R&D itself, and states that the main question to be asked is whether today's agreements, mergers, or practices allow the companies involved to slow down competition in a whole area of innovation or R&D.

The second view, and even more the third view, risks making today's high R&D spending or demonstrated innovative skills into a disadvantage in antitrust assessment. It would be a disadvantage that would operate today before the supposed results of today's R&D had been realized. This would mean, if the result was to influence today's antitrust decisions at all, that a high level of R&D today would lead to less favorable treatment for the company involved.

It is, of course, elementary in Community competition law as in U.S. antitrust law that a large or successful R&D program may, among other elements, be evidence of current dominance. In this limited sense, such a program is an antitrust disadvantage. The second and third views, however, would attribute greater importance to R&D, and the third would make it the key issue. The effect might be irrational because it would penalize an activity that is not only inherently desirable but crucially necessary in the sectors in question.

Caution is even more necessary in biotechnology than in, for example, software. Expenditure on software development by good programers is sure to produce useful results, even if nobody can be sure in advance that one company's future software will necessarily be better than another's. But in biotechnology, even using combinatorial chemistry, it is not always possible to be certain that a particular line of research will necessarily produce the desired results in the relevant future or at all, still less to judge in advance which of two lines of research will produce profitable results first.

Caution, of course, also leads to the conclusion that a merger, a joint venture, or an agreement on joint research that causes significant and financially viable independent research to come to an end today or to cease to be independently carried out is anticompetitive to that extent. Yet another reason for doubting the theory that antitrust policy should be based primarily on R&D considerations is the emerging evidence that it is not pioneers but "early leaders," those who enter new markets after the pioneers, which do best in new markets.[109] Because it is pioneers and not early leaders who seem most likely to spend R&D money on entirely new markets, it would be unwise to base forecasts of future markets on pioneers' R&D.

In fact, there are broader reasons for caution in relying on forecasts about the future. There are, for example, two beliefs about the future of multimedia. One view holds that the future will be dominated by a few vertically and horizontally integrated companies. The other view predicts that the Internet or some similar arrangements will provide low entry barriers, specialization, many and diverse companies, and a fluid market. These are fundamentally different visions, and it would be unwise for an antitrust authority to count on one rather than the other being correct. The most that antitrust can do is to ensure that present market power is not used to prevent whatever new developments the market may produce. In the telecommunications sector, the economics of different services are leading to segmentation of previously unified areas; basic voice networks are run by infrastructure providers, and value-added data networks are user-driven.

109. Gerard J. Tellis & Peter N. Golder, *First to Market, First to Fail? Real Causes of Enduring Market Leadership*, 37 SLOANE MGMT. REV. Winter 65 (1996); *see Why first may not last*, ECONOMIST, Mar. 16, 1996, at 65; FREDERICK E. SCHERER & DAVID ROSS, INDUSTRIAL MARKET STRUCTURE AND ECONOMIC PERFORMANCE 635-37 (3d ed. 1990).

F. *Conclusion—Looking into the Future*

One cannot easily imagine the Commission saying, "[t]he parties to this merger are not collectively dominant today, but they are doing research that is certain to be so much more successful than anyone else's that they will certainly be dominant in the future, and so we prohibit the merger." Yet, that is the crucial test. It would not be impossible to say that, but the circumstances would be unusual and extreme. The conclusion to be drawn from the Commission's decisions is that it is cautious and reluctant to try to look too far into the future. In particular, it is more willing to allow anticompetitive arrangements today between non-dominant companies than to allow increases in dominant power in the hope that competition will re-emerge in the future. Generalizations are difficult, however, because each case depends so much on the facts as they are seen by the Commission at the time when it made its decision. This is, of course, especially important under the Merger Regulation because such decisions are permanent and not reviewable by the Commission. Certainly, the Commission looks at competition in technology and R&D when it thinks it appropriate to do so, but perhaps with less willingness to look into the future than the U.S. Department of Justice or FTC, even making allowances for differences in circumstances in the European Community.

G. *Timing Issues and Dominant Companies' Efforts to Counteract the Effects of Liberalization*

When dominant companies in regulated industries know that liberalization is imminent, they need to adapt. Sometimes, they seek to adapt by taking steps to restrict the competition that is emerging. For example, ex-monopolies try to make exclusive agreements with their customers. It is particularly important to ensure that the emergence of real competition is not prevented in this way. So arrangements that might in other circumstances be permissible are not legal if they are made at a time when they offset the foreseeable benefits of liberalization, and prompt antitrust action may be needed to prevent this offsetting from occurring.

H. *Changes in Market Boundaries and Degrees of Substitutability*

Technological change or liberalization of regulatory regimes may erode dominant positions and facilitate entry of new competitors into a market. Technological change may also erode or eliminate the boundaries between markets by ending the differences between products or services that were previously distinct and making them increasingly substitutable for one another. There are several examples. A few years ago, computers came with "main memory"[110] and "add-on memory."[111] Presently, the memory capacity of even small computers is greater than that of main frame computers from not long ago. If extra memory is needed many users, especially private users, buy larger computers, not add-on memory. In the TV industry, encryption and decoders have made it possible to have pay-TV transmitted via satellite as well as by cable although cable or telephone lines in general are still needed for interactive services. The enormous increases in capacity due to optical fibers and digitalization in place of analog signals have made it possible for electricity and railway companies, to enter the telecommunications sector.

Such changes create legal difficulties because they make the future hard to foresee, and, in particular, because it is often hard to say when a change will alter a given market even if it is clear that it will ultimately do so. Antitrust authorities may have to decide questions like whether to permit a merger that will create a dominant position today, merely on the grounds that in the foreseeable future technological change is likely to erode or end that dominance. Similar issues arise where it is said that dominance will end or greater economies of scale are needed because of future liberalization.[112]

Antitrust authorities cannot normally foresee the economic future with confidence, and the Commission does not authorize what would otherwise be unlawful unless it is sure that it can foresee the future clearly enough. It is slow to allow a merger that is unquestionably anticompetitive today on the basis that it will prove in the future to have procompetitive effects or to have been compensated for by probable procompetitive influences on the market that have not yet come into existence. On the other

110. Main memory is the standard memory installed in a computer. See Paul M. Eng, *How to Pick the PC that's Compatible with You*, BUS. WK., Nov. 28, 1994, at 96.

111. The consumer can install add-on memory to the computer after purchase. *See id.* (discussing add-on memory).

112. Temple Lang, *supra* note 51, at 343-45.

hand, if a future situation is certain enough and coming soon enough, there is no reason why it cannot act on it, for example, *Mannesmann/Hoesch.*[113] But it must always be kept in mind that a merger today may discourage future market entry or that a merger today may prevent one of the merging companies from becoming the nucleus of a new effective competitor for the other.

I. *Changes in Market Boundaries and Essential Facilities*

In most essential facility cases, there is no doubt that there are two separate markets involved, either because the owner of an essential facility has already given access to some unrelated company or because other companies in similar situations frequently do so. The question as to whether these markets are separate is an objective one, and the owner of a facility cannot avoid the application of the principle merely by saying that it has always regarded all of its activities as an integrated, unified operation.

Difficulties can arise, however, in some cases because of changes in market boundaries. Two examples may be helpful:

- A software company writes the operating programs for a popular type of personal computer. It also writes applications programs, and, in this respect, it has competition. If it includes one or more applications programs into its basic operating program, it alters the interface between its operating program and its competitor's programs and makes it difficult for them to sell their applications programs for use with its operating program; and
- A chemical, pharmaceutical, or biotechnology company has produced raw material that it uses in its own downstream operation and also sells to a downstream competitor making the same end product, the *Commercial Solvents* situation.[114] It then discovers a more efficient method of synthesizing the end product without making the raw material.

Both of these hypothetical examples raise the question of whether a dominant company that supplies, and is required by law to supply, a service to its competitors in a downstream or

113. Mannesmann/Hoesch, O.J. L 114/34 (1992).
114. *Commercial Solvents*, [1974] E.C.R. at 223, [1974] 1 C.M.L.R. at 309.

otherwise related market is free to alter the nature of the service that it provides to competitors in that market, in effect changing the boundaries of that market for reasons of technology or other efficiency. The answer seems to be that it is free to do this as long as it does so objectively to improve its own product or service and not primarily with the effect of making difficulties for its downstream competitors. A dominant company is not required to continue providing an obsolete product or service to its downstream competitors, and a dominant company is free to make appropriate changes in the nature of the product or service that it supplies to its competitors. The proportionality principle,[115] however, means that a dominant company is not free to cause substantial inconvenience to its competitors to achieve a minimal improvement in its service. A dominant company is not free to cut off supplies to a downstream competitor merely because, without altering the nature of the product it produces at the stage at which it has sold it, the dominant company chooses to integrate forward and extend its own activities.

If the producer of an operating system extends the functionality of an operating system to include functions for which users previously had to buy a separate applications program, probably with a choice between several competing applications programs, the issue of whether this constitutes technological integration or bundling may arise. Although competition law should not be used to slow technological progress, there may be situations where adding functions to an operating system represents an exclusionary abuse rather than technical progress. Adding a function to an operating system that makes it easier to use or more functional for all users is probably technical progress even if users could previously achieve a similar level of ease of

115. The principle of proportionality is a general principle of Community law which is primarily a prohibition on governmental action imposing loss or hardship which is unnecessary or out of proportion to the objective sought. See NICHOLAS EMILIOU, THE PRINCIPLE OF PROPORTIONALITY IN EUROPEAN LAW: A COMPARATIVE STUDY 2-3 (1996). The principle also constrains the behavior of dominant companies and requires them, even when legitimately defending or promoting their interests, not to overreact and unnecessarily harm other companies. *See* United Brands v. Commission, Case 27/76, [1978] E.C.R. 207, ¶¶ 189-94 (holding that participation by distributor in a competitor's sales campaign is not justification for dominant company cutting off supply). It seems to follow that a dominant company which legitimately improves its own product or production methods may have a duty to minimize the adverse consequences to dependent downstream users.

use or functionality by buying add on products. Adding a piece of specialized software to the operating system and forcing all users to pay for it, however, only represents technical progress for some users and raises issues of cross-subsidization and of exclusionary intent. Again, the proportionality principle is relevant.

A similar issue arises if improvements in the dominant company's software are made primarily for its own benefit, without significantly altering its service to its customers. These changes affect the place of attachment to the computer network or operating system. This is particularly important if functionality is affected. In such a situation, a dominant company may have a duty under the proportionality principle to minimize the inconvenience caused to downstream competitors needing access and to disclose the interface changes to its downstream competitors, as in the Commission's *IBM* case.[116]

In short, the boundaries between the upstream and downstream markets, or between the modules in a horizontally integrated industry, are not necessarily fixed and permanent. The dominant company, because it should be free to improve its product, is also free to alter the interfaces between modules or to modify the point "downstream" at which a plaintiff needs to have access but may be obliged to take remedial action. Another similar question is when a dominant company has a duty to give advance notice to downstream competitors of its intention to change its interface. This was raised in the *IBM* case[117] and in *Decca*.[118]

Another distinct question is whether change in the boundaries of the markets may alter the duty of a dominant owner of an intellectual property right to license it to avoid monopolization of the complementary market. If, for example, interactive TV became so widespread that viewers could call up next week's programs on their screens and did not need a weekly TV magazine, would that end the duty of the BBC to give programs in advance to the Magill magazine because the markets were no longer sep-

116. International Business Machines Corp. v. Commission, Case 60/81, [1981] E.C.R. 2639, [1981] 3 C.M.L.R. 635.

117. COMMISSION OF THE EUROPEAN COMMUNITIES, FOURTEENTH REPORT ON COMPETITION POLICY 1984, at 77-79, §§ 94-95 (1985).

118. Commission Decision No. 89/113/EEC, O.J. L 43/27 (1989) [hereinafter Decca].

arate? It seems not, because the TV magazine market would still be distinct from the market for TV programs, even if the demand for TV magazines was reduced substantially. But it is possible to imagine situations in which intellectual property rights applying to both operating software and applications programs might no longer have to be licensed because the markets for both products had merged.

J. *Changes in the Market and the Tests to Be Applied by the Community Courts*

In any rapidly changing market, procedural problems may arise. A Commission decision in a competition case must be challenged under Article 173 of the EC Treaty within two months before the Court of First Instance. The oral hearing before the Court of First Instance is often not until twelve to twenty-four months after the date of the Commission's decision, and the judgment of the Court of Justice, if the case is appealed on points of law, may be rendered a year or so after that.

One problem that results from this is obvious, the legal situation will not be known with certainty for several years. Another problem is less obvious; there may be factual evidence that could be put before the Court of First Instance or of which the Court of Justice may be made aware that was not available at the time that the Commission made its decision. Should this evidence, whether it confirms or refutes the Commission's conclusions, be admissible? This question is linked to another; is it permissible for a company to make an argument for the first time before the Court of First Instance that it could have made, but did not make, before the Commission? This second question is not specific to high-technology industries and is not discussed here, but the first question needs analysis in relation to rapidly changing markets.

At first sight, most people would say that all available evidence should be before the Court of First Instance, irrespective of when it came into existence. It would be artificial and unrealistic to expect the Court of First Instance to close its eyes to what might be important evidence. If the Court of First Instance was obliged to ignore such evidence, its judgment might be substantially wrong in the light of facts known at the time it was rendered. If the Court of First Instance should ignore such evidence, there would be an onus on the Commission to revise its decision in the light of the changed circumstances. If the Commission's decision was not sufficiently proved by evidence available at the time it was rendered but was fully proved by evidence that became available later, few useful results might be obtained by annulling it, obliging the Commission to conduct a new procedure and adopt a new, more soundly based decision. If the Commission's decision seemed fully justified by the facts known at the time but later turns out to be unjustified, it should be either annulled by the Court of First Instance, with retroactive effect, or canceled by the Commission, which could be done only with prospective effects, if that was appropriate.

This apparently common-sense view is not necessarily correct, and it is not easy to reconcile with some well established rules of law. The validity of any decision of the Commission must be assessed as of the date on which it is adopted. More importantly, the reasons set forth in the decision must be sufficient to justify it. If the reasons are not sufficient, the fact that better reasons were available at the time or came into existence later will not cure the decision. An applicant who challenges a Commission decision in the Court of First Instance may or may not be free to make new arguments that it could have made to the Commission, but such an applicant is not free to make, in later written or oral arguments, points that it did not make in its initial application to the Court of First Instance. It certainly would seem odd and anomalous if a Commission decision that seemed fully justified at the time could be annulled retroactively because of facts that did not exist at the time when it was rendered.

Perhaps no simple rule covering all cases is appropriate or possible. Probably a distinction should be drawn between new evidence on arguments already raised and wholly new arguments, the latter being harder to justify. A distinction certainly must be drawn between interim measure decisions of the Commission, which have to be based on a *prima facie* case, and which will, therefore, be valid even if the Commission itself later changes its views, and definitive decisions.

K. *Complex Settlements*

In high technology industries, as in other industries, there has been a tendency, especially in larger cases, for companies to negotiate with the Commission, modify their plans, and, in most but not all cases, ultimately get approval. This goes some way in the same direction as a trend that has been commented on in the United States.[119] In the European Community, this tendency exists for several reasons. First, some joint venture and merger cases are so large and complex that the parties can always find something that is worth divesting or licensing without destroying the value of the whole transaction. Second, in cases involving companies in industries being liberalized, Member States can facilitate deals that they want to encourage, usually but not necessarily involving state-owned corporations, by accelerating liberalization to offset the anticompetitive effects of whatever restructuring is planned.[120] The third reason is an increasing tendency for companies to offer undertakings that, if accepted, may be incorporated in Commission decisions as conditions or may be accepted, in some cases, as sufficient without being replaced by requirements in a formal decision. It will be seen that these three reasons overlap. An example of another specific type of case is the *Italian GSM Operators* decision[121] in which the Commission ruled that Italy had infringed Article 90 of the EC Treaty by imposing on the second Italian mobile phone company a large payment for its license that had not been required for the first mobile phone company's licensee. The Commission gave the Italian authorities the choice between repayment or requiring a corresponding payment from the first licensee, which were the simplest ways of ending the distortion of competition, and "corrective measures" equivalent in economic terms to the payment imposed on the second operator. The "corrective measures" led the Italian authorities to negotiate a package of measures with the Commission. Similar situations have arisen in several other Member States.

Several comments are appropriate:

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119. *See Consent Decrees: Antitrust Enforcers as Regulators?*, 10 ANTITRUST No. 1 (Fall 1995).

120. *See* Temple Lang, *supra* note 51, at 368-69. This was done in the *Atlas-Phoenix-Global One* decision in 1996; *see also* Air France/Sabena, COMMISSION OF THE EUROPEAN COMMUNITIES, XXIID REPORT ON COMPETITION POLICY 1992, at 151-53, § 259 (1992).

121. Commission Decision No. 95/489/EC, O.J. No L 280/49, (1995); COMMISSION OF THE EUROPEAN COMMUNITIES, XXVTH REPORT ON COMPETITION POLICY 1995, at 54, § 109 (1996) (on appeal to Community courts).

- The fact that a settlement of an antitrust case is complicated in itself proves nothing about whether a party conceded too much, or whether the Commission was trying to achieve objectives other than those properly required by pure Community antitrust law considerations. Complex detailed settlements can be precisely adapted to the needs of the situation;
- In most cases, the specific proposals for divestiture, liberalization, or other modifications come from the parties or the government involved, not from the Commission;
- As far as I know, all the undertakings, conditions, and obligations resulting from negotiations and modifications in such cases have been designed and intended to promote competition, either by offsetting the anticompetitive effects of the transaction or by accelerating liberalization of the national market. I know of no case where the Commission has accepted or required a modification for motives other than competition; and
- The Commission is increasingly reluctant to accept undertakings or to impose conditions or obligations that require or prohibit particular behavior, because they are troublesome to supervise and likely to be controversial and not effective. The Commission has, however, imposed or accepted, in both Articles 85 and 86 cases, non-discrimination duties that are, of course, behavioral and that may require some degree of supervision, though in some cases the Commission has proposed arbitration as a means of dealing with day-to-day disputes.[122]

L. *Article 85 and Agreements to Set Up Standards*

Under the International Standards Organization's definition, a standard is "a document established by consensus and approved by a recognized body, that provides, for common and repeated use, rules, guidelines or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context."[123] The FTC Report uses a narrower concept: "standards . . . establish a common mode of interaction . . . which enables users to understand each others communica-

122. Commission Decision No. 89/467/EEC, O.J. L 226/25 (1989) [hereinafter UIP].

123. International Standards Organizations, *Standardization and Related Activities—General Vocabulary*, (visited Feb. 1, 1997) <http://www.iso.ch/cate/24887.html.

tion."[124] Standards and networks are particularly important in the computer industry, in telecommunications, and in sound and video recording technology.

In practice, Community standards have been "approved" by, among other bodies, CEN, CENELEC, and ETSI. ETSI, however, works slowly, and in high-technology industries it is natural that dynamic companies should try to develop standards first and have them approved by ETSI later. This is often necessary if the proposed standard needs to be widely used before it can be satisfactorily approved.

An agreement between two or more companies to develop a standard does not necessarily restrict competition. The question of whether it does has to be looked at in light of the effects of the agreement on competition between the parties and its possible exclusionary effects on companies that are not parties to the agreement.

If two companies that are not actual or potential competitors agree to work together to develop a standard, there is no effect on competition. This occurs, for example, when the companies involved produce different products that need to work together.

In practice, the parties to agreements to develop standards usually include companies that are competitors of one another. Whether the agreement restricts competition between them usually depends on whether the standard to be developed is an important element in the competition between them. Usually it is not, and, even when it is, the advantages for competition that would result if the competitors could agree on a single standard may outweigh the anticompetitive effects of the agreement. Much may depend on whether the competing companies have already developed products on the basis of different specifications or characteristics, and if so, what effects the agreement will have on competition between those products. Although at some stages in the development of a particular product or service a proposed standard can be an important element in competitive

124. ANTICIPATING THE 21ST CENTURY, *supra* note 3, ch. 9, at 1. The European Commission's *IBM* case essentially involved standards from the viewpoint of competing producers of hardware and software rather than users. IBM v. Commission, Case 60/81, [1981] E.C.R. 2639; COMMISSION OF THE EUROPEAN COMMUNITIES, FOURTEENTH REPORT ON COMPETITION POLICY 1984, at 77-79, §§ 94-95 (1985); Temple Lang, *supra* note 22, at 455-57.

differentiation and there may be intense competition to persuade ETSI or any other body to choose between two or more competing standards, in the end it usually becomes more advantageous for everyone to have a single standard. This is particularly so in the European Community where competition is likely to increase the more national markets are integrated.

Another issue that is important in considering the effect of an agreement on competition between parties is whether the parties need to cooperate reciprocally with one another to provide a satisfactory service to their customers and, therefore, need to establish a technical basis for this cooperation. The main telecommunications companies in different countries have to be able to transmit messages between their networks and must have some technical basis for connecting them. It is necessary, and not anticompetitive, to make the most efficient arrangement available.

An agreement to develop a standard, however, may often lead to, or be linked with, arrangements to cooperate in other respects that may restrict competition. In practice, whether an agreement to develop a standard is anticompetitive depends largely on whether new parties may freely join the agreement and take part in the development on non-discriminatory terms (for example, without unjustifiably giving them less influence than the founding members) and on whether the standard when developed will be available to all companies on equal terms.[125] In practice, only companies with market power set out to develop standards. Membership of standard-developing groups should be open at all times to all companies likely to be interested in or affected by the result.

The parties to an agreement, however, should not develop a standard which would create a barrier to entry for other companies, even if it is to be formally available to everyone. So, for example, a group of telecom network operators should not develop a basic standard for basic networks if the effect of the standard would be to raise the barriers for entry into the market for the provision of basic networks. In the case of enhanced or ad-

125. Cf., *Eurovision*, [1996] 5 C.M.L.R. at 386; *see* Vollmer, *Product and Technical Standardization Under Article 85*, 1986 E.C.L.R. 388-402; *see* Commission Communication, 359 (1996) (on Standardization and the Global Information Society: The European Approach).

ded value services, however, the natural barriers to entry are lower, and it is less likely that a standard fixed for such areas would significantly raise these natural barriers. But, any standard, the effect of which is to create or to raise barriers to entry into the market, needs to be justified under Article 85(3) of the EC Treaty.[126]

It is important to remember that when a standard has been approved by a Community standards organization it can become compulsory and is not merely a preferred or recognized standard. A Community standard may be merely permissive, *i.e.*, everyone must accept goods or services that comply with it, or exclusive, everyone must use it and no other standard. The effect of the standard on barriers to entry into any market may depend, among other things, on what kind of standard it is in this respect.

In theory, the fact that a standard has been approved by ETSI or any other Community standards body does not make it automatically immune from challenge under Community competition rules. Member States may not authorize or approve agreements between companies the effects of which are contrary to Article 85, and what they may not do individually, they may not do collectively either.

The Article 85 standards cases that have arisen in Community law so far, for example, *IGR Stereo-Salora*,[127] have not raised important questions about the relative merits of intrasystem and intersystem competition, because in each case it was clear that no second system was feasible. The Commission is well aware that this often difficult question arises in standards cases, as it does in essential facilities cases.

M. *Standards and Intellectual Property*

A standard may include information protected by intellectual property rights and, if so, the owner of the intellectual property rights continues to be entitled to remuneration for their use. If the rights are freely licensed, or if non-parties are freely admitted to any patent pool associated with the standard (if ap-

126. *See* Commission Decision No. 95/551/EC, O.J. L 312/79 (1995) [hereinafter Dutch Crane Hire].

127. *IGR*, COMMISSION OF THE EUROPEAN COMMUNITIES, ELEVENTH REPORT ON COMPETITION POLICY 1981, at 63-64, § 94 (1982).

propriate, on payment of a suitable contribution to the capital costs involved), there will normally be no difficulty as a result of the fact that intellectual property rights are involved.

If the effect of the agreement on a standard is to create a barrier to entry or a competitive handicap for non-parties and the parties to the agreement or the owner of the intellectual property rights refuse to license the rights or are willing to do so only on discriminatory terms, Article 85 of the EC Treaty may create a duty to license on non-discriminatory terms, regardless of whether Article 86 is applicable.[128] The leading cases under Article 85 involving intellectual property rights are *IGR-Stereo Television*[129] and *RTE-BBC-ITV-Magill.*[130]

It is generally accepted that it is harder to justify a refusal to license intellectual property rights when Article 85 of the EC Treaty applies than when Article 86 applies. In any case, after a standard has been adopted, it must be open to everyone. Before the standard is finally adopted, therefore, a refusal to license would be justified, for example, if the licensee refused to pay its share of development costs on a non-discriminatory basis or was not creditworthy. It seems reasonable to say that the burden of proof is on the parties to any agreement intended to lead to a standard to show that any refusal to license intellectual property rights is justified. This is not because a refusal is necessarily unjustified. Rather, it is because, in those circumstances, the parties concerned must have an identifiable reason for the refusal and should be able to articulate the reasons. Parties to an agreement to promote a standard for general use should have no difficulty in stating why they decline to license intellectual property rights needed by users of the standard.

N. *Multicompany Arrangements, Joint Ventures, and the Essential Facilities Principle*

A principle similar to the essential facilities principle and raising similar economic issues, applies when two or more companies make arrangements to establish joint or reciprocal opera-

128. Temple Lang, *supra* note 22, at 507-09; Commission Regulation No. 3652/93, O.J. L 333/37 (1993).

129. COMMISSION OF THE EUROPEAN COMMUNITIES, ELEVENTH REPORT ON COMPETITION POLICY 1981, at 63-64 (1982).

130. *RTE*, [1991] E.C.R. at II-485, [1991] 4 C.M.L.R. at 586; *ITP*, [1991] E.C.R. at II-575, [1991] 4 C.M.L.R. at 745; *BBC*, [1991] E.C.R. at II-535, [1991] 4 C.M.L.R. at 669.

tions. This only applies, however, if third parties find that they cannot do business with the companies involved or that they can do so only on less favorable terms than those given by the parties to one another or to the joint venture. The question then arises under Article 85 of the EC Treaty whether the parties should be entitled to refuse to do business with third parties or be entitled to give third parties less favorable terms than they give to one another. It is not possible to give a simple and clear answer to this question because it can arise in a wide variety of different situations. It is clear, however, that in granting an individual exemption under Article 85 for an agreement, the Commission may require the parties to refrain from discriminating in favor of the joint venture or of one another if the existence or operations of the joint venture or joint arrangement would otherwise impose a serious handicap on competitors that are denied access.[131]

Whether such a duty should be imposed depends on a number of factors. It depends on the combined market shares of the parent companies and the joint venture in both the relevant markets, and on the extent of the disadvantage imposed on competitors, for example, the extent of foreclosure. It also depends on the extent to which competitors need to cooperate with the parties and are, thus, dependent on satisfactory cooper-

131. In several Article 85 cases, the Commission imposed or took note of duties or accepted undertakings not to discriminate against non-parties. *IGR*, COMMISSION OF THE EUROPEAN COMMUNITIES, ELEVENTH REPORT ON COMPETITION POLICY 1981, at 63-64, § 94 (1982); Amadeus-Sabre, *in* Temple Lang, *supra* note 51, at 317-22; DHL International, COMMISSION OF THE EUROPEAN COMMISSION, XXIST REPORT ON COMPETITION POLICY 1991, at 71-72, §§ 88-89 (1992); Eirpage, O.J. L 306/22, [1991], ¶ 20; Infonet, COMMISSION OF THE EUROPEAN COMMISSION, XXIID REPORT ON COMPETITION POLICY 1992, at 416 (1993); *EBU Eurovision*, O.J. L 179/23 (1993), Art. 2; Commission Decision No. 94/579/EC, O.J. L 223/36 (1994) ¶ 57 (BT-MCI); Commission Decision No. 94/594/EC, O.J. L 224/28, (1994) (ACI); Commission Decision No. 94/663/EC, O.J. L 259/20 (1994) (European Night Services); Gas Interconnector, COMMISSION OF THE EUROPEAN COMMISSION, XXVTH REPORT ON COMPETITION POLICY 1995, at 39-40, § 82 (1996); Lufthansa-SAS, O.J. L 54/28 (1996), Article 3; Atlas-Phoenix-Global One, O.J. L 239/23 (1996); *see Eurovision*, O.J. L 179/23 (1993); *Metro Grossmärkte*, Case 26/76 [1977] E.C.R. 1875, at ¶ 20. In *Nordic Satellite Distribution*, the parties were willing to give an undertaking not to discriminate, but the agreement was ultimately prohibited. O.J. L 53/20, at 40 (1996). Similar undertakings were also offered in *MSG Media Service*. O.J. No L 364/1 (1994). This is because a merger which creates a dominant position contrary to Regulation 4064/89 cannot be made lawful merely by assurances that it will not abuse its dominance. In these cases a duty not to discriminate was imposed without any finding of dominance, although in some of the cases such a finding could certainly have been made.

ation from them and on what alternatives are available to competitors. It also depends on whether membership in the arrangement is freely open to competitors and whether there is any justification that may be available for denying the benefit of the arrangement to non-parties. A duty may be imposed even if the parties are not controlling a facility that is so essential that non-parties could not do business without it. Access on non-discriminatory terms may involve a competitor complying with certain criteria or requirements or making an appropriate contribution to the joint operations; there is never a duty to provide better terms to non-parties than to parties. It is also relevant to know whether the parties could share with competitors the same services on the same terms without decreasing the benefits of the arrangement to themselves, apart from the fact that they would no longer have that particular advantage over their competitor. It is always also relevant to ask whether the benefits of the arrangements are obtained primarily by the parties or are obtained directly by consumers as well, for example, in the case of airlines computerized reservation systems and telephone companies' reciprocal use of their networks. The duty to grant access arises only if without it the market would not be competitive, for example, there would be too few companies left that did not suffer from a significant handicap as a result of being denied access to the joint arrangement. How much the joint arrangement reduces competition between the parties to it, and how much, if at all, it would be possible, satisfactory, and procompetitive for competitors not involved in one joint operation to set up a rival one of their own that would do substantially the same things in the same geographical area, in competition with the first joint operation (intersystem cooperation) is also relevant.

The strict legal basis for this is that any multicompany or joint venture arrangement that substantially restricts competition needs to comply with the four requirements of Article 85(3) of the EC Treaty. In the case of arrangements involving control of an important facility, the crucial legal requirement is usually that restrictive agreements must not enable the parties to eliminate competition with respect to a substantial part of the goods or services concerned. So, joint ventures and similar arrangements are usually required to license competitors on non-discriminatory terms when, if they were not so required, the parties would be in a position to eliminate competition in respect of a "substantial" part of the products concerned either by refusing to supply competitors or by supplying them only on less favorable terms. This is a lower threshold than in the case of a single dominant company because a dominant company normally has no duty to supply if there is even one alternative source available, except in the special case of joint dominance.

Also, if the joint venture does license competitors, Article 85(1) of the EC Treaty directly prohibits second-line discrimination because the shareholders cannot do through the joint venture what they could not do directly by agreement.

One problem of non-discrimination obligations is that a third party will not necessarily know that it is being discriminated against. The Commission does not have the manpower to carry out all the investigations that might be necessary. The only effective way of ensuring that such an obligation is carried out in the absence of a sector-specific regulation may be to oblige the companies concerned to record formally all their dealings with all the companies to whom access has been given, to require auditors to certify the correctness of the record for the purposes of comparison, and, if necessary, to subject the records to supervision by the Commission. This was done in the *Atlas-Phoenix-Global One* decisions.[132]

A separate, but related, issue arises when a dominant upstream company, such as a content provider, proposes to enter into a joint venture with a telecommunications carrier that will give them control over an essential facility such as a decoder for encrypted TV signals. This was the situation in the *MSG Media Service*[133] and *Nordic Satellite*[134] cases and the Commission prohibited the mergers.[135] This type of problem is particularly acute if the owner of an essential facility is obtaining from a competitor financing for investment in, for example, decoders, and the parties want this investment to entitle them to exclusive use of the facilities.

In deciding whether there should be a duty to grant access, different considerations arise in different kinds of multi-company situations:

132. Atlas-Phoenix-Global One, O.J. L 239/23 (1996).

133. MSG Media Service, O.J. L 364/1 (1994).

134. Commission Decision No. 96/17/EC, O.J. L 53/20 (1996).

135. *Id.* at 40; MSG Media Service, O.J. L 364/1, at 20 (1994).

- Cooperation between competitors may be essential to carry out the operations in question, as in the case of banks' check clearing systems and airlines' interlining arrangements. Such arrangements are better the more participants there are, and inter-system competition is unimportant because there is unlikely to be scope for more than one system. Network externalities magnify disadvantages of exclusion and reduce the viability of otherwise efficient competitors. Exclusion would be hard to justify, as it would create a category of second-class competitors, unless admission would reduce the efficiency of the network;
- Where cooperation is needed to provide a service for all the participants that could not be provided otherwise because of, for example, insufficient economies of scale. This type of case typically raises issues about the capacity of the joint operations and whether another group of competitors could jointly set up a rival operation. Because an arrangement that reduces costs is procompetitive and does not impose any handicap on competitors or deny them the possibility of cutting costs in the same or any other way, there is normally no duty to give access to competitors;
- Cases in which an essential facility has been developed by one company primarily for its own use and ownership later is shared with other companies using it are often a subset of the situations in which the joint venture owning the essential facility is in a dominant position. That the users are also shareholders does not significantly alter the legal or economic position;
- In cases in which a consortium of users or buyers have joined together to get control of an important source of supply, from which they had previously bought but that none of them had previously owned controlled or developed. The right of third parties to get access is likely to be clear, as otherwise the arrangement would be similar to a collective boycott;
- When competitors have set up a pool of patents, particularly if the patents are complementary, and if the combination cannot be duplicated or invented around, in particular if the patents constitute a *de facto* standard, they are obliged to license all the patents needed by non-parties to

compete;[136] and

- Often in telecommunications or rail transport, a consortium sets up a joint venture that will use all of the facilities owned by the parties in different geographical areas, and it would be difficult or impossible for any other competitor or consortium to set up a similar network of facilities in all the same areas. In such circumstances, competitors would normally have a right of access under Article 85 of the EC Treaty, apart from any specific measures on telecommunications or railways, at least if the areas in the Community to which the network in question controls access are "substantial."

To summarize, when competitors together create, own, or operate an important facility, access to which is essential for the competitiveness of the market and of non-participant competitors, and where admission of non-participants is compatible with the legitimate purposes of the joint arrangement, the participants may be obliged to grant access to competitors on non-discriminatory terms.

It will be seen that in multi-company and joint venture cases almost all of the same kinds of problems arise as in the case of single-firm ownership of an essential facility. It may be necessary to ensure that access is available to other competitors to enable them to compete without a serious handicap. On the other hand, it may be significantly procompetitive to allow the parties to keep for themselves the benefits of their investment or their ingenuity. There is, however, usually an important difference in relation to transaction costs. In a multi-company situation, there are already agreements between the companies involved. It is, therefore, usually not difficult to determine what effects non-discriminatory terms would have on a competitor.

When the essential facilities principle is better known, it will lead in many cases to parties entering into contracts that they might not have made without the transaction costs of litigation or Commission procedures. The rule merely makes it more likely that contracts will be entered into and influences the terms of these contracts.

136. *IGR*, COMMISSION OF THE EUROPEAN COMMUNITIES, ELEVENTH REPORT ON COMPETITION POLICY 1981, at 63, § 94 (1982).

O. *Non-Discrimination as a Condition*

In a number of cases in which joint ventures have been authorized, the Commission has imposed a requirement that the parent companies do not discriminate in favor of the joint venture. If such a requirement is embodied in a condition in a formal decision, the result would be clear, any discrimination would make the authorization inapplicable. The situation is less clear if the agreement is permitted on the basis of undertakings from the parent companies not to discriminate, but undertakings are normally equivalent to conditions.[137] If the duty not to discriminate is expressed to be a mere obligation, the breach of the obligation means that companies may be fined or the exemption withdrawn, but it does not mean that the exemption becomes inapplicable automatically with immediate effect.

The legal consequences, however, can be more complex. For example, if one of three or more parent companies discriminates in violation of a condition, the exemption may cease to apply to the relations between the others as well. Furthermore, if the companies concerned do not challenge the imposition of a condition within the time limits specified by Article 173 of the EC Treaty, they cannot subsequently claim that a condition is too strict and that an obligation would have been sufficient. This is important because it means that the effect of breach of the condition is genuinely automatic. The Commission does not need to adopt a second decision making a finding that the breach is important enough to activate the condition. Finally, if a condition is infringed and the exemption ceases to apply, it seems that third parties could recover compensation for loss caused to them by the operation of the agreement during the time when the agreement was not exempt, even if the loss was not caused by the breach of the condition specifically.

P. *Pricing Abuses, Selective Pricing, and Cross-subsidies by Dominant Companies*

In brief, the rules of Community competition law about selective pricing and cross-subsidies by dominant companies are as follows:

- Predatory pricing is unlawful if it infringes one of the two

137. Temple Lang, *supra* note 51, at 368-89.

AKZO judgment tests;[138]

- Article 86(c) of the EC Treaty prohibits second line discrimination, *i.e.*, price or other differences that distort competition between the customers of the dominant enterprise;
- Article 86 prohibits first line discrimination, for example, prices that are lower if the buyer buys exclusively from the dominant company, an exclusionary abuse;[139]
- Article 86 prohibits excessively high prices;

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138. Akzo Chemie, Case C 62/86, [1991] E.C.R. I-3359, [1993] 3 C.M.L.R. 215; Luc Gyselen, *Abuse of Monopoly Power Within the Meaning of Article 86 of the EEC Treaty: Recent Developments*, *in* 1989 FORDHAM CORP. L. INST. 597, 617-36 (Barry Hawk ed., 1990). It has already been mentioned that these tests are not appropriate where the marginal cost of additional production is near to zero. In essence, the difficulty seems to be this: the Court in *Akzo* said a dominant company has no reason to price below average variable cost, except intent to eliminate a competitor, because every sale generates an additional loss. *AKZO*, [1991] E.C.R. at I-3455-56, ¶¶ 71-72. But if every additional sale costs almost nothing and brings in a sum greater than its variable cost, it is not irrational to make additional sales and they cannot be attributed, without more, on the basis of the *Akzo* judgment criteria, to an intention to exclude a competitor. Clearly if nothing is added to the *Akzo* criteria, dominant companies selling products or services of which the variable cost is near-zero, which are relatively common in high technology industries, have much scope for putting competitors out of business by what would be widely regarded as predation.

The right approach, it is suggested, is analogous to that in air transport cases, where the question of whether predation is occurring is answered not by comparing the price at which the last seat is sold and the marginal cost of flying one more passenger in it. Instead, one should look at the fares charged for all the seats and the number of seats sold or likely to be sold on each flight in each fare category. Predation occurs if, on the basis of the aggregate sales, the cost of the flight exceeds expected revenues and it would be cheaper to keep the plane on the ground. Even this apparently simple principle is not always easy to apply to modern airline practices of yield management, but it clearly prohibits planned and systematic overall loss-making operations. In industries where the marginal cost of additional production is near to zero, it is suggested that the test to be applied is whether a company charges a price for goods and services which, although above the average variable cost of providing the specific goods or services for which the price in question is paid, is so low that its overall revenues for all the goods or services in question would be less than its average variable costs of providing them if it sold the same proportion of its output at the same price on a continuing basis, even where no intent to exclude a competitor is proved.

This principle, if it is accepted, would limit both the volume and the price of goods sold at near-zero marginal cost, and make it unlawful for a dominant company deliberately to charge, on a selective or ad hoc basis, a combination of prices which it would not be rational to sustain except for exclusionary purposes. Subject to that, however, and leaving aside start-up situations, this principle would not prevent legitimate loss-minimizing by dominant companies. *See* William G. Shephard, *Assessing "Predatory" Actions by Market Shares and Selectivity*, 1986 ANTITRUST BULL. 1 (1986).

139. Cooperativevereniging VA v. Commission, joined Cases 40/73 and others, [1976] E.C.R. 1663, 1999, 2004, 1 C.M.L.R. 295 [hereinafter Suiker Unie]; Hoffmann LaRoche v. Commission, Case 85/76, [1979] E.C.R. 461, [1979] 3 C.M.L.R. 211; NV

- Discrimination by a dominant enterprise on the grounds of nationality is contrary to Community law,[140] at least if it is substantial or systematic;[141]
- It is contrary to Article 86 if a dominant company sells both a raw material and an end product at prices that are so close to one another that a reasonably efficient competitor buying the raw material could not make a profit and would be forced out of business.[142] This can be regarded as a price squeeze, as raising competitor's costs, or as providing an essential facility at an uneconomic price. A defense that the dominant company's downstream operations are exceptionally competitive is permissible, but exceptionally clear cost accounts would be essential to prove it; and
- Cross-subsidizing is likely to be unlawful if the dominant company uses profits from an area in which it has a dominant position to subsidize the production and sale of products or services in another area in which it faces competition.[143] Unlawful cross-subsidizing could be by funding one operation with capital remunerated substantially below the market rate, or providing premises, equipment, or services at less than the market price. There is no reason why this principle should be limited to cases in which there is a monopoly, although the Commission called attention to the principle in connection with telecommunications monopolies.

The Court of Justice has accepted that cross-subsidization can be contrary to Article 86 of the EC Treaty, but has not had an opportunity to consider what circumstances would necessitate such a finding.[144]

Nederlandische Baden-Industrie Michelin v. Commission, Case 322/81, [1983] E.C.R. 3461, [1985] 1 C.M.L.R. 282.

140. Sacchi, Case 155/73, [1974] E.C.R. 409, [1974] 2 C.M.L.R. 177; Commission Decision No. 81/1030/EEC, O.J. L 370/49, (1981).

141. *See* Commission Guideline, O.J. C 233/2, ¶ 120 (1991) (concerning application of EEC competition rules in telecommunications Sector).

142. *See* Commission Decision No. 76/185/ECSC, O.J. L 35/6 (1976) (National Carbonising); Commission Decision No. 88/518/EEC, O.J. L 284/41 (1988) (British Sugar), COMMISSION OF THE EUROPEAN COMMUNITIES, EIGHTEENTH REPORT ON COMPETITION POLICY 1989, at 80 (1990).

143. *See* Commission Guideline, O.J. C 233/2, ¶¶ 102-10 (1991) (concerning application of EEC competition rules in telecommunications sector).

144. *See* Port of Genoa, Case C 179/90, [1991] E.C.R. I-5889, I-5929 ¶ 19, [1994] 4 C.M.L.R. 422, 445 (discussing that exclusive rights led monopoly to reduce prices to certain consumers and offset reductions by charging other consumers more).

Not every cross-subsidization by a dominant company is unlawful. It is unlawful only if it has a substantial exclusionary effect and if it cannot be justified because cross-subsidizing of a downstream operation by a vertically integrated dominant company is unlawful (the price squeeze cases). It is natural that cross-subsidizing by a horizontally integrated dominant company can also be unlawful if it has substantial effects. Cross-subsidizing different customers within the area of monopoly is lawful because it has no effect on competition and because it may be essential to maintain a widespread service on an economic basis overall.[145] It may be illegal for a dominant company to offer at a low price a combination of products or services, if it has a dominant position for some of them and not for others, if the effect is that a competitor providing only the latter would have to offer a discount so large that it would be uneconomic, sometimes called "financial tying." Finally, where a dominant company is able to discriminate between its customers, more common with services that cannot be traded than with products that can, and the dominant company has a policy of responding to competitors by selectively offering low prices to warn off competitors or discourage them from price competition, these kinds of behavior can also be unlawful. These are less precisely defined types of unlawful pricing behavior in Community law.

Q. *Interim Measures in Rapidly Changing Industries*

In an industry that is changing rapidly, it is sometimes important for the Commission to act quickly in order to enable a competitor to enter a market or to prevent a competitor being forced out. Prompt action is especially important when the first mover has a substantial advantage.

The Commission has adopted few interim measure decisions since the Court ruled that it had the power to adopt them in 1980.[146] Nevertheless, the requirements for interim measures

145. Regie des Postes v. Corbeau, Case C 320/91, [1993] E.C.R. I-2533, [1995] 4 C.M.L.R. 621.

146. Camera Care Ltd. v. Commission, Case 792/79 R, [1980] E.C.R. 119, [1980] 1 C.M.L.R. 334; BLANCO, *supra* note 31, at 283-92; Pastor & Van Ginderachter, *La procédure en référé*, REV.TRIMESTRIELLE DE DROIT EUROPÉEN 25(4), 561-621 (1989) (discussing interim measures adopted by Community Courts in Luxembourg on basis of similar principles). Article 4a of Regulation 3975/87, which provides an especially quick interim measures procedure in air transport cases, has never been used. *See* Regulation 1284/91, O.J. L 122/2 (1991).

have been regarded as fairly clear. There must be *prima facie* evidence of a violation of Article 85 or Article 86 of the EC Treaty. There must be evidence of a risk of serious and irreparable damage or intolerable damage to complainants, or intolerable damage to the public interest, giving rise to an urgent need to adopt interim measures. The Commission will balance the interests involved. It will compare the consequences for all parties of doing nothing with the consequences of adopting interim measures of the kind requested. Interim measures can be ordered, on these conditions, in order to ensure that the final decision of the Commission will be effective, for example, that the complainant will not be forced into liquidation before the case is over or will not irretrievably lose an important first mover advantage in an uncompetitive market. Interim measures need not merely preserve the status quo before the presumed violation. The Court of First Instance orders interim measures on essentially the same grounds as the Commission. Among the interim measures that it can make are orders suspending the operation of decisions of the Commission. This gives rise to at least one paradox that has not been fully resolved.

If the Commission orders interim measures on the basis of a *prima facie* case, there is often a *prima facie* case to be made also for saying that the Commission's decision is wrong and that the defendant will suffer serious and irreparable harm if the Commission's decision stands. This might lead the Court of First Instance to suspend the Commission's decision, thereby depriving the complainant or the public of the protection that the Commission's decision had been intended to give.

The paradox is accentuated in the case of a final decision of the Commission. Such a decision is not based on a *prima facie* finding of infringement, but a fully considered ruling. If on the basis of such a ruling the Commission orders the defendant to change its behavior on a lasting basis, the defendant may be able to argue that it would suffer serious and irreparable harm if the Commission's decision is not suspended while the case is before the Court of First Instance. Because it is the President and not the Court of First Instance who orders interim measures, applications for interim measures are rarely rejected on the grounds that not even a *prima facie* case has been made to show that the Commission's decision is wrong. The reason is that if the President rejected a request on this ground, he would preempt the final judgment of the Court of First Instance. The result is that apart from balance of interests arguments, whether a company that the Commission has ordered to alter its behavior can have the Commission's decision suspended often depends in practice on whether it can show that it is sufficiently likely to suffer serious damage.

If Commission decisions were suspended on evidence of a small risk of damage or of certain but slight damage, the result might be that in many cases the Commission's efforts to change the market would be delayed for the duration of the proceedings in the Court of First Instance and even the subsequent appeal to the Court of Justice. This period might be far too long in a rapidly changing industry and might seriously reduce competition, prejudice complainants, and unjustifiably benefit defendants.

In all such cases, whether the Commission's decision will be suspended depends, apart from balance of interests arguments, on the evidence put before the President, often hurriedly, at the interim measures hearing. Few deductions, therefore, can safely be made for other cases. Nevertheless, complainants feel concerned by orders made by the two courts in Luxembourg in the *Atlantic Container Lines* ("TAA") case.[147]

In this case, the Commission's decision prohibiting price fixing was suspended on the grounds that it involved major changes in the way the shipping companies operated, which might be difficult to reverse if their action was successful and which might compromise the stability of the market. If the shipping companies finally lose, they would be liable to pay compensation for the whole period of the court proceedings to the companies who suffer loss as a result of the suspension. The price fixing had been going on since 1986 and even earlier, and this influenced the result. One should not deduce from these orders that, even in cases in which the infringement is as clear as in the case of price fixing, Commission decisions will be suspended if termination of the infringement could lead to major changes in

147. Order of the President of the Court of First Instance, Case T 395/95 R, Atlantic Containers Line and others, Mar. 10, 1995 ; Order of the President of the Court of Justice, Case C 149/95 P(R), July 19, 1995. *But see* Case T 52/96 R, Sogecable v. Commission, order dated July 12, 1996 (stating that interim measures will not be ordered to suspend Commission procedure under the Merger Regulation because Court's role is to supervise Commission and not to replace it).

the market. In most cases, complainants' interests would be entitled to more weight than they were in *Atlantic Container Lines*, where the complainants said that although they would be entitled to compensation, they would have trouble proving the amount of compensation that should be paid. The Court of First Instance will certainly be careful not to suspend Commission decisions regularly, as this would risk impeding or postponing the operation of Community competition policy. If a complainant were being forced out of the market or prevented from entering the market, the result would almost certainly be different. The Commission considers that it has power to order interim measures to allow a new competitor to enter the market,[148] and, if it needed to use this power, it is unlikely that its decision would be suspended, because suspension would lead to the competitor being forced out of the market again. A competitor, however, is not entitled to interim measures merely to allow it to enter the market sooner than if it had to wait for the Commission's final decision. It must be able to show a substantial first mover advantage that is so significant that these cases are "it is now or never" cases in order to justify interim measures, and it must show that the market it wishes to enter is uncompetitive. But, it is precisely in industries undergoing fast technological change that the first mover advantage is likely to be important and easy to prove.

R. *Joint Dominance in High Technology Industries*

The circumstances in which a joint dominant position exists and in which it is abused have not yet been fully clarified by the case law of the Community courts or the practice of the Commission. The law is still developing. The words of Article 86 of the EC Treaty make it clear that it applies when more than one company shares a dominant position. It is clear that the words of Article 86 must add something to Article 85. It would be contrary to all the usual principles of interpretation of the EC Treaty to believe that the words were pointless and without practical effect.

148. Sea Containers v. Stena Sealink, O.J. L 15/8 (1994); see *RTE-ITP*, [1995] E.C.R. at I-743, [1995] 4 C.M.L.R. at 718; Temple Lang, *supra* note 22 at 289-91, 292-93; *see IGR*, COMMISSION OF THE EUROPEAN COMMUNITIES, ELEVENTH REPORT ON COMPETITION POLICY 1981, at 63-64, § 94 (1982).

In brief, the law seems to be as follows: for two or more companies to be jointly dominant, they must be in the same geographical market. Two companies, each dominant in a separate geographical market, are not the same as two jointly dominant companies. For two or more companies to be in a joint dominant position, they must together have substantially the same position *vis-à-vis* their customers and competitors as a single company has if it is in a dominant position. In addition, there must be no competition, or no significant competition, between the companies in question, at least with respect to the behavior of the lawfulness of what is in question. If the absence of significant competition between the companies is sufficiently clear so that in practice the behavior of one company is not constrained by the competitive reactions of the other, there does not seem to be any reason in law or in economic theory to say that any other economic link between the companies is necessary.[149]

The next question that arises is what kind of behavior constitutes an abuse in situations of joint dominance. It is clear that if both or all the companies practice behavior that would be contrary to Article 86 of the EC Treaty in the case of a single dominant company, both or all of them are acting illegally if they are in fact jointly dominant. In some sectors, such as telecommunications, the problem that is most likely to arise in practice is where there are two alternative facilities and access to one but not both is essential for service providers. One should not assume that in such circumstances there is necessarily joint dominance. Joint dominance does not exist if the companies in question compete vigorously with one another and on relatively equal terms and if, in any case, it will be some considerable time before alternative networks become so competitive that many of today's incumbent national telecommunications operators cease to be solely dominant on their national territories.

If there are two companies, each of which can offer a facility that is essential for downstream competition, and if there is competition between them, one would expect that one or both of them would be willing to provide access to any enterprise that

149. Commission Decision No. 92/553/EEC, O.J. L 356/1, at 24-25 (1992) [hereinafter Nestlé-Perrier]; Temple Lang, *supra* note 51, at 360-65; Antoine Winckler & Marc Hansen, *Collective Dominance under the EC Merger Control Regulation*, 30 COMMON MKT. L.REV. 787 (1993).

needed it. If neither was willing to do so and if there was no technical or commercial justification for the refusal, national regulatory authorities might resolve the problem by ordering one or both of the companies to offer access. It is not easy to visualize clearly circumstances in which no national order for access would be made despite the absence of technical or commercial reasons for refusing it. But, refusals by two companies in a joint dominant position to provide access, even in the absence of any concerted practice between them, could be a violation of Article 86 by both of them, if their anticompetitive motives for refusing access were sufficiently clear. Duopolists that are immune from competition and that behave similarly to protect their downstream operations from competition cannot defend themselves successfully merely by proving that they acted independently of one another. Neither duopolist can avoid the duty to provide access merely by saying that the other might have provided it. Abuse by duopolists is probably less likely in developing, high technology markets than in mature and static markets.

The *Gencor/Lonhro* decision[150] of the Commission in 1996 was a decision preventing the establishment of a duopoly and was not concerned with abuse of a joint dominant position under Article 86. In the decision, the Commission noted, "[s]imilar negative effects which arise from a dominant position held by one firm arise from a dominant position held by an oligopoly. Such a situation can occur where a mere adaptation by members of the oligopoly to market conditions causes anticompetitive parallel behavior whereby the oligopoly becomes dominant."[151] Active collusion would, therefore, not be required for the members of the oligopoly to become dominant and to behave to an appreciable extent independently of their remaining competitors, their customers, and, ultimately, the consumers.

S. *When Can Litigation to Enforce the Legal Rights of a Dominant Company Be Contrary to Article 86?*

In general, a dominant company is free to enforce its legal rights just as any other company is, even against competitors. If the defendant in such a situation argues that because the plain-

150. Commission Decision No. 97/26/EC, O.J. L 11 (1997) [hereinafter Gencor/ Lonhro].

151. *Id.* at ¶ 140.

tiff is dominant it does not have the legal right that it claims, that question will be decided by the national court, if necessary with advice from the Court of Justice under Article 177 of the EC Treaty or with information given by the Commission.[152] Such a situation might arise, for example, if a dominant company relied on a contract that a defendant said was invalid or unenforceable because it was contrary to Article 86 or if the defendant said the dominant company was not permitted to rely on an intellectual property right because to do so was contrary to Article 86.[153] In such circumstances, the Commission would not normally begin a procedure of its own, because it would expect the national court to deal with the case appropriately, and the Commission is not an appellate tribunal from a national court. If the national court needs guidance on a question of Community law, it can get guidance from the Court of Justice under Article 177 of the EC Treaty.

The Commission, however, will act on a complaint in some rather similar situations. One such situation is where a dominant company makes a practice of systematically threatening litigation against competitors or a practice of registering trademarks or other intellectual property rights that it does not use and that create barriers to entry for competitors.[154]

It is not easy to express the relevant principle precisely. Nevertheless, it seems that it is an abuse of a dominant position to threaten litigation or to bring proceedings if the dominant company is not merely reasonably exercising its apparent legal rights but is carrying out a systematic campaign or strategy to intimidate or create difficulties for competitors or to raise unreasonably their costs, based on litigation in which it is unlikely to succeed, in order to reduce the competition to which it is exposed.

152. O.J. No. C 31/6 (1993) (discussing notice on cooperation between national courts and the Commission in applying Articles 85 and 86 of the EEC Treaty).

153. CICRA v. Renault, Case 53/87 [1988] E.C.R. 6039, [1990] 4 C.M.L.R. 265; *Volvo*, [1988] E.C.R. at 6211, [1989] C.M.L.R. at 122; *RTE-ITP*, [1995] E.C.R. at I-743, [1995] 4 C.M.L.R. at 718.

154. See Osram/Airam, COMMISSION OF THE EUROPEAN COMMUNITIES, ELEVENTH REPORT ON COMPETITION POLICY 1981, at 66, § 97 (1982) (discussing registration of trademakers including the syllable "ram" and objections to the use of a competitor's company name); Hilti AG v. Commission, Case T-30/89, [1991] E.C.R. II-1439, II-1482-83, ¶ 99, [1992] 4 C.M.L.R. 16, 45 (Ct. of First Instance) (explaining that deliberately claiming a licence payment six times higher than ultimately awarded is an abuse).

III. *COMMUNITY COMPETITION LAW IN REGULATED INDUSTRIES*

Industries and activities that are liberalized in accordance with Community directives may still be regulated in some respects to manage the transition from monopoly to full competition. This situation gives rise to several notable points on competition law. First, in several cases, notably *Atlas-Global One*,[155] the Commission has considered that liberalization on paper is not enough to justify certain kinds of close cooperation and that these can only be justified by actual licensing of competitors to enter into previously monopolized markets. Secondly, the more liberalized a market is, the more important it is to ensure that competition law is fully enforced. Thirdly, Community antitrust law requires all the features of the relevant market to be taken into account, including, if appropriate, that there is some degree of supervision of prices by national regulatory authorities. If, for example, a price squeeze by a dominant company is alleged, however, the Commission will not dismiss the complaint merely on the grounds that the national regulatory authority has power to prevent an exclusionary squeeze, if it has not in fact done so. The Commission will not assume that national authorities whose primary responsibility is not antitrust law will necessarily take whatever action is necessary to bring about the results required by Community antitrust law.

A. *Community Competition Law and Regulations for Specific Industries*

In several high technology industries, it is widely agreed that there is a need for specific regulatory measures for the industry in question, as well as for Community competition law. This is so in particular in the biotechnology, genetic engineering, and telecommunications industries. This combination or coexistence of two sets of legal rules raises several issues of Community law.

B. *Should Regulatory Measures Be at the National or Community Level?*

The question as to whether regulatory measures should be adopted at the national or Community level is answered, in part,

155. Commission Decision No. 96/546/EC, O.J. L 239/23 (1996).

by Community law itself. Where, as in telecommunications, there are industry-specific Community directives, they must be implemented by whatever national measures are appropriate. That is inherent in the concept of a directive under Article 189 of the EC Treaty. The need for implementing measures is not lessened by the rule of Community law stating that if a Member State fails to implement a directive, it cannot rely on or take advantage of its own failure when it or one of its national authorities is a party in litigation in one of its own courts.[156]

Of course, many activities within these industries are not covered by Community directives. Insofar as they are not, Member States are free to legislate or regulate if they wish, subject only to the rules of Community law mentioned below. Indeed, the principle of subsidiarity, more a political principle than a legal rule, but now written into the EC Treaty by the Treaty on European Union, states says that the European Community may take action only if and in so far as the objectives of the proposed action cannot be sufficiently achieved by the Member States, and, therefore, can be better achieved, by reason of the scale or effects of the proposed action, by the European Community.[157]

When the European Community has adopted a directive, national measures implementing the directive must, if possible, be interpreted to give effect to the directive, even if that is not necessarily their normal interpretation.[158] If a Member State fails to implement a directive and its failure causes loss to a private party, it must pay compensation if the directive, on its correct interpretation, was intended to protect individual rights.[159] Measures implementing a directive must be drafted, equipped with fines or other penalties, and enforced as effectively as simi-

156. Pubblico Ministero v. Ratti, Case 148/78 [1979] E.C.R. 1629, [1980] 1 C.M.L.R. 96; Oberfinanzdirektor des Kreises Borken v. Handelsonderneming Moorman BV, Case 190/87, [1988] E.C.R. 4689, 4722, [1990] 1 C.M.L.R. 656.

157. Article 3b, as introduced by Article G of the Treaty on European Union; *see* John Temple Lang, *What Powers Should the European Community Have?*, EUR. PUB. L. 97-116 (1995).

158. Marleasing v. La Comercial Internacional de Alimentacion, Case C-106/89, [1990] E.C.R. I-4135, [1990] 1 C.M.L.R. 305; Coloroll Pension Trustees Ltd. v. Russell, Case C-200/91, [1994] E.C.R. I-4389.

159. Francovich v. Italy, Joined Cases C-6/90 & C-9/90, [1991] E.C.R. I-5357, [1993] 2 C.M.L.R. 66; Brasseries du Pecheur, joined Cases C-46/93 & C-48/93, [1995] [1996] All E.R. (E.C.) 301, [1996] 1 C.M.L.R. 889; John Temple Lang, *New Legal Effects Resulting from the Failure of States to Fulfil Obligations under European Community Law: The Francovich Judgment*, 16 FORDHAM INT'L L.J. 1 (1992).

lar or corresponding rules of national law and rigorous enough to provide effective enforcement of the Community law rules.[160] In practice, the national measures implementing directives are integrated fully into national measures adopted to achieve purely national objectives, although the directives must prevail if there is any conflict.

Although, except in the directives themselves, the Commission does not try to promote further harmonization of national legislation, it is both desirable and inevitable that national regulators that are dealing with similar problems will adopt similar solutions. There is a certain amount of informal exchange of drafts and information between national regulatory authorities in the industries in question. This may need to be encouraged.[161] Essentially, national measures can complement Community directives in two ways: they can implement the directives by going into details not addressed in the directives themselves or they can address other issues not touched on at all by the directives.

C. *Issues for National Regulation*

In the field of telecommunications, national regulations are needed to ensure that vertically integrated, dominant companies maintain separate cost accounting for each of their activities, so that regulators can ensure that unfair cross-subsidies and discrimination in favor of a dominant company's own activities are avoided. This is particularly important for interconnection charges that constitute a high proportion of the costs of competitors of the dominant infrastructure owner. In fact, the necessary regulations do little more than oblige dominant companies to gather cost accounting data that a well run telecommunications company should already have. Although separate cost accounting is not directly or expressly required by Community antitrust law, it may become necessary to require it. Using Article

160. *See e.g.*, Public Prosecutor v. Vandevenne, Case C-7/90, [1991] E.C.R. I-4371, [1993] 3 C.M.L.R. 608; Commission v. United Kingdom, Case C-382/92. [1994] E.C.R. I-2435, [1995] 1 C.M.L.R. 345; Commission v. United Kingdom, Case C-383/92, [1994] E.C.R. I-2479, [1995] 1 C.M.L.R 345.

161. See Barry E. Hawk & Laraine Laudati, *Antitrust Federalism in the United States and Decentralization of Competition Law in the European Union: A Comparison*, 20 FORDHAM INT'L L.J. 49 (1996) (arguing that EC Member States need association of leaders of national competition authorities in order to create more effective competition laws).

90(3), vertically integrated dominant companies ought to practice it[162] for antitrust reasons as well as regulatory and management purposes.

National regulators have to consider how far it is necessary or desirable to impose on non-dominant companies obligations corresponding to those imposed on dominant companies under national regulatory regimes. In the biotechnological industry, national regulators are much less concerned with economic and financial issues such as those under antitrust law than with public health, ethical issues (cruelty to animals, use of human tissues), and environmental pollution, although national rules on these issues may affect competition significantly even when they apply formally to all competitors by raising barriers to entry or by prohibiting the use of cheap but environmentally damaging technologies.

D. *National or Community Level—Some Institutional Issues*

A study carried out for the Commission[163] suggested a number of options on how best to regulate the telecommunications industry. The study stated that in most Member States there is at present only limited cooperation between the national competition authority and the national telecommunications regulatory authority. Also, there is only limited cooperation between the various regulatory authorities and even between the various competition authorities. The situation, however, is evolving rapidly. After full scale liberalization and the first round of national regulation, which has only recently begun in some Member States, the study explains that competition law will be more important than national regulation and that competition questions will have to be addressed by the European Commission rather than by national authorities. The main options for a new regulatory institutional system are an authority independent of the Community institutions (this would probably involve amending the Community treaties and would create the kind of problems raised by the European Economic Area),[164] a legal

162. Temple Lang, *supra* note 22, at 294-95.

163. FORRESTER, NORALL & SUTTON, THE INSTITUTIONAL FRAMEWORK FOR THE REGULATION OF TELECOMMUNICATIONS AND THE APPLICATION OF EC COMPETITION RULES (1996).

164. *See* Court of Justice, Opinion 1/91, O.J. C 110/1, [1991] E.C.R. I-6079, I-6101, 1 C.M.L.R. 245, and Opinion 1/92, [1992] E.C.R. I-2821, [1992] 1 C.M.L.R. 217 (re-

framework giving the Commission regulatory powers, an advisory agency to coordinate, monitor and express opinions (but without legal powers) and consolidation of existing committees.

Opinion in governmental circles in the European Community at present, however, may not be in favor of setting up wholly new institutions. Also, setting up any new body with real powers would tend to delay rather than promote liberalization of the industry. One of the two less radical options is, thus, probably most likely to be adopted. These would raise few legal problems. This Article does not address the constitutional issues that would be raised by the more radical first and second options.

What this means is that there is at present no Community equivalent of the U.S. Federal Communications Commission, either for telecommunications or for broadcasting. It may come to be considered that telecommunications cannot be satisfactorily regulated, to whatever extent may be thought necessary, by national regulators working closely together and acting within a Community law framework. If this conclusion is finally reached, a choice will have to be made between the more radical options mentioned above. It seems unlikely that there will be a single Community authority dealing with broadcasting, among other reasons, because telecommunications is subject to federal jurisdiction in Germany and broadcasting is not. The German Länder would object strongly to a Community broadcasting authority, but would not object to the Federal Government transferring some of its powers to a Community telecommunications authority.

E. *The Rules of Community Law on National Regulatory Measures*

There are a number of general rules of Community law that apply to national regulatory measures.

1. Independence of Regulators

An industry must not be regulated by the companies in the industry themselves or by a state-owned or dominant company in the industry. Regulators must be independent of the regulated industry. Member States must not deprive their legislation of its

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garding creation of the European Economic Area); *see* Temple Lang, *Institutional Aspects of EC-EFTA Relations*, *in* CREATING A EUROPEAN ECONOMIC SPACE: LEGAL ASPECTS OF EC-EFTA RELATIONS 17-62 (Robinson & Findlater eds., 1990).

official character by delegating to private companies responsibility for taking measures affecting the economic sphere. Advisory committees are permissible,[165] however, and even a dominant company must be free to plan and manage its own business activities.[166]

The Court has not had occasion to spell out all the consequences if a regulator is not sufficiently independent of the companies regulated. In theory, regulations might be wholly invalid or merely ineffective against competitors. If the regulations really amount to a cartel or abuse of dominance in the guise of governmental responsibility delegated to private parties, the measure should presumably be looked at under Articles 85 and 86 of the EC Treaty. This issue may become important insofar as companies are given *de facto* power to adopt standards that if validly adopted would be legally binding on their competitors. Although Article 86 does not contain a clause corresponding to Article 85(2), it seems clear that clauses that infringe Article 86 are void, at least as against the dominant company.

2. National Competition Authorities Applying Community Competition Law

Regulatory authorities, even if they are not regarded as competition authorities or expressly empowered to apply national or Community competition law, have an important duty not to approve any agreement, including price fixing agreements, practice, or behavior that is contrary to Community competition law, whether Article 85 or Article 86.[167]

165. Van Eycke v. Aspa NV, Case 267/86, [1988] E.C.R. 4769, [1990] C.M.L.R. 330; *France v. Commission*, [1991] E.C.R. at I-2526-72, ¶ 51, [1992] 5 C.M.L.R. at 574-75; RTT v. GB-Inno-BM, Case C-18/88, [1991] E.C.R. I-5941, [1994] 1 C.E.C. (CCH) 117; Centro Servisi Spediporto Srl v. Spedizione Marittima del Golfo Srl, Case C-96/94, [1995] E.C.R. I-2883, [1996] 4 C.M.L.R. 613; Procurer de la Republic v. Thierry Tranchant, Case C-91/94, [1995] E.C.R. I-3911, 4 C.M.L.R. 74; John Temple Lang, *European Community Competition Law and Member State Action*, 10 Nw. J. INT'L L. & BUS. 114-32 (1989).

166. *See British Telecom*, [1985] E.C.R. at 886, [1985] 2 C.M.L.R. at 382.

167. Ahmed Saeed Flugreisen and Silver Line Reisburo GmbH v. Zentrale zur Bekampfung unlanteren Wettbewerbs e.V., Case 66/86, [1989] E.C.R. 803, [1990] 4 C.M.L.R. 102; Costanzo v. Comune di Milano, Case 103/88, [1989] E.C.R. 1839 ¶ 31, [1989] 3 C.M.L.R. 239; John Temple Lang, *European Community Constitutional Law and the Enforcement of Community Antitrust Law*, *in* 1993 FORDHAM CORP. L. INST. 525, 580-83 (Barry Hawk ed., 1994). The duty of national courts to avoid conflicts with Commission decisions was confirmed in *Dijkstra*. Hendrik Evert Dijkstra v. Friesland (Frico Domo)

National competition authorities should be given express powers by national legislation to apply Community competition law.[168] Whether it would be useful also to give such express powers to a national regulatory authority depends on the extent to which, in practice, the authority in question is acting as a competition authority or taking antitrust arguments into account. It is clearly desirable, to avoid duplication of procedures and unnecessary cost, that when a national regulatory authority deals with an issue or with an individual case, it ensures that whatever result is called for by Community antitrust is achieved, if it is convenient and appropriate for it to do so in the course of its procedure.

Regulators can bring about a situation in which they can, in effect, apply rules corresponding to Community antitrust law by writing clauses corresponding to Articles 85 and 86 of the EC Treaty into the licenses they grant in the course of their activities. This is different, however, from having powers given by legislation to apply Community law, in at least some respects. The interpretation of such clauses, even if their wording was identical to Articles 85 and 86, could not be referred to the Court of Justice in Luxembourg under Article 177. The rights of third parties to compensation and injunctions would not necessarily be the same as in the case of breach of Community competition law. Furthermore, the Community law duties of national authorities to ensure observance of Community law would not apply to pure rules of national law, even when they are obviously copied from Community law.

National courts have a duty to raise questions of Community law even if the parties have not done so.[169] Because national administrative authorities have the same duties as national courts not to apply national law if it is inconsistent with Commu-

Cooperatie BA and Others, Case C-319/93, [1995] E.C.R. I-4471, [1995] 5 C.M.L.R. 178.

168. See Commission Notice, O.J. C 262/07 (1996) (on cooperation between the Commission and national competition authorities).

169. Verholen and Others v. Sociale Verzekeringsbank, Cases C-87-89/90, [1991] E.C.R. I-3757, 3772-73, [1994] 1 C.M.L.R. 157; Amministrazione delle Finanze dello Stato v. Simmenthal, Case 106/77, [1978] E.C.R. 629, 643, ¶ 16, [1978] 3 C.M.L.R. 263, 282-83; Peterbroeck van Campenhout SCS & Cie v. Belgium, Case C-312/93, [1996] 1 C.M.L.R. 793; Jeroen van Schijndel & Johannes van Veen v. Stichting Pensioenfonds voor Fysiotherapeuten joined Cases C-430-431/93, [1996] 1 C.M.L.R. 801.

nity law,[170] they may also have a duty to raise questions of Community law on their own initiative.[171]

National courts have a duty under Community constitutional law, in particular Article 5 of the EC Treaty, to give effective remedies for the protection of the rights afforded by EC law.[172] If, under national law, the primary responsibility for applying Community competition law is in practice that of a national regulatory authority rather than the national competition authority or the national courts, then the regulatory authority would have a duty to provide effective remedies of whatever kind is required by Community competition law.

If a national authority approves anything contrary to Community competition law, several consequences may follow. First, the validity of the approval can be open to challenge in the national courts. Second, the Commission can proceed against the companies involved in the usual way. It could not be bound by the findings made or the approval given by the national authority. At most, that approval might help to protect the companies against fines for anything done after the approval was given. Third, the Member State might be in breach of its obligations under Community law, and a procedure against it under Article 169 of the EC Treaty might be appropriate. Fourth, the national authority or the Member State might have to pay compensation for the protection of the rights of interested parties under Community law.

This duty of national authorities applies, as is clear from the

170. Fratelli Costanzo v. Comune di Milano, Case 103/88, [1989] E.C.R. 1839, 1871, [1989] 3 C.M.L.R. 239, 258.

171. This also seems to follow from *Flugreisen*, because one could not expect the parties in such a case to mention issues of Community competition law which, if they had any effect, would only be contrary to the parties' interests. *Flugreisen*, [1989] E.C.R. at 803, [1990] 4 C.M.L.R. at 102.

172. *See, e.g.*, Harz v. Deutsche Tradax, GmbH, Case 79/83, [1984] E.C.R. 1921, 1941-42 ¶¶ 21-28, [1986] 2 C.M.L.R. 430, 452-54 (stating that compensation must be adequate in relation to damage sustained.); Bozzetti v. Invernizzi SpA and Ministero del Tesoro, Case 179/84, [1985] E.C.R. 2301, 2317-18, ¶ 17, [1986] 2 C.M.L.R. 246, 262; Commission v. Greece, Case 68/88, [1989] E.C.R. 2965, 2984-85, [1991] 1 C.M.L.R. 31; Simmenthal, [1978] E.C.R. 629, [1978] 3 C.M.L.R. 263; Regina v. Secretary of State for Transport *ex parte* Factortame Limited, Case C-213/89, 1990 E.C.R. I-2433, [1990] 3 C.M.L.R. 1; Marshall v. Southampton and South West Hampshire Area Health Auth. (Marshall II), Case C-271/91, [1993] E.C.R. I-4367, [1993] 3 C.M.L.R. 293; *van Schijndel*, [1996] 1 C.M.L.R. at 801; *Factortame*, [1996] 1 C.M.L.R. at 889.

Ahmed Saeed judgment,[173] even when the authority does not intend or purport to give any approval on the basis of Community law. It seems to follow that if, for example, registration of a patent license is carried out only when the license is considered lawful under national law, the registering authority should on its own initiative consider if there is any objection to the license under Community law.

The duty of national regulatory authorities not to approve anything contrary to Community law, including Community competition law, is important because it is not clear that all such authorities are in fact completely independent of the companies that they are supposed to regulate. Also, even undeniably independent competition authorities like the U.K. Monopolies Commission are not always fully competition minded.

3. National Restrictions on Competition

It is a general principle of Community law that Member State measures that limit freedoms given or protected by Community law, even if they are non-discriminatory, must be for a legitimate public or general-interest purpose and must be no more restrictive than is essential to achieve that purpose.[174] Purely economic, protectionist aims are not legitimate. If the permissible purpose is already assured by the law in another Member State in which a company is established, the same obligations cannot be imposed a second time. This is a fundamental principle of Community law which applies to services.

The Court has specifically stated, "economic aims, such as that of securing for a national public foundation all the revenue from advertising intended especially for the public of the Member State in question, cannot constitute grounds of public policy

173. *Flugreisen*, [1989] E.C.R. at 803, [1990] 4 C.M.L.R. at 102.

174. Van Binsbergen v. Bestuur Van de Bedrijfsvereniging Voor de Metaalnijverheid, Case 33/74, [1974] E.C.R. 1299, [1975] 2 C.M.L.R. 298; Sichting Collectieve Antennevoorziening Gouda v. Commissariaat voor de Media, Case C-288/89, [1991] E.C.R. I-4007; EC Commission v. Netherlands, Case-353/89, [1991] E.C.R. I-4069, I-4092-94, ¶¶ 11-20; *see* Bond van Adverteerders v. Netherlands, Case 352/85, [1988] E.C.R. 2085, [1989] 3 C.M.L.R 113 (finding discriminatory restrictions on advertising on television and freedom to provide services); *see also* TV10 SA v. Commissariaat voor de media, Case C-23/93, [1994] E.C.R. I-4795, [1995] 2 C.M.L.R. 284. *See generally* PETER OLIVER, THE FREE MOVEMENT OF GOODS IN THE EUROPEAN COMMUNITY (3d ed. 1996) (explaining in depth free movement of goods).

within the meaning of Article 56 of the Treaty."[175]

Therefore, few lawyers were surprised when the Court adopted the *Corbeau* judgment[176] on postal services. In that judgment the Court wrote:

> [T]he questions referred to the Court must be understood as meaning that the national court is substantially concerned with the question whether Article 90 of the Treaty must be interpreted as meaning that it is contrary to that Article for the legislation of a Member State which confers on a body such as the Régie des Postes the exclusive right to collect, carry and distribute mail to prohibit an economic operator established in that State from offering, under threat of criminal penalties, certain specific services on that market.[177]

The Court then referred to its previous case law ruling that a statutory monopoly has exclusive rights under Article 90 and is in a dominant position under Article 86. Article 90 applies to Member State measures and prevents Member States from adopting measures that might deprive Article 85 and 86 of their effectiveness. The Court then went on to say that Article 90(2):

> [P]ermits the Member States to confer on undertakings to which they entrust the operation of services of general economic interest, exclusive rights that may hinder the application of the rules of the Treaty on competition insofar as restrictions on competition, or even the exclusion of all competition, by other economic operators are necessary to ensure the performance of the particular tasks assigned to the undertakings possessed of the exclusive rights.[178]

The Court continued and explained:

> [T]he Régie des Postes is entrusted with a service of general economic interest. . . . The question which falls to be consid-

175. *Bond van Adverteerders*, [1988] E.C.R. 2085, 2135, ¶ 34 [1989] 3 C.M.L.R. 113, 151.

176. *Corbeau*, [1993] E.C.R. at I-2533, [1995] 4 C.M.L.R. at 621. *See* Mario Siragusa, *Privatization and EC Competition Law*, 19 FORDHAM INT'L L.J. 999, 1053-58, 1074-78 (1996); Anthony Gardner, *The Velvet Revolution: Article 90 and the Triumph of the Free Market in Europe's Regulated Sectors*, 16 EUR. COMP. L. REV. 78 (1995); Luc Gyselen, *Anti-Competitive State measures Under the EC Treaty: Towards a Substantive Legality Standard*, 1993 EUR. L. REV. 55-106; John Temple Lang, *Community Antitrust Law and Government Measures Relating to Public and Privileged Enterprises: Article 90 EEC Treaty*, *in* 1984 FORDHAM CORP. L. INST. 543, 565-73 (Barry Hawk ed., 1985).

177. *Corbeau*, [1993] E.C.R. at 2566-67, ¶ 7 [1995] 4 C.M.L.R. at 642.

178. *Id.* at 2568.

> ered is therefore the extent to which a restriction on competition or even the exclusion of all competition from other economic operators is necessary in order to allow the holder of the exclusive right to perform its task of general interest and in particular to have the benefit of economically acceptable conditions.[179]

The Court assumed that the need to avoid overall losses presupposes that it will be possible to offset less profitable sectors against the profitable sectors and, hence, justifies a restriction of competition from individual undertakings in the economically profitable sectors. The Court noted that it may be necessary to prevent "cream skimming" by competitors.

The exclusion of competition, however, is not justified as regards non-traditional separate services insofar as they do not compromise the economic equilibrium of the service of general economic interest provided by the monopoly. The Court stated:

> [I]t is contrary to Article 90 of the EEC Treaty for legislation of a Member State which confers on a body such as the Régie des Postes the exclusive right to collect, carry and distribute mail, to prohibit, under threat of criminal penalties, an economic operator established in that State from offering certain specific services dissociable from the service of general interest which meet the special needs of economic operators and call for certain additional services not offered by the traditional postal service, in so far as those services do not compromise the economic equilibrium of the service of general economic interest performed by the holder of the exclusive right.[180]

Although the Court does not always accept either the Advocate Generals' conclusions or their ways of framing issues, the opinion of Advocate General Tesauro in *Corbeau* is important. He explained that the "central question" was the application of Article 86 and 90 to exclusive rights. He concluded that the case law confirms that Community law imposes precise limits on the freedom of Member States to confer exclusive rights. Measures that extend the scope of an exclusive right are not, by their nature, different from measures that create an exclusive right. In both cases, the essential point consists in verifying if the meas-

179. *Id.* at 2568-69.
180. *Id.* at 2570.

ures in question are objectively justified. The Court's earlier judgment concerned primarily the examination of the justification for exclusive rights. In this perspective, it is necessary to determine whether the exclusive rights conferred by Member States are justified by the needs of the general interest consistent with the aims of the Community. In this framework, Advocate General Tesauro noted that it is essential to respect the proportionality principle so that restrictions of competition are permissible only insofar as they are indispensable to satisfy the needs that justify the exclusive rights.

In particular, in light of the Advocate General's opinion, the natural way, and indeed the only way, to understand the *Corbeau* judgment is to say that the Court agreed with the Advocate General that exclusive rights may be given to carry out services of general economic interest (but not for other purposes) and insofar, but only insofar, as the restrictions on competition, or even the exclusion of all competition, are necessary to ensure the performance of the tasks. It is only if the judgment is understood in this way that the last paragraphs of the judgment make sense. Article 90(2) expressly allows the normal rules of the EC Treaty to be set aside only for undertakings entrusted with the operation of services of general economic interest. Because the Court went on to consider whether the monopoly was too wide and held that it was, the only reasonable interpretation of the judgment is that the Court is applying the test: is it necessary to ensure that the tasks are performed? Because this is precisely in line with the long established case law already referred to, this interpretation is entirely reasonable and must be correct. A small minority of lawyers, however, have not hesitated to state that the Court in *Corbeau* expressed itself badly and, if it meant what is said, was wrong to suggest that the freedom of Member States to set up monopolies is limited in any way. They have sought to rely on some more recent judgments.[181]

In the *Port of Genoa* case,[182] the Court stated that merely creating a dominant position by granting exclusive rights is not, as such, contrary to Articles 86 and 90 if the dominant enterprise, merely by exercising its exclusive rights, cannot avoid abusing its

181. Giorgio Banchero, Case C-387/93, [1996] 1 C.M.L.R. 829; *Porto di Genova*, [1991] E.C.R. at I-5889.

182. *Porto di Genova*, [1991] E.C.R. at I-5928, ¶ 17.

dominant position, or when its exclusive rights induce it to abuse its position. In the *Crespelle* case,[183] the Court, for no obvious reason, stated that a Member State only infringes Articles 86 and 90 when the enterprise is led, by the mere exercise of its exclusive rights, to abuse its dominant position. This simplified phrase was repeated in *Banchero*.[184]

The Court could not have meant to say that the only possible circumstances in which there can be a breach of Articles 86 and 90 is when an exclusive right leads to an abuse. There are plainly many other circumstances in which a Member State measure might require or lead to behavior in violation of Article 86 and no exclusive rights need be involved.

The explanation is not difficult. In the *Crespelle* case, the alleged abuse was excessive prices, and the Court explained that the applicable question was whether the prices were the direct consequences of the law conferring the exclusive rights. Naturally, it held that they were not. In other words, the Court was merely saying that it was not in itself a breach of Articles 86 through 90 for a law to grant an exclusive right and thereby create a dominant position. It is a breach of those Articles only if something more is shown. If the alleged abuse was excessive prices, then a link between the law and the abuse must be shown. Understood this way, the Court's language in *Crespelle* cannot be criticized. Similarly, in *Banchero* the Court went on to say that the law in question had not necessarily led to the specific behavior complained of.

This analysis demonstrates that the language in the recent judgments does not overrule *Corbeau* and illustrates the danger of making the mistake of treating a sentence from a Court judgment as if it were a legislative text. The better view is that the Court meant what it said in *Corbeau*, which corresponds to what it has said in its consistent case law in other areas. Therefore, Member States are free to set up monopolies provided that they do so to provide a service in the general economic interest and the means used are no more restrictive than is necessary to achieve the objective.

Although it has been necessary to analyze the issue, it has

183. Centre d'Insemination de la Crespelle v. Cooperative del la Mayenne, Case C-323/93, [1994] E.C.R. I-5077, ¶ 18.

184. *Giorgio Banchero*, [1996] 1 C.M.L.R. at 857-58, ¶ 51.

probably less relevance in high technology industries than it has had in the past. The Commission's Directive on Telecommunications, based on Article 90, requires Member States to end exclusive rights in that sector.[185] Therefore, the question will not arise in practice in the most important high technology sector in which it has arisen. Member States are not likely to try to establish new monopolies in the biotechnology industry. The principle, however, might be important in privatization cases, because it would seem to make it unlawful under Community law to protect a company from being privatized whether to promote the interests of the new shareholders or to increase the price at which the shares would be initially sold.

4. National Limits on Competition

The Court has repeatedly held that Member States may not require or encourage the adoption of agreements, decisions, or concerted practices contrary to Article 85 of the EC Treaty, reinforce their effects, or deprive official rules of the characters of legislation by delegating to private parties decisions concerning the economic sphere.[186] A genuine public measure limiting price competition, however, cannot be criticized under Community law on the grounds that Article 85 would not permit the companies affected to achieve the same result themselves.

The Court has not yet had to consider the argument that just as Community law allows freedom of movement of goods and freedom to supply services to be restricted only for a legitimate reason in the general interest and if the means used are no more restrictive than is necessary, so Member States may restrict competition in price or otherwise only in the general interest and insofar as it is essential to achieve the objective sought. This principle is, as already mentioned, a broad principle of Commu-

185. Commission Directive No. 88/301, O.J. L 131/73 (1988).

186. *Van Eycke*, [1988] E.C.R. 4769, 4791 ¶ 16, [1990] 4 C.M.L.R. 330, 339; Opinion of Advocate General van Gerven, Netherlands v. Commission, Case C-48/90 & C-66/90), [1992] E.C.R. I-565, 615-19, [hereinafter Dutch PTT], Case C-2/91, [1993] E.C.R. I-5791, ¶ 14; Bundesansalt fur den Guterfernverkehr v. Gebruder Reiff BmbH & Co KG, Case C-185/91, [1993] E.C.R. I-5801, 5846-47, ¶ 12, [1995] 5 C.M.L.R. 145, 175; Germany v. Delta Schiffahrts-und Speditionsgesellschaft GmbH, Case C-153/93, [1994] E.C.R. I-2517, 2529 ¶ 12, [1996] 4 C.M.L.R. 21, 29; Peralta, Case 379/92, [1994] E.C.R. I-3453, I-3496, ¶ 21; Tankstation 't Heukske VOF & JBE Boermans, Cases C-401-402/92, [1994] E.C.R. I-2199; *GB-Inno-BM*, [1977] E.C.R. 2115, 2144 ¶ 31 (providing Article 86 analysis).

nity law, and because competition is one of the foundations on which the Community is built, it seems reasonable to say that Community law creates a limited freedom to compete as well as a limited freedom to supply services. This principle would allow, for example, restrictions of competition in biotechnology for human health, environmental reasons, and on ethical grounds, and restrictions on competition in telecommunications and broadcasting due to, among other factors, shortage of frequencies or a policy of preventing excessive concentration of media ownership.

This principle would also be relevant to the question of whether national regulators should impose on non-dominant companies obligations similar to those imposed on dominant companies. If obligations, for example, to provide access or interconnection, are imposed on non-dominant companies, in particular if the beneficiaries of these obligations include the dominant companies, the scope for effective competition may be significantly lessened. It is, in general, procompetitive to allow companies to retain for their own use assets that they have legitimately acquired or constructed. This freedom should normally be curtailed only for strong public interest purposes or if the company is dominant.

5. National Approval of Restrictive Agreements

National regulatory or other non-competition authorities have no power to approve restrictive agreements under Article 85(3). They are subject to all other rules of Community law that apply to national competition authorities.[187]

6. Ensuring Community Competition Law is Applied

National regulatory authorities have a duty to take measures to ensure that Community competition law can be satisfactorily applied. When it necessitates cost accounting information to ensure that there is no unlawful cross-subsidizing or predatory pricing, the regulator presumably has a duty to ensure that all that information is available. Clearly a dominant company should not be in a better position if it keeps inadequate cost accounting data than if it keeps complete information. Therefore, if a domi-

187. *See generally* Temple Lang, *supra* note 167 (detailing restrictions on national regulatory and other non-competitive authorities).

nant firm was found not to have taken the steps necessary to provide whatever cost accounting information was needed, it might be appropriate for national courts to apply a rebuttable presumption that unlawful behavior had occurred.

IV. *PRACTICAL CONSEQUENCES FOR LAWYERS*

For lawyers, the first consequence of all this is that a good deal of specialized knowledge is needed, both of the special rules of law on biotechnology, software copyright, and telecommunications, and of the science and technology involved. These areas of law are presently interdisciplinary. It follows that, for example, an antitrust lawyer specializing in mergers will need the help of a lawyer specializing in telecommunications if he or she is to deal satisfactorily with a merger in the telecommunications sector.

In fact, for antitrust lawyers one of the main problems in high technology industries is a simple one: the future of high technology industries is far harder to foresee than the future of other industries. This does not matter much under Article 85 of the EC Treaty because the Commission could, if necessary, reconsider a negative clearance, an individual exemption, or a prohibition if circumstances change. It is particularly important in cases under the Merger Regulation where decisions are definitive and cannot be reconsidered even if the market does not develop as expected. Under Article 86, the extent of the problem varies with the circumstances. Unquestionable dominance today may disappear if competitors achieve a technical breakthrough. The problem is more difficult in essential facilities cases in which the Commission may have to decide as best it can, in effect, whether competition will be encouraged most in the medium or long-term by allowing a dominant company to refuse access to a facility that is essential, thereby preventing competition from emerging in the short-term, but forcing competitors to develop their own facilities in the medium term, or somehow to invent around the problem. Behavior that is now exclusionary may cease to be so if circumstances or technology changes, if the cost of building an alternative infrastructure or facility comes down, or if new scientific techniques or technological solutions are found.

The problem of technological change also creates a difficulty for lawyers notifying agreements. Statements are made in notifications in high technology industries that are perfectly accurate at the time they are made but that are no longer correct a few months later. I suggest that at least until the Commission takes a final position on a notification, lawyers have a professional duty to correct any statements in notifications, complaints, or other submissions that have ceased to be accurate. Lawyers need to advise their clients that changed circumstances may have made it likely or inevitable that the Commission, if asked to do so, would revise or withdraw authorizations already given.

This illustrates another consequence of rapid technological change. The Commission, as far as it is able to without being able to foresee the future any better than anyone else, may need to try to make clear the possible future changes of circumstances that would lead it to alter its conclusions in a particular case. This is not easy, among other reasons, because the Commission may need to avoid inhibiting desirable technological change. For example, the Commission might need to be careful to avoid stating that it would always be an abuse for a dominant company to integrate different modules of its products, thereby preventing competitors from selling them separately, if integration would be desirable and improve the combined products.

As a result of all this, some national courts and national competition authorities tend to feel, rightly or wrongly, that they do not have the time, the manpower, or the expertise to deal with the competition issues arising in these sectors and that they should leave them either to the Commission or to the relevant national regulatory authority.

Another practical consequence for lawyers concerns tactics in litigation on Community antitrust law issues. Of course, the tactics thought desirable vary greatly according to circumstances. Rapid technological change, however, may lead a company to fight a case against the Commission through the Community courts in the hope that even if it loses, it will make enough money meanwhile to justify the litigation. A company tempted to do this should remember that although there have been few claims for compensation for breach of Community antitrust law,[188] the Commission encourages such claims,[189] and such claims will certainly become more common. In a high technol-

188. *See* John Temple Lang, *EEC Competition Actions in Member States' Courts Claims*

ogy industry, the amount of compensation that might have to be paid for loss caused during several years of litigation could be enormous. Also, the uncertainty resulting from continuing litigation might make company planning difficult. In high technology industries settlements should always be considered. This is so, because the Court of Justice has said so often and so clearly that national courts must give effective remedies for breach of Community law.[190] Although this has usually been stated in connection with remedies against a Member State, the same duty certainly applies to remedies for loss caused by private parties. Claims for compensation for loss due to breach of Community antitrust law will increase.

One of the difficulties apparently experienced by plaintiffs is the need to prove the amount of their losses, including, proving what a price would have been if there had been no price fixing or what profits they would have made if they had not been excluded from a market. National courts, in order to fulfil their duty under Community law to give effective remedies, may be led to adopt presumptions as to probable quantum of loss, to avoid having to answer such speculative questions. Such presumptions would certainly cause an increase in claims for compensation.

In this context, a recent judgment of the English High Court is important.[191] The Commission had adopted a decision[192] finding that the British Gypsum Group had infringed Article 86 in a number of ways. British Gypsum appealed to the Community Courts and lost their appeal.[193] Iberian which had initially complained to the Commission, then brought proceed-

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for Damages, Declarations and Injunctions for Breach of Community Antitrust Law, in 1983 FORDHAM CORP. L. INST. 219 (Barry Hawk ed., 1984).

189. Notice on Cooperation Between National Courts and the Commission in applying Article 85 and 86 of the EEC Treaty, O.J. C 39/6 (1993); Notice on Cooperation Between National Courts and the Commission in the Field of State Aid, O.J. C 312/8 (1995).

190. *See e.g., Factortame,* [1996] 1 C.M.L.R. at 889.

191. Iberian UK Ltd v. BPB Industries Plc and Another, [119] E.C.C. 467; see Hasselblad (GB) Ltd v. Orbison [1985] 1 Q.B. 475 : *cf.* Macarthy v. Unichem, unreported judgment of Scott J, English High Court, Nov. 24, 1989; Temple Lang, *supra* note 167, at 568-70.

192. Commission Decision No. 89/22/EEC, O.J. L 10/50 (1989) [hereinafter BPB Industries].

193. BPB Industries plc v. Commission, [1995] E.C.R. at I-865, [1997] 4 C.M.L.R. at 238.

ings for compensation. British Gypsum argued that the English courts could not accept the Commission's decision, even after it had been upheld on appeal, as evidence that there had been an infringement of Article 86 by British Gypsum. In effect, they argued that Iberian had to start again from the beginning and were free to argue that the Commission and the Community courts were wrong. Not surprisingly this argument was rejected. The English court held that defendants may not ask national courts to reconsider a Commission decision in such circumstances. National courts should take all reasonable steps to avoid or reduce the risk of conflict between their judgments and decisions and judgments of the Community institutions.

Another possible consequence of the duty of national courts to give effective remedies for breach of Community law[194] should be mentioned. In a high technology industry, a company that had suffered serious loss due to an EC antitrust violation might go out of business if it could not obtain an interim payment of part of the compensation due to it, even if the exact amount of the total compensation owed was still undetermined. A national court might, therefore, have a duty under EC law to order an interim payment in such circumstances, despite that it would not do so in a case governed only by national law.

In general, antitrust issues in high technology industries are even more fact-based than antitrust issues in other industries. Because the facts in dispute often concern the future as well as the present, the European Commission has shown on occasion that it is willing to be influenced by its view of the future, but only with caution.

Another practical conclusion for lawyers is that a knowledge of the many facets of the relationships between Community law and national law is even more essential in high technology industries, at least those that continue to be regulated, than in other industries. I have drawn attention to this previously[195] and it

194. *Factortame*, [1990] E.C.R. at I-2433, [1990] 3 C.M.L.R. at 589; *Vandevenne*, [1991] E.C.R. at I-4371, *Marshall II*, [1993] E.C.R. at I-4367, [1993] 3 C.M.L.R. at 293; *Brasserie du Pêcheur*, [1996] C.M.L.R. at 889; Syndicat Français de l'Express International (SFEI) and Others v. La Poste and Others, Case C 39/94, [1996] 3 C.M.L.R. 369; Regina v. Minister of Agriculture, Fisheries and Food, *ex parte* Hedley Lomas (Ireland) Ltd., Case C 5/94, [1996] 2 C.M.L.R. 391; *see* Jeremy Lever, *UK Economic Regulation: Use and Abuse of the Law*, 1992 EUR. COMPETITION L. REV. 55-65.

195. Temple Lang, *supra* note 167; Temple Lang, *supra* note 188; *see* BLANCO, *supra*

should be no surprise to Canadian and U.S. lawyers. Antitrust specialists need to be aware of this.

It seems likely that, for many reasons that have been touched on in this Article and for other reasons, complaints in high technology industries will in general concern anticompetitive abuses rather than exploitative abuses. Because the former lead to more effective remedies, the Commission should afford them higher priority.[196]

CONCLUSION[197]

With little discussion, the Commission has made use of the concept of competition in R&D, rather than the concept of innovation markets, to object to several mergers, and will no doubt do so again.

Some of the antitrust law difficulties that arise in high technology industries are due to rapid change and the difficulty of foreseeing the future, not to advanced technology itself. Difficulties of these kinds will remain, and some adjustment in procedural rules about, for example, appellate arguments and interim measures, may be needed.

High technology industries tend to raise new antitrust issues that have to be resolved by reference to basic principles of antitrust law or antitrust economics. This makes demands on lawyers. It may well also mean that these issues will be ultimately resolved in the same manner in the European Community and in the United States, because most of the basic principles are the same. In the future, the World Trade Organization and trade related intellectual property issues, not discussed in this article, will probably be increasingly important for high technology industries in particular.

High technology industries have already raised a wide variety of new antitrust issues in the European Community, so wide that they cannot be neatly classified. They will certainly raise other new issues in the future, as well as those mentioned in this Article. New antitrust issues may require new answers and solu-

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note 31, at 11-34; EUROPEAN COMMISSION, XXIVTH REPORT ON COMPETITION POLICY 1994, at 29-30, §§ 23-24, 41-43, §§ 48-52, 67-74, §§ 95-104 (1995).

196. Temple Lang, *supra* note 188, at 245-47.

197. *See* Ungerer, *supra* note 5, at 1173-77; *see also* Simon M. Taylor, *Article 90 and Telecommunications Monopolies*, 15 EUR. COMPETITION L. REV. 322 (1994).

tions, and lawyers and enforcement authorities must be ready to develop them when that is necessary. However, they should not look for new answers when the old ones would do just as well.

High technology industries in the European Community raise many issues involving patents and other intellectual property rights, as they have done in the United States, but because of the diversity of Member State intellectual property laws, useful generalizations are difficult or impossible to set forth. There has been little interest in the European Community Patent Convention because it is at present structured in such a way that a national court in one Member State could, without necessarily getting the agreement of the Community courts, invalidate a Community Patent in the whole of the European Community. There is also an unresolved controversy over the extent to which it should be made possible by directive to patent biotechnological and genetic engineering inventions. When these two issues are ultimately resolved, EC intellectual property law in high technology industries will move forward rapidly. The work of the European Agency for the Evaluation of Medicinal Products will also alter market conditions.

New combinations of different kinds of companies in strategic alliances may necessitate more sophisticated types of economic analysis. For example, if a dominant telecommunications company joins with a satellite TV company to enter into the cable business and promote interactive services, such a pincer movement requires a much more complex analysis than merely "potential competition" or barriers to entry.

The Commission already begins more procedures on its own initiative in high technology industries than in other industries, to prevent companies obtaining advantages from delaying or avoiding notification and to ensure that similar cases are treated similarly. This more proactive policy may have to develop even further and may come to have implications for the Commission's view of its antitrust role and responsibilities.

The distinction between concentrative and cooperative mergers is particularly difficult and unsatisfactory in the complicated circumstances of high technology industries. It would be a big step forward to abolish the distinction as is now suggested.

The more technical, sophisticated, and rapidly-changing the industry, the greater the informational gap is likely to be between the companies involved in a given transaction or behavior and the antitrust authorities, including the courts. In high technology industries, antitrust authorities may need to take special measures to close this gap. One solution may be close cooperation with regulatory authorities.

Community-level regulation, and perhaps regulatory authorities, may be needed in some high technology industries. Community antitrust law cannot be used to achieve purely regulatory objectives. Furthermore, it may not prove possible to achieve regulatory objectives satisfactorily by uncoordinated national regulation.

Some antitrust issues, for example, determining a reasonable price for access to an essential facility, are close to being regulatory in nature. In general, Community antitrust law seems better prepared to address high technology industries than national regulation in Member States. Thus, there will be demands to use antitrust law for essentially regulatory objectives. The Commission will probably leave borderline issues to national regulators whenever possible.

High technology industries involve many relationships between competitors, as suppliers of goods or services to one another, or because their products need to work together and to be compatible with one another. Some companies' product specifications are *de facto* standards for other companies. In these circumstances, the duty of moderation in behavior likely to harm other companies (other than by offering better products at lower prices), which results from the principle of proportionality, is likely to grow in importance. This duty is relevant to the distinction between anticompetitive or exclusionary behavior of dominant companies and legitimate competition and defense of the dominant company's interests. It concerns both the incidental consequences of changes in a dominant company's product and dominant companies' reactions to competitive initiatives, as in the *United Brands-Olesen* case.[198] The proportionality principle may also be relevant to exploitative abuses.

198. United Brands Co. v. Commission, Case 27/76, [1978] E.C.R. 207, 293, ¶¶ 189-94, [1978] 1 C.M.L.R. 429, 496-97.