

PART II: THE IMPROPER ACQUISITION OF PATENTS AS A COMPETITION LAW PROBLEM

Over and above the way in which the respective patent laws may deal with situations involving devious conducts at the patent office, or the extent to which patent courts may take them into consideration during litigation, such conducts—and their immediate outcomes—can have, at least potentially, considerable implications for competition. By way of a plain, paradigmatic example, a deceptive conduct before the patent office could lead to the grant of an unwarranted patent, which could in turn hamper competitors' participation on an otherwise unrestricted market or even ban them from entering or remaining in it. In this context, laws protecting competition may have a role to play as a way of countering this kind of abuses and preventing them from unduly foreclosing the market. Part II of this work, thus, is precisely aimed at analysing the way and the extent to which competition rules can be applied within this quite peculiar context.

Part II is divided into three chapters. Chapter IV first briefly explains the rationale behind the protection of competition, develops some basic economic concepts and describes the essential features of EU competition and US antitrust laws,⁴⁸⁵ particularly those referred to abusive unilateral conducts. Chapter V thence presents a synopsis of the general interplay between competition rules and intellectual property and analyses how American and European antitrust case law have dealt with abuses in patent prosecution until today. Finally, chapter VI critically appraises the approach assumed by courts and antitrust enforcers and, based on many of their underlying foundations, seeks to postulate a sound and systematic mechanism for the application of competition laws against this specific type of behaviour by presenting a workable, across-the-board theory of harm.

485 Whereas the term 'antitrust law' is commonly employed in US law, Europeans normally prefer the term 'competition law'. This work, however, uses both terms interchangeably, except where specifically noted.

Chapter IV: Competition and Competition Law Tools

1. Goals of Competition Law

As a general principle, an economy with free competition is widely recognised as the best possible mechanism for warranting allocative, productive and dynamic efficiency and hence achieving an optimal combination of products and services in the market in terms of price, quality, and consumer choice.⁴⁸⁶ Instead, when an industry is monopolised, prices tend to rise above costs and output is reduced below the competitive level, which logically brings about considerable negative implications for consumers and for the market as a whole. Firstly, on an allocative efficiency dimension, those consumers who cannot afford the higher prices suffer an evident loss, which is usually referred to as deadweight loss since it is not offset by any gains by the monopolist. Moreover, those who can still afford the higher price are also harmed because they are compelled to pay prices above the competitive level, and their loss in this case is equal to the additional revenue that the monopolist obtains by charging a price above its costs. But monopolised markets might have an even more harmful impact on social welfare in terms of productive and dynamic efficiencies, since monopolists will often lack incentives to keep their production costs low or invest in innovation.⁴⁸⁷

Against this background, it is no surprise that the primary objective of competition law is to protect competition. The exact content of this proclamation, however, is far from clear and conceals a diversity of possible objectives.⁴⁸⁸ If having firms with considerable market power leads to welfare

486 Frederic M Scherer and David Ross, *Industrial Market Structure and Economic Performance* (3rd edn, Houghton Mifflin 1990) 15; FTC, 'To Promote Innovation: The Proper Balance of Competition and Patent Law and Policy' (2003) ch 1, 3.

487 For a general overview of the social costs of monopolies see, among many others, Scherer and Ross (n 486) chs 2 and 18; Massimo Motta, *Competition Policy: Theory and Practice* (Cambridge Univ Press 2004) ch 2; Richard A Posner, 'The Social Costs of Monopoly and Regulation' (1975) 83 J Pol Econ 807.

488 Phillip E Areeda and Herbert Hovenkamp, *Antitrust Law: An Analysis of Antitrust Principles and Their Application* (3rd edn, Aspen 2011) para 100. For a more thorough debate on the objectives of competition, see Daniel Zimmer (ed), *The Goals of Competition Law* (Edward Elgar 2012).

losses, the first impulse would probably be to surmise that competition policy should predominantly aim at ensuring a permanent multiplicity of rival firms on the market and at limiting their individual market power to the greatest possible extent. Alas, basic economics attest that delineating a sound competition policy might be a little thornier than that. On the one hand, not every competitor might deserve to be protected, particularly not those who are less efficient and deliver less to consumers in terms of price, choice, quality and innovation.⁴⁸⁹ On the other hand, there is no reason to condemn a dominant position as such when it is the result of superior performance in the market.⁴⁹⁰ What is more, not every monopolised market will necessarily reduce social welfare. Firstly, from a productive efficiency dimension, it can enable the attainment of economies of scale.⁴⁹¹ And from a more Schumpeterian perspective, firms holding a dominant position can also be beneficial to social welfare in terms of dynamic efficiency, since they may be in a better position to invest in innovation than firms under fierce competition and with very tight profit margins.

What, then, do competition laws seek, if not to protect competitors and squash dominant firms? Antitrust enforcers in the EU and the US seem to agree today that, instead of specific competitors, competition policy should protect the competitive process.⁴⁹² Or more bluntly, that laws should not *mandate* competition, but rather intervene to condemn certain conducts that may obstruct it.⁴⁹³ To determine how the competitive process should be protected, they seem to be slowly converging under the ban-

489 Communication from the Commission, Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings [2009] OJ C45/7, para 6 (EU Guidance Paper); Case C-209/10 *Post Danmark A/S v Konkurrencerådet* (CJEU, 27 March 2012), para 21.

490 Case 322/81 *Nederlandsche Banden-Industrie-Michelin v Commission* [1983] ECR 3461, para 57; Joined Cases C-395/96 P and C-396/96 P *Compagnie Maritime Belge Transports v Commission* [2000] ECR I-1365, para 37; *United States v Grinnell Corp* 384 US 563, 570-71 (1966); *Verizon Communications Inc v Law Offices of Curtis V Trinko, LLP* 540 US 398, 407 (2004). In this same line of thinking, Justice Learned Hand famously stated that 'The successful competitor, having been urged to compete, must not be turned upon when he wins.' *United States v Aluminium Company of America (Alcoa)*, 148 F 2d 416, 430 (2nd Cir 1945).

491 Scherer and Ross (n 486) 30.

492 Commission Notice, Guidelines on the application of Article 81(3) of the Treaty [2004] OJ C101/97, para 105 (Guidelines on Article 81(3)); EU Guidance Paper (n 489) para 6; FTC, 'To Promote Innovation' (n 486) ch 1, 3.

493 Eleanor M Fox, 'We Protect Competition, You Protect Competitors' (2003) 26 *World Competition* 149, 149.

ner of a more economic approach, aligning themselves behind a Post-Chicago School economic reasoning.⁴⁹⁴ In this sense, the overarching rationale behind the protection of competition should be the enhancement of consumer welfare and the efficient allocation of resources,⁴⁹⁵ and this language is observed more and more in decisions and opinions by antitrust enforcers and courts.

This growing consensus, however, by no means implies that US and EU competition policies entirely coincide; in fact, important differences can still be observed between the two jurisdictions.⁴⁹⁶ Most significantly, conducts that can virtually eliminate competition, even if justified by economic efficiency, are normally judged with distrust by EU competition enforcers, and the goal of protecting effective competition somehow subdues other efficiency goals.⁴⁹⁷ In this sense, European competition policy seems to lean towards a consumer surplus standard, which might not exactly match US' model of total consumer welfare.⁴⁹⁸

On the delineation of EU competition's objectives, the legal traditions of the EU Member States can also have a significant influence. Germany's

494 Josef Drexel, 'Is There a "More Economic Approach" to Intellectual Property and Competition Law?' in Josef Drexel (ed), *Research Handbook on Intellectual Property and Competition Law* (Edward Elgar 2008) 35.

495 FTC, 'To Promote Innovation' (n 486) ch 1, 3; Guidelines on Article 81(3) (n 492) para 33; EU Guidance Paper (n 489) para 19. See also, however, Robert H Lande, 'A Traditional and Textualist Analysis of the Goals of Antitrust: Efficiency, Preventing Theft from Consumers, and Consumer Choice' (2013) 81 *Fordham L Rev* 2349 (arguing that the overriding purpose of the antitrust statutes is actually to prevent firms from stealing from consumers by charging them supra-competitive prices and to warrant consumer choice, and that economic efficiency was only a secondary concern when the Sherman Act was drafted).

496 Fox, 'We Protect Competition' (n 493); Drexel, 'Is There a "More Economic" Approach?' (n 494) 35.

497 See, eg, the language of art 101(3)(b) of the TFEU (essentially banning per se any agreement that could permit firms to eliminate competition in respect of a substantial part of the market); Guidelines on Article 81(3) (n 492) para 105 ('Ultimately the protection of rivalry and the competitive process is given priority over potentially pro-competitive efficiency gains which could result from restrictive agreements.'). See also Joined Cases C-501/06 P, C-513/06 P, C-515/06 P and C-519/06 P *GlaxoSmithKline v Commission* [2009] ECR I-9291, para 63 (insinuating that consumer welfare is not the only goal of EU competition law and highlighting that it also aims to protect 'the structure of the market and, in so doing, competition as such.').

498 Josef Drexel, 'Real Knowledge is to Know the Extent of One's Own Ignorance: On the Consumer Harm Approach in Innovation-Related Competition Cases' (2010) 76 *Antitrust L J* 677, 678. See also Zimmer (n 488).

Kartellrecht, for instance, was in its origins very strongly inspired by the Freiburg school of ordoliberalism, which traditionally regarded economic freedom as one of its primary goals,⁴⁹⁹ and it is widely believed that these principles have impinged upon the delineation of art 102.⁵⁰⁰

Lastly, non-economic principles often also play a role in defining competition policies. In this regard, the social and historical context in which European competition laws were passed and the place they occupy in the EU legal regime also leave an important imprint and instil law enforcers to conduct themselves with an eye on ancillary objectives.⁵⁰¹ In particular, competition law is viewed in the EU as a key mechanism for achieving market integration along the territory of the Union,⁵⁰² eg by severely judging conducts that could partition the internal market, even at the expense of economic efficiency.⁵⁰³

2. Legal Framework in the EU and in the US

In order to achieve their competition policy goals, both EU and US legal systems have in place their own sets of competition rules and guidelines, which in the case of the EU are built on the grounds of arts 101-106 TFEU and the Merger Regulation⁵⁰⁴ and in the US on the basis of the Sherman

499 Pinar Akman, *The Concept of Abuse in EU Competition Law: Law and Economic Approaches* (Hart 2012) 103.

500 David J Gerber, *Law and Competition in Twentieth Century Europe: Protecting Prometheus* (OUP 2003) 261-65. Cf Pinar Akman, 'Searching for the Long-Lost Soul of Article 82 EC' (2009) 29 Oxford J Leg St 267 (2009) (suggesting that the ordoliberal influence might not be as strong as commonly thought).

501 Motta (n 487) 17.

502 *ibid* 23.

503 Giorgio Monti, *EC Competition Law* (Cambridge Univ Press 2007) 39-40. One of the areas where the contrast between free movement of goods and economic efficiency can be most clearly observed is that of vertical restraints. See, for instance, Joined Cases 56 and 58/64 *Établissements Consten SàRL and Grindig-Verkaufs-GmbH v Commission* [1966] ECR 299 (one of the first cases of the CJEU applying art 101 TFEU (then art 85 EEC Treaty), where a vertical territorial restraint based on trademark rights was judged anticompetitive). For a report of the facts of the case, see text at nn 853ff in ch 5.

504 Council Regulation (EC) 139/2004 of 20 January 2004 on the control of concentrations between undertakings [2004] OJ L24/1 (the EU Merger Regulation).

Act,⁵⁰⁵ the Clayton Act⁵⁰⁶ and the FTC Act.⁵⁰⁷ Admittedly, rules and case law in both jurisdictions do not entirely coincide, but considering that they are based on a common analytical framework and that the historical underpinnings upon which they have been developed are to a large extent analogous, this chapter attempts to analyse their essential features side by side, particularly those referring to unilateral conducts, underlining their differences wherever appropriate.⁵⁰⁸

A. Essential Pillars of the Competition Legal Framework

In the realm of antitrust rules, a basic distinction can readily be made between unilateral conducts and contractual relations between two or more parties. Generally speaking, horizontal and vertical contracts—or any sort of concerted practices—are condemned when they have as a purpose or effect to restrict or distort competition,⁵⁰⁹ or are concluded ‘in restraint of trade or commerce’.⁵¹⁰ These may include, by way of example, price-fixing, market allocation, certain exclusivity arrangements, tying, etc. Moreover, when agreements have a more permanent nature and involve a change of control in one of them by way of a merger, purchase of shares, joint venture, etc., concerns grow and different, more stringent rules apply. In those cases, firms are normally required to inform the competition agencies before the change of control takes place, provided that certain conditions are met—most importantly in terms of turnover thresholds.⁵¹¹

But competition policy is not only concerned with the surveillance of bilateral or multilateral agreements, as unilateral conducts by individual firms might be equally capable of restraining competition—especially if

505 15 USC §§ 1-7.

506 15 USC §§ 12-27.

507 15 USC §§ 41-58.

508 In addition to the differences that may exist as to the core antitrust provisions of the EU and the US, significant differences also remain with regard to their remedial structure, ie how those rules are enforced and the sanctions that are associated thereto. Except for some specific questions, those dissimilarities exceed the scope of this work. The significance of these issues on competition policy, however, should not be underestimated. For a comparison of both jurisdictions, see Einer Elhauge and Damien Geradin, *Global Antitrust Law and Economics*, (2nd edn, Foundation Press 2011) 11-70.

509 TFEU, art 101.

510 § 1 Sherman Act.

511 EU Merger Regulation, art 4; § 7A Clayton Act.

the firms hold a high degree of market power. For this reason, antitrust rules also condemn certain forms of unilateral behaviours when at least some degree of market power is involved. In the US, § 2 Sherman Act is the central rule dealing with these conducts and condemns the act of monopolising or attempting to monopolise any part of the trade or commerce. EU law, on its turn, finds its key provision in art 102 TFEU, which bans the abuse of a dominant position. Considering that the scope of this work is concentrated on conducts by patent applicants taking place at the patent office, and that said conducts are not likely to be undertaken by more than one person, rules dealing with unilateral conducts become of utmost importance. Hence, a more thorough analysis of their content and scope seems obligatory before diving into the particularities of patent prosecution and its intersection with competition law.⁵¹²

B. § 2 Sherman Act and Article 102 TFEU. Scope and Objectives

As it was mentioned above, the central provision in the US on the matter of unilateral conducts is § 2 of the Sherman Act, which reads as follows:

Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty of a felony ...

From the language of the statute, three separate offences can be clearly distinguished: monopolisation, attempt to monopolise and conspiracy to monopolise. As the latter logically does not regulate unilateral behaviour, emphasis will be placed on the first two variations.

With respect to the offence of monopolisation, courts have recognised that two elements are to be attested: '(1) the possession of monopoly power in the relevant market and (2) the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident.'⁵¹³ In other

512 Rules referring to anticompetitive agreements, however, should not be entirely disregarded, particularly those norms concerning horizontal agreements, as a behaviour at the patent office could be the result of a conspiracy or concerted practice by more than one undertaking. In those cases, art 101 of the TFEU and § 1 of the Sherman Act might also become applicable, as well as the last part of § 2 of the Sherman Act, as it refers to conspiracy to monopolise.

513 *Grinnell* (n 490) 570-71.

words, the offense requires proof not only of monopoly power—which in itself cannot be condemned⁵¹⁴—but also an exclusionary or anticompetitive conduct.⁵¹⁵

On the other side, in the case of attempts to monopolise, the conditions are slightly different. To demonstrate this offence, courts require proof ‘(1) that the defendant has engaged in predatory or anticompetitive conduct with (2) a specific intent to monopolize and (3) a dangerous probability of achieving monopoly power.’⁵¹⁶ In attempt to monopolise cases, thus, the law softens the monopoly power requirement by replacing it by a dangerous probability that it will happen,⁵¹⁷ ie that such market power will be achieved, but adds as a counterbalance a specific intent element to the anticompetitive conduct. Such intent, courts conventionally acknowledge, goes beyond the mere intent to do the act and requires an aspiration to accomplish the anticompetitive objective.⁵¹⁸

As far as EU competition law is concerned, the fundamental provision dealing with unilateral conducts is art 102 TFEU, which provides the following:

Any abuse by one or more undertakings of a dominant position within the internal market or in a substantial part of it shall be prohibited as incompatible with the internal market in so far as it may affect trade between Member States.

Such abuse may, in particular, consist in:

- (a) directly or indirectly imposing unfair purchase or selling prices or other unfair trading conditions;
- (b) limiting production, markets or technical development to the prejudice of consumers;
- (c) applying dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage;
- (d) making the conclusion of contracts subject to acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of such contracts.

514 *Trinko* (n 490) 407.

515 Phillip E Areeda and Herbert Hovenkamp, *Fundamentals of Antitrust Law* (4th edn, Wolters Kluwer 2011) para 6.03a.

516 *Spectrum Sports Inc v McQuillan* 506 US 447, 456 (1993).

517 *Swift & Co v United States* 196 US 375, 396 (1905).

518 *Aspen Skiing Co v Aspen Highlands Skiing Corp* 472 US 585, 602 (1985).

This provision hence contains one single offence, for which two separate points need to be shown: (1) a dominant position and (2) an abuse of that position. Like the Sherman Act in the US, EU law does not make it illegal to simply possess market power, but requires an additional anticompetitive behaviour. The language of art 102 TFEU, however, is clearly different from § 2 Sherman Act and may actually seem either narrower or broader, depending on the prism with which it is observed.⁵¹⁹ It appears narrower in the sense that its focus is placed not so much on the way in which market power is acquired, but rather on the way such power, once acquired, is employed. On the other hand, the scope of art 102 TFEU may seem broader than its US counterpart with regard to the type of behaviours it condemns, as it prohibits not only ‘exclusionary’ conducts but also ‘exploitative’ abuses that directly harm consumers—most significantly excessive pricing.⁵²⁰ Moreover, the degree of market power required from the relevant undertaking has also been interpreted differently in both jurisdictions, the European standard probably standing someplace between the tough standard of monopolisation cases and the more lenient one of attempts to monopolise.⁵²¹

Despite the ostensible dissimilarities in their wording and criteria, it seems that both art 102 TFEU and § 2 Sherman Act require proof—in one way or another—of two essential elements, ie market power and an anti-competitive conduct. The first element, which pertains to the definition of market power and the relevant market, stands beyond the scope of this work. Yet considering that many of the conducts studied in this work proceed from undertakings who might not—at least not yet—hold substantial market power, the issue can play a decisive role in the competition assessment. Therefore, a general overview of what constitutes market power is offered below, together with some of the most debated issues. Later, the second element (ie, the abusive or anticompetitive conduct) will be introduced and a general framework will be provided. This framework will then serve as a cornerstone for the succeeding chapters, where specific unilateral conducts are studied in detail.

519 Elhauge and Geradin (n 508) 271.

520 Alison Jones and Brenda Sufrin, *EU Competition Law* (5th edn, OUP 2014) 283.

521 Elhauge and Geradin (n 508) 272.

I. The First Element: Market Power

The concept of market power is essential to competition policy, and particularly in cases of unilateral behaviours.⁵²² In the US, monopolisation cases require (with a rather archaic vocabulary) ‘the possession of monopoly power’⁵²³ and attempt to monopolise situations demand a dangerous probability that it will be achieved.⁵²⁴ In the EU, art 102 TFEU requires a dominant position within the internal market or a substantial part of it. Both jurisdictions thus penalise unilateral anticompetitive conducts only when they stem from a firm having (or threatening to have, in the case of attempts to monopolise) some degree of market power.

How is it possible, then, to determine whether a firm holds market power? Although in certain cases econometric techniques, evidence or indicia may allow to directly detect whether a firm holds such market power, the traditional approach is to evaluate it in an indirect way which comprises two separate steps. Firstly, the boundaries of the market in which the firms operate are analysed and the relevant market is defined. Secondly, and only once the relevant market has been defined, the degree of market power that the firm holds on that market is measured, with the aid of a range of methodological tools.⁵²⁵

a. Market Definition

In general terms, the task of defining the relevant market consists in identifying all those products which are interchangeable and can function as al-

522 Motta (n 487) 101. Along this work, the concepts of ‘market power’ and ‘market dominance’ are used interchangeably, though it is important to note that some difference between them exist. Most significantly, whereas the former is a purely economic term, the latter rather seems to be a legal one. Josef Drexler, ‘The Relationship Between the Legal Exclusivity and Economic Market Power: Links and Limits’ in Inge Govaere and Hans Ullrich (eds), *Intellectual Property, Market Power and the Public Interest* (Peter Lang 2008) 15.

523 Grinnell (n 490) 570-71. Monopoly power and market power are to be considered interchangeable concepts. Thomas G Krattenmaker, Robert H Lande and Steven C Salop, ‘Monopoly Power and Market Power in Antitrust Law’ (1987) 76 Geo L J 241.

524 *Swift* (n 517) 396.

525 Case 6/72 *Europemballage Corporation and Continental Can Company Inc v Commission* [1973] ECR 215, para 32; Grinnell (n 490) 570-71.

ternatives to one another in the eyes of the customers.⁵²⁶ The definition of the relevant market in this field, however, might differ from definitions in other contexts, since its value here is purely instrumental to a later verification of whether a firm has market power or not.⁵²⁷ In this regard, the CJEU has stated that

... an examination limited to the objective characteristics only of the relevant products cannot be sufficient: the competitive conditions and the structure of supply and demand on the market must also be taken into consideration.⁵²⁸

In a similar vein, the US Supreme Court has emphasised that, when determining the outer boundaries of a product market, physical or functional differences between products are not sufficient to prove separate markets,⁵²⁹ and that the cross-elasticity of demand and supply constitute essential factors to be considered.⁵³⁰

The delimitation of the market, hence, does not depend so much on whether products or services are physically comparable, but rather on whether they can impose a competitive constraint on each other in an economic sense.⁵³¹

i. Product and Geographical Markets. The Hypothetical Monopolist Test

In order to determine whether a product is subject to competitive constraints, different aspects of the market need to be analysed. In the first place, and since the constraints depend not only on the likeness of the alternative products but also on the geographical proximity of their supply, it is important to distinguish the product from the geographical dimension: both dimensions must be separately studied and later consolidated to establish the relevant market.⁵³²

526 *Continental Can* (n 525), para 32; *United States v EI du Pont de Nemours & Co* 351 US 377, 394 (1956).

527 Commission Notice on the definition of relevant market for the purposes of Community competition law [1997] OJ C372/5, paras 2-3 (EU Notice on Market Definition).

528 *Michelin* (n 490) para 37.

529 *du Pont* (n 526) 394.

530 *Brown Shoe Co v United States* 370 US 294, 325 (1962).

531 Motta (n 487) 102.

532 EU Notice on Market Definition (n 527) paras 1-4 and 9; *Brown Shoe* (n 530) 324.

As it was anticipated above, the relevant product market is comprised by products that have a sufficient degree of interchangeability, and such interchangeability is to be assessed from an economic standpoint so as to determine whether there can be ‘effective competition between the products which form part of it’.⁵³³ In order to make this assessment, the US Department of Justice introduced in 1982 a method commonly known as the SSNIP (‘Small but Significant Non-transitory Increase in Prices’) or Hypothetical Monopolist test,⁵³⁴ which has become today the standard method for most competition agencies worldwide.⁵³⁵

Essentially, the purpose of the SSNIP test is to identify the smallest market within which a hypothetical monopolist would be able to profitably raise its prices in an appreciable and non-transitory way.⁵³⁶ To this end, it is necessary to identify a group of products, assume that there is only one firm selling them (the ‘hypothetical monopolist’) and evaluate whether it would be profitable for that firm to impose a small but significant and non-transitory increase in price, or whether after such rise in price consumers would rather shift to readily available substitutes.⁵³⁷ If the outcome reveals that such price rise would indeed prove profitable, it suggests that this group of products does not face significant competitive constraints, and hence that these products constitute the relevant product market. Conversely, if the result shows that the firm would not find such price increase profitable, additional products will need to be included into the group until an increase in their prices would become lucrative.⁵³⁸

It should be pointed out that, despite the SSNIP test’s proven reliability when assessing merger cases,⁵³⁹ its employment in situations involving unilateral conducts is not without difficulties, particularly when determining the benchmark price to which the hypothetical price increase should

533 Case 85/76 *Hoffmann-La Roche & Co AG v Commission* [1979] ECR 461, para 28. See also *Brown Shoe* (n 530) 325.

534 Gregory J Werden, ‘The 1982 Merger Guidelines and the Ascent of the Hypothetical Monopolist Paradigm’ (2003) 71 *Antitrust L J* 253, 254.

535 Elhauge and Geradin (n 508) 334.

536 DoJ and FTC, Horizontal Merger Guidelines (19 August 2010), para 9 (US Horizontal Merger Guidelines).

537 *ibid* para 4.1.1. US antitrust enforcers refer to a 5 percent increase. *Ibid* para 4.1.2. EU law refers to a range of five to ten percent. EU Notice on Market Definition (n 527) para 17.

538 EU Notice on Market Definition (n 527) para 17.

539 Simon Bishop and Mike Walker, *The Economics of Competition Law: Concepts, Application and Measurement* (3rd edn, Sweet & Maxwell 2010) para 10-002.

be exerted.⁵⁴⁰ This problem is commonly known as the ‘cellophane fallacy’, due to an economic error in which the US Supreme Court incurred in the well-known *du Pont* case⁵⁴¹—an error that has since been widely recognised.⁵⁴² The fallacy resides in the fact that, when assessing the conduct of firms which already possess a high degree of market power, their prices might already be at a monopoly level, ie high enough so as to make any further increase unprofitable. Thus, employing their current prices as yardsticks could lead to inaccurate market definitions, wrongly including products which do not truly constitute substitutes.⁵⁴³

Finally, in addition to the relevant product market, the geographical dimension should also be appraised. In essence, the geographical market refers to the relevant area in which the undertaking concerned is involved and where the conditions of competition are sufficiently homogeneous, taking particularly into account the characteristics of the products and the existence of entry barriers (most importantly transport costs) or consumer preferences.⁵⁴⁴ As a rule, the demarcation of the relevant geographical market is also carried out with the aid of the SSNIP test.⁵⁴⁵ The pertinent question is hence whether the consumers would be ready to switch to products located elsewhere should the hypothetical monopolist impose a small but appreciable price increase.⁵⁴⁶

ii. Demand and Supply Substitution

As it was explained above, the quest of defining the relevant product and geographical market consists of identifying substitutable products, and such substitutability can be approached from two different angles: demand

540 Jones and Sufrin (n 520) 71; Motta (n 487) 105.

541 *du Pont* (n 526).

542 See, eg, William M Landes and Richard A Posner, ‘Market Power in Antitrust Cases’ (1981) 94 Harv L Rev 937, 960-61. Although without expressly referring to this case, the EU Commission has recognised this difficulty in para 19 of the EU Notice on Market Definition (n 527).

543 Motta (n 487) 105. For a list of different solutions that have been suggested to this problem, see Robert O’Donoghue and A Jorge Padilla, *The Law and Economics of Article 102 TFEU* (2nd edn, Hart 2013) 113-16.

544 EU Merger Regulation, art 9(7); US Horizontal Merger Guidelines (n 536) para 4.2.

545 Monti (n 503) 139.

546 EU Notice on Market Definition (n 527) para 17; US Horizontal Merger Guidelines (n 536) paras 4.2.1 and 4.2.2.

substitution and supply substitution.⁵⁴⁷ The former refers to the ability and willingness of customers to shift from one product to another—which they view as a substitute—in case of a change in the market such as the price increase posited within the SSNIP test.⁵⁴⁸ This is naturally the most immediate and effective source of competitive constraints, and hence where competition enforcers normally focus most of their attention.⁵⁴⁹

But antitrust agencies, both in the EU and in the US, have recognised that supply substitution might also be an important factor to consider when defining the relevant market.⁵⁵⁰ This principle refers to the ability of other suppliers, not currently active in the market, to switch their production to the relevant (or a substitute) product without substantial delay and without incurring in significant additional costs in case of a change in prices like the one hypothesised by the SSNIP test.⁵⁵¹ Thus, even if there are currently no alternative products in the market, competitive constraints might still exist from certain firms if switching production is for them easy, rapid and feasible.⁵⁵²

iii. Product and Technology Markets

When envisaging conventional scenarios that normally attract the attention of competition law enforcers, the types of markets that first come to mind are probably those consisting of physical goods or services. Markets where, eg, cars, apples, air tickets or telephone services are traded. Together, these markets are commonly referred to as product markets.⁵⁵³ But when products incorporate technological developments protected by intel-

547 Jones and Sufrin (n 520) 66.

548 EU Notice on Market Definition (n 527) para 13; US Horizontal Merger Guidelines (n 536) para 4.

549 EU Notice on Market Definition (n 527) para 13.

550 *ibid* paras 20-23; US Horizontal Merger Guidelines (n 536) para 4. The US Supreme Court had long ago acknowledged this principle in *United States v Columbia Steel Co* 334 US 495 (1948) and so did the CJEU in *Continental Can* (n 525) para 33.

551 EU Notice on Market Definition (n 527) para 20; US Horizontal Merger Guidelines (n 536) para 5.1.

552 Motta (n 487) 104.

553 Communication from the Commission, Guidelines on the applicability of article 101 of the Treaty on the Functioning of the European Union to horizontal co-operation agreements [2011] OJ C 11/1, para 8 (EU Guidelines on Horizontal Cooperation Agreements).

lectual property rights and those rights are marketed independently from the products to which they relate, a separate technology market might also need to be acknowledged.⁵⁵⁴ Indeed, technology can constitute an upstream market that plays the exact same role as any other input to the goods and services traded in the downstream product market—just like any other physical supply.⁵⁵⁵ For instance, to manufacture and sell a certain gadget, a firm might not only need physical supplies like silicon, copper or plastic, but also licences for those intellectual property rights which protect the technology embedded in it, and each of them could thus constitute a separate market: the downstream product market for the gadget (and its possible substitutes), the upstream product markets for silicon, copper and plastic (and their possible substitutes) and the upstream technology market for the intellectual property licences (and their possible substitutes).

The existence of technology markets as a concept separate from product markets has been recognised both in the EU and in the US.⁵⁵⁶ They are defined, in both jurisdictions, as the intellectual property rights that are licensed and their substitutes, ie technologies which are sufficiently close that customers could use them as substitutes,⁵⁵⁷ or which are sufficiently close to constrain the exercise of market power.⁵⁵⁸

From a theoretical point of view, technology markets do not fundamentally differ from product markets.⁵⁵⁹ As a matter of fact, they are treated like any other upstream supply market and the same methodology— ie,

554 *ibid* para 116.

555 Josef Drexel, ‘Anticompetitive Stumbling Stones on the Way to a Cleaner World: Protecting Competition in Innovation Without a Market’ (2012) 8 J Comp L & Econ 507, 514.

556 Commission Regulation (EC) 316/2014 of 21 March 2014 on the application of Article 101(3) of the Treaty on the Functioning of the European Union to categories of technology transfer agreements [2014] OJ L93/17, art 1 (TTBER); Commission Regulation (EU) 1217/2010 on the application of Article 101(3) of the Treaty on the Functioning of the European Union to certain categories of research and development agreements, [2010] OJ L335/36, art 1; DoJ and FTC, Antitrust Guidelines for the Licensing of Intellectual Property (12 January 2017) para 3.2.2 (US Antitrust Guidelines for the Licensing of IP).

557 EU Guidelines on Horizontal Cooperation Agreements (n 553) para 116; Communication from the Commission, Guidelines on the application of Article 101 of the Treaty on the Functioning of the European Union to technology transfer agreements [2014] OJ C89/3, para 22 (EU Guidelines on Technology Transfer Agreements).

558 US Antitrust Guidelines for the Licensing of IP (n 556) para 3.2.2.

559 Drexel, ‘Anticompetitive Stumbling Stones’ (n 555) 515.

the hypothetical monopolist or SSNIP test—is thus employed for defining their boundaries.⁵⁶⁰ Therefore, in the case of technology markets, the conundrum is to identify the smallest group of technologies over which a hypothetical monopolist would be able to profitably impose a small but significant and non-transitory price increase.

Defining a technology market, however, might encounter some additional hurdles that do not emerge in traditional product markets.⁵⁶¹ Identifying the actual sources of competitive constraints for any given technology, for instance, can be particularly challenging. The main source of competitive constraints is undoubtedly incarnated by substitute technologies offered by competing licensors,⁵⁶² ie by the intellectual property rights owned by third parties to which customers could switch. But constraints to a technology to produce a certain good can also originate from technologies used to produce other goods that compete with the former in the downstream product market.⁵⁶³ And what is more, competitive constraints might even stem from technologies that belong to the public domain—either because they are non-patented, non-patentable or the term already expired. Indeed, in those cases, a price increase by the licensor of the patented technology could lead customers to switch to alternative free technologies. Finally, competitive constraints can also derive from protected technologies which are only used in-house and hence not available for customers to license. In these cases, the competitive constraint of the alternative technology cannot be observed in the upstream market—because said technology is not open for licensing—but rather in the downstream product market, where the products implementing the alternative technologies actually compete. In light of the foregoing, and also bearing in mind the complications of employing the SSNIP test in upstream technology markets where information on royalty levels tends to be very scarce,⁵⁶⁴ competition agencies often turn to look at the downstream product markets when defining the relevant technology market.⁵⁶⁵

560 EU Guidelines on Technology Transfer Agreements (n 557) para 22; US Antitrust Guidelines for the Licensing of IP (n 556) para 3.2.2.

561 See, eg, the discussions on defining the relevant market that preceded the adoption of the TTBER. Jones and Sufrin (n 520) 867-74.

562 EU Guidelines on Horizontal Cooperation Agreements (n 553) para 116; US Antitrust Guidelines for the Licensing of IP (n 556) para 3.2.2.

563 US Antitrust Guidelines for the Licensing of IP (n 556) para 3.2.2, fn 19.

564 Jones and Sufrin (n 520) 882.

565 EU Guidelines on Technology Transfer Agreements (n 557) para 25; US Antitrust Guidelines for the Licensing of IP (n 556) para 3.2.2.

An additional source of competitive constraint for technology markets—but one certainly not free from controversy—is the one stemming from potential competition. The EU Guidelines on Horizontal Cooperation Agreements, for instance, regard potential competition as a relevant factor for defining the relevant technology market, although they mainly seem to refer to supply substitution scenarios, ie firms which do not currently license their technology but might be willing to do so if the licensing prices increase.⁵⁶⁶ But the concept of potential competition can be a bit of a quagmire, as it might also be interpreted to comprise less immediate sources of constraints.⁵⁶⁷ Indeed, in the area of technology markets, potential competition could be interpreted as also embracing the hypothetical incentives that other firms might have for engaging in R&D activities to develop competing technologies. In view of the extended times ordinarily demanded by R&D activities, however, the likelihood of them configuring a competitive constraint seems rather strained and its inclusion in the definition of the relevant technology market may thus be far-fetched.

Finally, a question that might become particularly relevant for the object of this work is whether a technology market needs to be defined at all in those cases where the technology market is not open for licensing. A pharmaceutical firm, for instance, could be the owner of a patent and sell the pharmaceutical product implementing the technology without licensing the patent to any other party. In such cases, a product market certainly exists for the pharmaceutical product concerned and its substitutes, but is it necessary to define a separate technology market for the patented technology? A similar question arose in the context of the debate on refusal to license in the EU, where the CJEU stated that, in order for a refusal to license to violate competition laws, the existence of two separate markets (among other requirements) needed to be verified.⁵⁶⁸ In that case, the CJEU also stated that, for identifying the upstream market, ‘it is sufficient that a potential market or even hypothetical market can be identified’.⁵⁶⁹

566 EU Guidelines on Horizontal Cooperation Agreements (n 553) para 118. Such potential competition, however, is not considered in the TTBER when defining the relevant technology market. TTBER, art 1(n)(i).

567 The Commission Notice on the definition of the relevant market expressly states that potential competition should not be taken into account for defining relevant markets, although it might be taken into account at a later stage. EU Notice on Market Definition (n 527) paras 14 and 24.

568 Case C-418/01 *IMS Health GmbH & Co OHG v NDC Health GmbH & Co KG* [2004] ECR I-5039, para 38.

569 *ibid* para 44.

Such a definition, however, has been accused of artificial and criticised for the dangerous implications it entails,⁵⁷⁰ and it might be possible to argue, in any case, that it was aimed to the specific circumstances of refusal to license cases. Such a definition in the context of this work could indeed lead to extremely narrow market definitions.

iv. Competition without markets. From Innovation Markets to Competition in Innovation

It is fairly clear today that firms do not only compete in terms of price over existing products, but also in terms of innovation by continually striving to generate new and better products.⁵⁷¹ From an economic perspective, this suggests that competition among companies can also be approached from a dynamic dimension and competition policy might hence have an important role to play in steering innovation. The idea is admittedly not new: rivers of ink have flowed seeking to recognise which market structure is more favourable for technological development and two major lines of thought are traditionally identified in this regard. Firstly, from a Schumpeterian perspective, the idea of temporary market power is considered an essential factor for motivating firms to engage in research and development activities, both as a stimulating reward and as a way to recover costs.⁵⁷² In apparent contradiction, Arrow argued that it is the existence of competitive constraints that predominantly encourages firms to innovate.⁵⁷³ But these two fundamental insights are not necessarily irreconcilable, as they might both coalesce under the overarching principle of contestable markets.⁵⁷⁴ In any case, that competition policy occupies a pivotal

570 Damien Geradin, 'Limiting the Scope of Article 82 EC: What can the EU Learn From the US Supreme Court's Judgment in *Trinko* in the Wake of *Microsoft*, *IMS*, and *Deutsche Telekom*?' (2004) 41 CML Rev 1519, 1530.

571 Drexler, 'Anticompetitive Stumbling Stones' (n 555) 513.

572 Joseph Schumpeter, *Capitalism, Socialism and Democracy* (Routledge 1992) 87-92.

573 Kenneth J Arrow, 'Economic Welfare and the Allocation of Resources for Invention' in National Bureau of Economic Research (ed), *The Rate and Direction of Inventive Activity: Economic and Social Factors* (Princeton Univ Press 1962) 620.

574 Carl Shapiro, 'Competition and Innovation: Did Arrow Hit the Bull's Eye?' in Josh Lerner and Scott Stern (eds), *The Rate and Direction of Inventive Activity Revisited* (Univ of Chicago Press 2012) 363-64.

position in spurring innovation can hardly be debated and both EU and US laws have long acknowledged this central role.⁵⁷⁵

When firms engage in innovation activities, they frequently do it in an ‘incremental’ or ‘evolutionary’ way, in the sense that they simply remodel or improve already existing products and processes. But innovation can also be—and occasionally is—‘revolutionary’ or ‘drastic’, as it can lead to the emergence of wholly new products and product markets.⁵⁷⁶ Yet for this form of innovation, where firms compete for future, not-yet-existing technology and product markets, traditional competition laws might at times result ill-suited, seeing as their regulations and tools strongly rely on the notion of already existing markets.⁵⁷⁷

When competition agencies and scholars first took interest on this issue and began to realise that firms’ incentives to innovate can be strongly affected by events taking place long before the emergence of the traditional product markets, the question immediately arose as to how could competition rules better adapt to this scenario. The initial reaction was to try to identify a further upstream market, and Gilbert and Sunshine suggested in this line that a separate ‘innovation market’ should be recognised.⁵⁷⁸ The concept was first proposed for merger analysis, but the DoJ and the FTC quickly incorporated it in 1995 when issuing the Guidelines for the Licensing of Intellectual Property.⁵⁷⁹ According to these guidelines, an innovation market ‘consists of the research and development directed to particular new or improved goods or processes, and the close substitutes for that research and development.’⁵⁸⁰ To define its boundaries, the guidelines

575 EU Guidelines on Technology Transfer Agreements (n 557) para 7; FTC, ‘To Promote Innovation’ (n 486) ch 2, 8-9.

576 See Drexl, ‘Anticompetitive Stumbling Stones’ (n 555) 513-14; Miguel Rato and Nicolas Petit, ‘Abuse of Dominance in Technology-Enabled Markets: Established Standards Reconsidered?’ (2013) 9 ECJ 1, 3.

577 Susan DeSanti and William Cohen, ‘Competition to Innovate: Strategies for Proper Antitrust Assessments’ in Rochelle C Dreyfuss, Diane L Zimmerman and Harry First (eds), *Expanding the Boundaries of Intellectual Property* (OUP 2001) 328; Drexl, ‘Anticompetitive Stumbling Stones’ (n 555) 508.

578 Richard J Gilbert and Steven C Sunshine, ‘Incorporating Dynamic Efficiency Concerns in Merger Analysis: The Use of Innovation Markets’ (1994) 63 Antitrust LJ 569.

579 US Antitrust Guidelines for the Licensing of IP (n 556) para 3.2.3.

580 *ibid.*

even attempt to transplant the SSNIP test.⁵⁸¹ In a similar vein, the concept of innovation markets was also incorporated in the EU in the old Guidelines on Technology Transfer Agreements and in the old Guidelines on Horizontal Cooperation Agreements.⁵⁸²

Despite its laudable purposes, the notion of innovation markets rapidly became the object of intense criticism.⁵⁸³ Among the many critiques yielded by such a proposal, perhaps the most important one lies on the fact that an ‘innovation market’ falls short of all the essential features that define a proper market, since there are absolutely no transactions taking place at that stage.⁵⁸⁴ Speaking of an innovation market thus mistakenly leads to think that a relevant market can actually be defined and, most importantly, that the notion of market power can be transposed to this sphere.⁵⁸⁵ In reality, however, innovation competition seems to work differently from traditional price competition; the economic theory behind the latter might not completely explain the structure of the former. From a Schumpeterian perspective, for instance, reducing the number of firms engaging in R&D does not necessarily have a negative impact on innovation.⁵⁸⁶

Considering these strong concerns, modern US and EU regulations seem to be shifting away from the concept of ‘innovation markets’.⁵⁸⁷ Without diminishing the importance of the dynamic dimension in the

581 *ibid* (‘The close substitutes are research and development efforts, technologies, and goods that significantly constrain the exercise of market power with respect to the relevant research and development, for example by limiting the ability and incentive of a hypothetical monopolist to retard the pace of research and development.’) (Citations omitted).

582 Communication from the Commission: Guidelines on the application of Article 81 of the EC Treaty to technology transfer agreements, O.J. C101/2 (27.04.2004) para 25 (repealed); Commission Notice, Guidelines on the applicability of Article 81 of the Treaty to horizontal cooperation agreements, [2001] OJ C3/2, para 60 (repealed).

583 See, eg, Richard T Rapp, ‘The Misapplication of the Innovation Market Approach to Merger Analysis’ (1995) 64 *Antitrust L J* 19; John Temple Lang, ‘European Community Antitrust Law: Innovation Markets and High Technology Industries’ (1997) 20 *Fordham Int’l L J* 717.

584 Rapp (n 583) 27.

585 Drexler, ‘Anticompetitive Stumbling Stones’ (n 555) 519.

586 Research joint ventures, for example, are a form of concentration that reduces competition between different R&D projects, and would hence be highly suspicious if viewed from a traditional competition standpoint. Rapp (n 583) 28-30 (1995). See also DeSanti and Cohen (n 577) 332.

587 Some, however, consider that the ‘innovation market’ analysis might still serve as a good starting point. See, eg, Benjamin R Kern, ‘Innovation Markets, Future Markets, or Potential Competition: How Should Competition Authorities Ac-

overall competition assessment, they now refer to ‘innovation competition’⁵⁸⁸ or ‘competition in innovation’⁵⁸⁹ and avoid using the term ‘market’. The TTBER Guidelines in the EU, for instance, explain that, in situations in which competition in innovation might be at stake, the Commission will normally confine to analyse existing product and technology markets or recognise innovation as a source of potential competition, and in exceptional cases it will proceed to analyse the effects on competition in innovation separately.⁵⁹⁰ The new approach seems to provide more flexibility to the competition agencies in coping with these novel problems—though sometimes sacrificing legal certainty.⁵⁹¹

Be that as it may, the discussion on innovation competition has mostly taken place within the framework of bilateral conducts, ie when two parties merge or enter into different types of agreements in such a way that mutual constraints to innovate are reduced. Much less debate seems to have arisen in the context of unilateral behaviours,⁵⁹² one of the most important reasons probably being that the relevant rules are deeply associated with the concept of market power and simply cannot be applied against conducts excessively remote from the emergence of a traditional market.⁵⁹³ The state of affairs might be even more problematic under European law, for art 102 TFEU only condemns conducts carried out by firms already holding a dominant position—as opposed to § 2 Sherman Act in the US, which also censures behaviours taking place before that stage.

It is important to note that this riddle might become of utmost importance in circumstances like the ones targeted by this work, for conducts in the patent office sphere might take place long before a palpable market exists and hence only affect future product or technology markets.⁵⁹⁴ Never-

count for Innovation Competition in Merger Reviews?’ (2014) 37 World Competition 173.

588 US Horizontal Merger Guidelines (n 536) para 6.4.

589 EU Guidelines on Horizontal Cooperation Agreements (n 553) paras 119-22; EU Guidelines on Technology Transfer Agreements (n 557) para 26.

590 EU Guidelines on Technology Transfer Agreements (n 557) para 26.

591 Drexl, ‘Anticompetitive Stumbling Stones’ (n 555) 519.

592 An important exception in Europe is given by the investigation that the Commission carried in *Boehringer Ingelheim* (Case COMP/39.246). The conducts under analysis involved defensive patenting strategies in form of applications for blocking patents. The case was finally closed with a settlement agreement. See Commission Press Release IP/11/842, ‘Antitrust: Commission Welcomes Improved Market Entry for Lung Disease Treatments’ (6 July 2011).

593 Drexl, ‘Anticompetitive Stumbling Stones’ (n 555) 529.

594 See text at nn 1454ff in ch 6.

theless, many of these conducts might still not be captured by the concept of competition in innovation, since they may not truly entail constraints against other firms' incentives to innovate, but rather on traditional competition by imitation—though on a market which might not yet exist.⁵⁹⁵

b. Market Power

Once the relevant market is defined, the following step consists on determining whether a firm has market power on it. From an economic perspective, market power is traditionally defined as the ability of a firm or group of firms to profitably raise prices above marginal cost,⁵⁹⁶ or above competitive levels.⁵⁹⁷ Based on these definitions, most firms would actually hold at least some degree of market power, as it is only in hypothetical perfect competition models that prices equal marginal costs.⁵⁹⁸ However, not any kind of market power in an economic sense constitutes relevant market power in the eyes of antitrust laws, but in those cases where such market power can be regarded as 'substantial' and durable.⁵⁹⁹

In any case, and despite a few concerns that might be posed from a theoretical dimension, these definitions are widely regarded as the cornerstone of any market power assessment⁶⁰⁰ and its influence can clearly be perceived in the definitions that EU and US courts have offered for this concept. In the EU, the CJEU has defined a dominant position as

595 Josef Drexl, 'AstraZeneca and the EU Sector Inquiry: When do Patent Filings Violate Competition Law?' in Josef Drexl and Nari Lee (eds), *Pharmaceutical Innovation, Competition and Patent Law: A Trilateral Perspective* (Edward Elgar 2013) 315-20. See also Marcus Glader, *Innovation Markets and Competition Analysis* (Edward Elgar 2006) 297-98 (arguing that, although there are good reasons to caution against the policy of innovation markets, it might provide an effective way of attacking unilateral anticompetitive behaviour affecting competition at an early stage, such as fraudulent procurement of patents).

596 Landes and Posner, 'Market Power in Antitrust Cases' (n 542) 939; Bishop and Walker (n 539) para 3-002.

597 Areeda and Hovenkamp, *Fundamentals* (n 515) para 5.02.

598 Motta (n 487) 115.

599 Jones and Sufrin (n 520) 59. For the complexities of determining what constitutes 'substantial' market power, see Einer Elhauge, 'Defining Better Monopolization Standards' (2003) 56 Stan L Rev 253, 259-60. It has also been argued that there is no reason to exclude short-lasting monopoly power from the scope of competition rules, provided that the anticompetitive harm can be proven. Luis Ortiz Blanco, *Market Power in EU Antitrust Law* (Hart 2012) 47-48.

600 Jones and Sufrin (n 520) 60.

...a position of economic strength enjoyed by an undertaking which enables it to prevent effective competition being maintained on the relevant market by giving it the power to behave to an appreciable extent independently of its competitors, customers and ultimately of its consumers.⁶⁰¹

For its part, the Supreme Court in the US has defined market power (monopoly power) as ‘the power to control prices or exclude competition’.⁶⁰²

Although both definitions seem to include two separate components—one referring to price discretion and the other one to the ability to exclude competition—it is widely understood that both elements represent simply one and the same thing,⁶⁰³ as market power ultimately entails a certain level of discretion in price-setting.⁶⁰⁴

If market power, thus, is defined as the ability of a firm to independently set prices above marginal cost or competitive prices, a simple and direct method for proving market power in both jurisdictions would be to observe price levels in the market and compare them against their marginal costs or the prices that would be perceived as competitive.⁶⁰⁵ In practice, however, that is rarely the case. Firstly, because estimating the marginal cost is in practice a quasi-impossible task.⁶⁰⁶ The same can also be said about competitive prices, since unilateral behaviour cases are precisely based on the premise that the market is no longer competitive.⁶⁰⁷ Furthermore, because even if it was possible to estimate the marginal cost, a firm might have inefficiently high costs (and hence price slightly above marginal cost) and still hold a dominant position,⁶⁰⁸ or enjoy large profit margins in a market of effective competition.⁶⁰⁹ It is for all these reasons

601 Case 27/76 *United Brands Co v Commission* [1978] ECR 207, para 65.

602 *du Pont* (n 526) 391.

603 Damien Geradin and others, ‘The Concept of Dominance in EC Competition Law’ (2005) GCLC Research Paper on the Modernization of Article 82 EC, 3 <<http://ssrn.com/abstract=770144>> accessed 14 February 2018.

604 EU Guidance Paper (n 489) paras 10-11; *du Pont* (n 526) 392.

605 The most cited method in this sense is the renowned ‘Lerner index’, which measures the difference between current prices and marginal cost. Abba P Lerner, ‘The Concept of Monopoly and the Measurement of Monopoly Power’ (1934) 1 *Rev of Econ Stud* 157.

606 Motta (n 487) 116.

607 Elhauge and Geradin (n 508) 279.

608 Motta (n 487) 116; Monti (n 503) 131.

609 *United Brands* (n 601) para 126. See also Landes and Posner, ‘Market Power in Antitrust Cases’ (n 542) 957 (1981).

that courts and competition agencies, both in the EU and the US, turn to alternative, indirect methods for determining market dominance, most commonly by observing market shares—which explains why the previous step of appropriately defining the relevant market is of utmost importance.⁶¹⁰

i. Indirect Methods of Establishing Market Power. Market Shares, Entry Barriers and other Indicia

In actual practice, the most frequent way for determining market power is by inferring it from the market share that the concerned firm holds in the relevant market.⁶¹¹ Although, as a rule, this factor cannot alone uphold a finding of dominance, it is often used as a valuable starting-point and regarded as the most important element in every market power assessment.⁶¹²

Which precise levels of market share, then, do authorities normally regard as an indication of market power? In the case of the EU, the CJEU understands that, save in exceptional circumstances, a market share above 50% constitutes a presumption of market power⁶¹³ and it would hence be the concerned firm's burden to rebut it. On the other end of the spectrum, low levels of market share (below 25%) can establish a presumption of lack of market power.⁶¹⁴ In the US, market power thresholds seem to be somehow higher.⁶¹⁵ Courts normally regard more than 90% as certainly evidencing monopoly power, shares around 60% as doubtful scenarios and shares of 33% as clearly ruling it out.⁶¹⁶

610 Jones and Sufrin (n 520) 61.

611 *Hoffmann-La Roche* (n 533) para 39; *Grinnell* (n 490) 571; *Jefferson Parish Hospital District No 2 v Hyde* 466 US 2, 17 (1984).

612 *Hoffmann-La Roche* (n 533) paras 39-40; Areeda and Hovenkamp, *Fundamentals* (n 515) para 5.03b. It has been argued, however, that in dynamic markets with short innovation cycles, even high market shares might not be indicative of market power. See, eg, Case T-79/12 *Cisco Systems Inc v Commission* (GC, 11 December 2013), para 69.

613 Case C-62/86 *AKZO Chemie BV v Commission* [1991] ECR I-3359, para 60.

614 Case 75/84 *Metro SB-Großmärkte GmbH & Co KG v Commission* [1986] ECR 3021, paras 85-86 (market shares of 10% and below practically preclude the existence of a dominant position); EU Merger Regulation, recital 32 (a market share below 25% is not likely to impede effective competition).

615 Monti (n 503) 143-44.

616 *Alcoa* (n 490) 424; *American Tobacco Co v United States* 328 US 781, 813-14 (1946).

Notwithstanding their somewhat diverse standards, both jurisdictions show that there is a wide range of situations where the market share is neither high nor low enough to constitute a decisive indicium.⁶¹⁷ Thus, anywhere between their upper and lower benchmarks, competition agencies will need to turn to additional factors.

One of the most important factors to be considered in this regard is the existence of entry barriers—a notion deeply intertwined with supply substitutability, potential competition and contestable markets.⁶¹⁸ Generally speaking, the concept of entry barriers refers to the level of difficulty for potential competitors to enter the relevant market and constrain the ability of the allegedly-dominant firm to raise prices.⁶¹⁹ In this sense, if an incumbent has a high market share but entry to the relevant market is extremely easy, it is likely that it has no significant market power.⁶²⁰

Entry barriers can result from a wide variety of factors, and in many cases hinge on the sunk costs involved.⁶²¹ Entry barriers can arise, firstly, from the very nature of the relevant market, eg due to the existence of economies of scale, natural monopolies, essential facilities, network effects, etc.⁶²² They can even arise from the restrictive behaviour of firms already in the market.⁶²³ But most importantly for the purposes of this work, barriers to entry can be the result of governmental measures, including the grant of intellectual property rights.⁶²⁴ Some patents, indeed, can significantly raise barriers to entry,⁶²⁵ although others might play no role at all—the impact ultimately depending on its scope, the existence of alterna-

617 It has also been argued that the relevance of market share as a factor for finding market power should strongly depend on the reliability of the definition of the relevant market, although courts do not seem to pay much attention to this question. Areeda and Hovenkamp, *Fundamentals* (n 515) para 5.03a.

618 Motta (n 487) 120-21.

619 *Southern Pacific Communications Co v AT&T Co* 740 F 2d 980, 1002 (DC Cir 1984).

620 Monti (n 503) 144.

621 Commission Notice, Guidelines on Vertical Restraints [2010] OJ C130/1, para 117 (EU Guidelines on Vertical Restraints).

622 Ortiz Blanco (n 599) 60.

623 *ibid* 61.

624 EU Guidelines on Vertical Restraints (n 621) para 117. Other entry barriers emerging from governmental action include exclusive rights, state aid, import tariffs, special authorisation requirements, etc.

625 See, eg, *AstraZeneca* (Case COMP/A.37.507/F3) Commission Decision 2006/857/CE [2006] OJ L332/24, para 517.

tive technologies, etc.⁶²⁶ The specifics of the relationship between patents and market power are more comprehensively analysed in the following chapter.⁶²⁷

In addition to entry barriers, other supplementary factors which are occasionally resorted to when assessing market power include the relative level of market share,⁶²⁸ the structure of demand,⁶²⁹ and the behaviour of the undertakings.⁶³⁰ Lastly, specific industries might also merit particular factors to be taken into account. In the pharmaceutical sector, for instance, firms are often restrained in terms of price-setting, either directly through price controls or indirectly through reimbursement arrangements.⁶³¹

ii. Is Market Definition Always Necessary? Direct Methods of Establishing Market Power

As previously explained, the rationale behind the traditional method of evaluating market power indirectly, and thereby first defining the relevant market, seems to be that any attempt to measure it in a direct way is doomed to fail—mostly due to the lack of reliable data.⁶³² Yet the task of defining the relevant market might sometimes present comparable hur-

626 Andreas Heinemann, 'The Contestability of IP-Protected Markets' in Josef Drexel (ed), *Research Handbook on Intellectual Property and Competition Law* (Edward Elgar 2008) 62-63; Sven Bostyn and Nicolas Petit, 'Patent=Monopoly: A Legal Fiction' (2013) 15 <<http://ssrn.com/abstract=2373471>> accessed 14 February 2018.

627 See text at nn 734ff in ch 5.

628 *Hoffmann-La Roche* (n 533) para 63 (a significant gap between the firm concerned and the next largest competitors is an additional factor for assessing market dominance); *Transsource Int'l Inc v Trinity Industries Inc* 725 F 2d 274, 284 (5th Cir 1984).

629 Scherer and Ross (n 486) ch 14.

630 Ortiz Blanco (n 599) 57, 62-65. The CJEU has indeed acknowledged that the mere ability to engage in an anticompetitive behaviour can be indicative of market dominance. *Michelin* (n 490) para 60 (confirming the criteria used by the Commission).

631 Communication from the Commission, Pharmaceutical Sector Inquiry: Final Report (8 July 2009) paras 145-46 <<http://ec.europa.eu/competition/sectors/pharmaceuticals/inquiry>> accessed 14 February 2018. Yet it is also argued that, in the pharmaceutical industry, the market power held by firms is often larger due to the very limited elasticity of demand, and that price controls are just a means of curtailing to some extent such excessive market power. Commission Decision in *AstraZeneca* (n 625) paras 553-56.

632 Motta (n 487) 101.

dles, particularly when searching for a benchmark price for applying the SSNIP test in already monopolised markets.⁶³³ Furthermore, market shares might not always constitute a reliable yardstick with which to determine market power.⁶³⁴ It has even been argued that defining a market is impossible without first formulating an estimate of market power.⁶³⁵ Thus, considering that econometric tools and evidence are sometimes available for assessing market power directly, competition agencies might as well, under certain circumstances, eschew the traditional structural analysis and dispense with the task of defining the relevant market.⁶³⁶

In the EU, indeed, recent cases in the Commission seem to evidence a subtle shift away from market definitions and towards directly testing market power.⁶³⁷ Furthermore, the CJEU has admitted that, in certain cases, the behaviour of a firm in the market can itself demonstrate that it is able to impede effective competition and, hence, that it holds a dominant position.⁶³⁸ A similar predisposition can be observed in US agencies and courts.⁶³⁹

II. The Second Element: the Abusive or Anticompetitive Behaviour

As it was mentioned earlier, neither EU nor US law condemn the holding of market power as such, but rather require on top some kind of anticom-

633 See text at nn 540ff.

634 Motta (n 487) 117.

635 Louis Kaplow, 'Why (Ever) Define Markets?' (2010) 124 Harv L Rev 437, 466-67.

636 James A Keyte and Neal R Stoll, 'Markets? We Don't Need no Stinking Markets! The FTC and Market Definition' (2004) 49 Antitrust Bull 593; Monti (n 503) 150-53.

637 Monti (n 503) 152. As a matter of fact, this was a central argument in the report of the Economic Advisory Group on Competition Policy (EAGCP) when advocating for an economic approach to competition law. European Commission, Econ Advisory Group on Competition Policy, Report on an Economic Approach to Article 82 (July 2005) 14 <http://ec.europa.eu/dgs/competition/economist/eagcp_july_21_05.pdf> accessed 14 February 2018. For a more thorough discussion, see Emanuela Arezzo, 'Is There a Role for Market Definition and Dominance in an Effects-Based Approach?' in Mark-Oliver Mackenrodt, Beatriz Conde Gallego and Stefan Enchelmaier (eds), *Abuse of Dominant Position: New Interpretation, New Enforcement Mechanisms?* (Springer 2008) 21.

638 *Michelin* (n 490) paras 60-61 (confirming a decision from the Commission in that sense).

639 *Tops Markets Inc v Quality Markets Inc* 142 F 3d 90, 98 (2nd Cir 1998); *Toys "R" Us v FTC* 221 F 3d 928, 937 (7th Cir 2000). See also Keyte and Stoll (n 636).

petitive behaviour on the part of the concerned firm: in the EU an *abuse* of that market power and in the US the *monopolising* conduct or the attempt to monopolise. Neither art 102 TFEU nor § 2 Sherman Act, however, offer a clear-cut definition of what such behaviours consist of. A list of specific conducts is admittedly offered in art 102 TFEU, but such list is merely illustrative and other behaviours not included therein can thus still fall within its scope.⁶⁴⁰ Courts on both sides of the Atlantic have hence strived to provide some guidance on the issue, although an all-encompassing definition might be a well-nigh impossible task to achieve.⁶⁴¹

On the US side, the Supreme Court long ago expressed that the monopolisation conduct consists of the ‘willful acquisition or maintenance’ of monopoly power ‘as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident.’⁶⁴² The first problem with this definition probably arises with the fact that very often firms wilfully acquire or maintain market power *precisely* through superior products or business acumen.⁶⁴³ These concepts, hence, are not mutually exclusive.⁶⁴⁴ Moreover, the vagueness of terms like ‘superior product’ and ‘business acumen’ might bring unnecessary uncertainty to the legal standard, as it might often be difficult to distinguish, for instance, whether a certain business strategies represents a superior business acumen or an illicit, exclusionary conduct.⁶⁴⁵ In an effort to clarify, modern case law seems to prefer the concept of ‘competition on the merits’ instead. In *Aspen Skiing*, for instance, the Supreme Court defined an anti-competitive behaviour as that which ‘not only (1) tends to impair the opportunities of rivals, but also (2) either does not further competition on the merits or does so in an unnecessarily restrictive way.’⁶⁴⁶

In the case of the EU, the CJEU offered a seminal definition of abusive behaviour in *Hoffmann-La Roche*, where it stated that

640 *Continental Can* (n 525) para 26; Case C-95/04 P *British Airways v Commission* [2007] ECR I-2331, para 57; Case C-52/09 *Konkurrensverket v TeliaSonera Sverige AB* [2011] ECR I-527, para 26. See also O’Donoghue and Padilla (n 543) 257-58 (the list of examples of art 102 TFEU is not exhaustive, although it does set out an exhaustive list of *categories* of abuse).

641 Richard Whish, *Competition Law* (8th edn, OUP 2015) 208.

642 *Grinnell* (n 490) 570-71.

643 Elhauge, ‘Defining Better Monopolization Standards’ (n 599) 261.

644 *ibid.*

645 *ibid* 263.

646 *Aspen Skiing Co* (n 518) 605, fn 32. See also *Trinko* (n 490) 407 (stating that the possession of monopoly power is not unlawful ‘unless it is accompanied by an element of anticompetitive *conduct*’) (emphasis in original).

[t]he concept of abuse is an objective concept relating to the behaviour of an undertaking in a dominant position which is such as to influence the structure of a market where, as a result of the very presence of the undertaking in question, the degree of competition is weakened and which, through recourse to methods different from those which condition normal competition in products or services on the basis of the transactions of commercial operators, has the effect of hindering the maintenance of the degree of competition still existing in the market or the growth of that competition.⁶⁴⁷

This is probably the most frequently cited definition of abuse in EU case law, although the question naturally remains as to what exactly constitutes ‘normal competition’. In more recent cases, the CJEU seems to prefer a slightly different language by requiring dominant firms to ‘compete on the merits’,⁶⁴⁸ in some way resembling the evolution of US Supreme Court’s case law. The Commission, for its part, has also adopted this concept in its Guidance on the application of art 102 TFEU—and ventured to shed some light on it.⁶⁴⁹ In the EU, the concept of abuse is also strongly influenced by the fact that courts have consistently recognised a ‘special responsibility’ upon dominant firms.⁶⁵⁰ In this regard, the CJEU stated in *Michelin* that a firm holding a dominant position has ‘a special responsibility not to allow its conduct to impair genuine undistorted competition on the common market.’⁶⁵¹ In later cases, the CJEU even suggested that said responsibility might increase along with the degree of market power.⁶⁵²

In any case, both jurisdictions seem to be slowly converging in delineating the scope of the reprehensible behaviour along the boundaries of the concept of ‘competition on the merits’. The exact confines of this standard, however, are still strongly debated and there are in fact numerous exam-

647 *Hoffmann-La Roche* (n 533) para 91.

648 *AKZO* (n 613) para 70; *Post Danmark* (n 489) para 25.

649 EU Guidance Paper (n 489).

650 *Jones and Sufrin* (n 520) 374.

651 *Michelin* (n 490) para 57.

652 Case C-333/94 P *Tetra Pak International SA v Commission* [1996] ECR I-5951, para 24 (*Tetra Pak II*); *Compagnie Maritime Belge* (n 490) para 114. The idea of ‘super dominance’ and increased responsibilities has been often criticised for lack of economic basis and for adding significant legal uncertainty. O’Donoghue and Padilla (n 543) 206-08. See also Ekaterina Rousseva and Mel Marquis, ‘Hell Freezes Over: A Climate Change for Assessing Exclusionary Conduct under Article 102 TFEU’ (2013) 4 J Eur Comp L & Prac 32, 43 (suggesting that *Post Danmark* may indicate an attempt to read this concept from a more economic perspective).

ples of clashing interpretations, where conducts labelled as ‘competition on the merits’ in the United States were judged anticompetitive under EU law.⁶⁵³ At the end of the day, the definition of what constitutes an anti-competitive behaviour seems to be strongly swayed by the ultimate interest that antitrust is believed to protect, although important differences also linger when observing the particulars of art 102 TFEU and § 2 Sherman Act and the conditions that each of these provisions demand. The following paragraphs analyse those that are most relevant for the purposes of this work.

a. Types of Anticompetitive Conducts: Exclusionary and Exploitative Behaviours

Under EU law, two types of abuse are commonly distinguished: exploitative and exclusionary.⁶⁵⁴ The CJEU has recognised in *Continental Can* that both of them are captured within the scope of art 102 TFEU.⁶⁵⁵ Simply put, exploitative abuses are those where firms take advantage of their market power in order to exploit their customers,⁶⁵⁶ the classic example being the imposing of high prices. Exclusionary abuses, on the other hand, harm customers in a more indirect—but also more severe—way, by affecting the competitive process and hence preventing the development of competition.⁶⁵⁷

653 See, eg, Monti’s case study on the British Airways/Virgin case on rebate schemes. Monti (n 503) 162-69.

654 Additional categories of abuses are occasionally mentioned, such as ‘reprisal’ abuses or ‘single market’ abuses. See, eg, John Temple Lang, ‘Reprisals and Overreaction by Dominant Companies as an Anti-competitive Abuse under Article 82(b)’ (2008) 29 Eur Comp L Rev 13. See also Jones and Sufrin (n 520) 371-72 (also highlighting that the line between exploitative and exclusionary abuses becomes blurred when approaching art 102 TFEU from a consumer welfare approach); Akman, *The Concept of Abuse* (n 499) ch 8 (suggesting that abusive behaviours under art 102 TFEU should be behaviours that are *both* exclusionary and exploitative).

655 *Continental Can* (n 525) para 26 (‘...the provision is not only aimed at practices which may cause damage to consumers directly, but also at those which are detrimental to them through their impact on an effective competition structure...’).

656 Jones and Sufrin (n 520) 367.

657 Whish (n 641) 212.

Exploitative abuses constitute the most obvious objection to a dominant firm, as they incarnate the core of competition policy's ultimate nemeses: monopolists reducing output and increasing prices.⁶⁵⁸ There are, however, a number of compelling reasons that call for extreme caution in condemning this category of abuses and suggest that focusing on exclusionary conducts might be a more sensible policy. Firstly, exclusionary abuses are often much more harmful to consumers in the long-run. Indeed, if a dominant firm charges high prices in a market where the entry barriers are low, this conduct might in itself incite competition over time.⁶⁵⁹ Furthermore, determining whether a price is excessive or not is a nearly impossible task, particularly taking into account that almost every firm prices, to a larger or smaller extent, above its marginal costs.⁶⁶⁰ And even if a firm were found to charge too high a price, penalising this behaviours as a rule would virtually convert competition agencies into regulators⁶⁶¹ and could negatively affect investments and innovation.⁶⁶² In this regard, there does not seem to be any sound reason to penalise high prices as such, as the opportunity to charge high prices is what actually incentivises firms to engage in competition in the first place.⁶⁶³

It is precisely for these reasons that US antitrust law only focuses on exclusionary conducts and why exploitative behaviours are considered to be beyond the scope of § 2 Sherman Act.⁶⁶⁴ The Supreme Court has indeed emphasised in this regard that the charging of high prices 'is not only not unlawful; it is an important element of the free-market system.'⁶⁶⁵ The European stance, on its turn, does not seem to be as bold. For starters, because art 102(a) TFEU expressly mentions 'imposing unfair purchase or selling prices' as the first example of abusive behaviour. Admittedly, the

658 *ibid.*

659 *ibid*; Areeda and Hovenkamp, *Antitrust Law* (n 488) para 720b. See also *Trinko* (n 490) 407 ('The opportunity to charge monopoly prices –at least for a short period– is what attracts “business acumen” in the first place.').

660 Monti (n 503) 218.

661 Valentine Korah, *An Introductory Guide to EC Competition Law and Practice* (9th edn, Hart 2007) 135; *Trinko* (n 490) 414.

662 Lars-Hendrik Röller, 'Exploitative Abuses' in Claus-Dieter Ehlermann and Mel Marquis (eds), *European Competition Law Annual 2007: A Reformed Approach to Article 82 EC* (Hart 2008) 527.

663 Motta (n 487) 69-70.

664 Eleanor M Fox, 'Monopolization and Dominance in the United States and the European Community: Efficiency Opportunity and Fairness' (1986) 61 *Notre Dame L Rev* 981, 993.

665 *Trinko* (n 490) 407.

Commission and the courts have been rather cautious when dealing with exploitative abuses⁶⁶⁶ and mostly concentrated their efforts against exclusionary abuses.⁶⁶⁷ Under certain scenarios, however, the Commission has recognised the importance of attacking exploitative abuses and, for instance, has been relatively active in regulating prices in newly liberalised sectors.⁶⁶⁸ And more importantly for the purpose of this work, it has been argued that the figure of exploitative abuses might also prove useful as an ancillary resource, eg for closing ‘enforcement gaps’ or for rectifying ‘mistakes’ by competition agencies.⁶⁶⁹ A clear example of such use is explained in the following paragraph.

b. The Importance of Timing: Dominance as a Prerequisite under EU Law. Differences with US’ Monopolisation and Attempt to Monopolise

The language of art 102 TFEU is clear in condemning the abuse of a dominant position. As it was anticipated above, this implies that the provision only captures abuses from firms which already hold a dominant position in the market, but not where the abusive behaviour leads to the *acquisition* of that dominant position.⁶⁷⁰ In contrast, § 2 Sherman Act does capture conducts taking place before the acquisition of market power: on the one hand, the monopolisation offence comprises both the acquisition and maintenance of monopoly power; on the other hand, the concept of attempt to monopolise applies even if the behaviour does not result in the acquisition of such market power, provided that a dangerous probability of success can be verified.⁶⁷¹

EU competition law’s constrained focus on conducts taking place after the acquisition of market power and its failure to capture behaviours that lead to the attaining of that market power leave an important enforcement

666 Indeed, courts have very rarely attacked exploitative abuses under EU case law. Massimo Motta and Alexandre de Streel, ‘Exploitative and Exclusionary Excessive Prices in EU Law’ in Claus-Dieter Ehlermann and Isabela Atanasiu (eds), *European Competition Law Annual 2003: What is an Abuse of a Dominant Position?* (Hart 2006) 91.

667 Monti (n 503) 218; EU Guidance Paper (n 489) paras 5-7.

668 Monti (n 503) 220.

669 Röller (n 662) 528-29.

670 See, among others, Franklin M Fisher, ‘Monopolization versus Abuse of Dominant Position: An Economist’s View’ in Barry Hawk (ed), *International Antitrust Law & Policy: Fordham Corporate Law 2003* (Juris Publishing 2004) 159.

671 *ibid.*

gap⁶⁷² and the consequences have become manifest in scenarios such as those involving patent ambush,⁶⁷³ where an abusive conduct by a non-dominant firm can lead in a very short period of time to a position of significant market power. As a means to close this gap, it has been suggested that the concept of exploitative abuse could be employed.⁶⁷⁴ In this sense, surveying the high prices charged by a monopolist could function as a gateway for indirectly tackling the exclusionary conduct that took place before the acquisition of market dominance. As a matter of fact, in the *Rambus* decision, which concerned a firm concealing information on its patents from the standard setting organisation and subsequently demanding high royalties, the Commission seemed to embrace such a theory.⁶⁷⁵

c. Causation: The Relationship between Market Power, Anticompetitive Conduct and Anticompetitive Effects

Associated with the above portrayed problem is the question as to the causal link that competition law requires between the anticompetitive conduct and the market power held by the concerned firm. Indeed, since art 102 TFEU speaks about the abuse *of a* dominant position, the syntax implies that there should be some kind of link between these two concepts.

672 Röller (n 662) 529; Elhauge, 'Defining Better Monopolization Standards' (n 599) 332.

673 Josef Drexel, 'Deceptive Conduct in the Patent World: A Case for US Antitrust and EU Competition Law?' in Wolrad Prinz zu Waldeck und Pyrmont and others (eds), *Patents and Technological Progress in a Globalized World: Liber Amicorum for Joseph Straus* (Springer 2009) 156; Inge Govaere, 'In Pursuit of an Innovation Policy Rationale: Stakes and Limits under Article 82 TEC' (2008) 31 *World Competition* 541, 550-51; Peter Picht, *Strategisches Verhalten bei der Nutzung von Patenten in Standardisierungsverfahren aus der Sicht des Europäischen Kartellrechts* (Springer 2013) 452.

674 Röller (n 662) 529.

675 *Rambus* (Case COMP/38.636) Commission Decision 2010/C 30/09 [2010] OJ C30/17, paras 27-39. See also Drexel, 'Anticompetitive Stumbling Stones' (n 555) 530-36 (generally endorsing the Commission's approach); Ian S Forrester, 'The Interplay Between Standardization, IPR and Competition Law' in Giandonato Caggiano, Gabriella Muscolo and Marina Tavassi (eds), *Competition Law and Intellectual Property: A European Perspective* (Wolters Kluwer 2012) 129 (highlighting that the indirect theory used by the Commission was necessary due to the limitations of art 102 TFEU). For a more detailed analysis of the case, see text at nn 1478-1486 in ch 6.

Vogelengang⁶⁷⁶ has distinguished, in this regard, three modalities in which abuse and dominance can be possibly connected:

- (a) cases where the abuse itself can only be performed by a dominant firm (eg, predatory pricing);
- (b) cases where the act can be performed by anyone, but where the anticompetitive effects would not occur if the firm were not dominant. Within this category, yet another distinction can be made between cases where the dominant position was the *condition sine qua non* of the anticompetitive effect (eg, refusal to deal) and cases where the anticompetitive effect is strengthened due to the dominant position of the firm (eg, rebate schemes); and
- (c) cases where the act and the dominant position have no connection whatsoever.

In *Continental Can* and in *Hoffmann-La Roche*, the CJEU rejected a narrow interpretation whereby art 102 TFEU should only capture the first category of cases.⁶⁷⁷ This interpretation necessarily implies that, as a minimum, the first set of cases from the second category should be comprised as well.⁶⁷⁸ Yet the CJEU also stated in *Tetra Pak II* that art 102 TFEU ‘presupposes a link between the dominant position and the alleged abusive conduct’,⁶⁷⁹ which seems to acknowledge that some kind of link is still necessary⁶⁸⁰ and would hence leave the third category of cases outside the scope of the provision. The question, hence, is whether the required causation under art 102 TFEU embraces both cases in the second category or only the first one. The recent decision of the CJEU in *AstraZeneca* seems to incline towards the former alternative,⁶⁸¹ since anticompetitive effects could have existed

676 Pierre Vogelengang, ‘Abuse of a Dominant Position in Article 86: the Problem of Causality and Some Applications’ (1976) 13 CML Rev 61, 66-67.

677 *Continental Can* (n 525) para 27; *Hoffmann-La Roche* (n 533) para 91 (‘...the interpretation suggested by the applicant that an abuse implies that the use of the economic power bestowed by a dominant position is the means whereby the abuse has been brought about cannot be accepted.’).

678 Vogelengang (n 676) 70.

679 *Tetra Pak II* (n 652) para 27.

680 Thomas Eilmansberger, ‘How to Distinguish Good From Bad Competition Under Article 82 EC: In Search of Clearer and More Coherent Standards for Anticompetitive Abuses’ (2005) 42 CML Rev 129, 142; O’Donoghue and Padilla (n 543) 263. Cf Whish (n 641) 215 (arguing that in *Tetra Pak II* the Court was not really concerned with the problem of causation).

681 Case C-457/10 P *AstraZeneca v Commission* (CJEU, 6 December 2012, ECLI:EU:C:2012:770).

even if the conduct had been performed by non-dominant firms, yet the impact on competition was much larger because of the dominant position.⁶⁸² More specifically, the anticompetitive effect derived from the temporal extension of the dominant position by unduly acquiring SPC protection.

On the US side, the Supreme Court has suggested in *Kodak* that the monopolisation offence consists of the ‘use of monopoly power to foreclose competition, to gain a competitive advantage, or to destroy a competitor’,⁶⁸³ which at first glance seems to imply that a certain causal link should also be proven under US antitrust law. Such a conclusion, however, does not stand up to scrutiny, as it lays in stark contrast to the traditional definition of monopolisation.⁶⁸⁴ Indeed, because § 2 Sherman Act also captures behaviours leading to the initial acquisition of market power, debating whether causation in the European sense is required under US antitrust law seems unnecessary.

In any case, it is important to distinguish the above depicted question from the causation that competition laws require between the anticompetitive conduct and the anticompetitive effects. In this sense, US antitrust law does require a causal connection between those two elements, since § 2 Sherman Act requires the exclusionary conduct to be the cause of the acquisition (or maintenance) of market power.⁶⁸⁵ The required causal link in monopolization offences would thus be ‘conduct→market power’. Although it has been argued that this strongly differs from EU law,⁶⁸⁶ the difference in practice does not seem to be significant.⁶⁸⁷ While EU competition law undoubtedly postulates the dominant position as a prerequisite, it also requires a causal link between the conduct and the anticompetitive effects—especially with the increasing tendency towards an effect-based approach.⁶⁸⁸ The causal sequence under art 102 TFEU would thus be ‘dominance→abuse→anticompetitive effect’.⁶⁸⁹

682 See Drexl, ‘Deceptive Conduct in the Patent World’ (n 673) 151-52.

683 *Eastman Kodak Co v Image Technical Services Inc* 504 US 451, 482-83 (1992).

684 Elhauge, ‘Defining Better Monopolization Standards’ (n 599) 333 (also emphasising that the Supreme Court’s statement in *Kodak* was dicta).

685 *Grinnell* (n 490) 570-71.

686 Elhauge, ‘Defining Better Monopolization Standards’ (n 599) 331-33.

687 Thorsten Kåseberg, *Intellectual Property, Antitrust and Cumulative Innovation in the EU and the US* (Hart 2012) 75.

688 Whish (n 641) 211.

689 Kåseberg (n 687) 74.

d. The Role of Intent

It is commonly understood that, as a principle, unilateral conducts are to be assessed exclusively under objective parameters and do not depend on the concerned firm's subjective intent. In the EU, the CJEU has famously stated in *Hoffmann-La Roche* that '[t]he concept of abuse is an objective concept'.⁶⁹⁰ In the US, intent did seem to play a significant role in the early cases,⁶⁹¹ but that role has been relegated with the wake of the Chicago and Post-Chicago school of antitrust analysis.⁶⁹² In *Aspen Skiing*,⁶⁹³ for instance, the Supreme Court disparaged the weight of the intent factor and cited Judge Hand's renowned statement: 'no monopolist monopolizes unconscious of what he is doing.'⁶⁹⁴ There are sound reasons for courts and competition agencies not looking at subjective elements as a rule, including the complications involved in proving it⁶⁹⁵ and the fact that, in many cases, it is nearly impossible to distinguish an illegitimate intent to exclude rivals from a legitimate intent to maximise profits.⁶⁹⁶

In exceptional circumstances, however, courts and competition agencies have considered intent as a relevant factor in their assessments, mostly as a tool for understanding ambiguous behaviours or foreseeing their likely effects.⁶⁹⁷ In predatory pricing cases, for instance, prices above average variable costs but below average total costs can be regarded abusive in the EU 'if they are determined as part of a plan for eliminating a competitor.'⁶⁹⁸ In the US, predatory pricing cases require 'that the competitor had a reason-

690 *Hoffmann-La Roche* (n 533) para 91.

691 Herbert Hovenkamp, 'The Monopolization Offence' (2000) 61 Ohio St L J 1035, 1037-38. See also Denis Waelbroeck, 'Tough Competition: What is the Relevance of Intention in Article 82 cases?' (2006) 5(8) Comp Law Insight 5-7.

692 Marina Lao, 'Reclaiming a Role for Intent Evidence in Monopolization Analysis' (2004) 54 Am Univ L Rev 151, 164.

693 *Aspen Skiing Co* (n 518) 602-03.

694 *Alcoa* (n 490) 432.

695 Richard A Posner, *Antitrust Law* (2nd edn, Univ of Chicago Press 2001) 214-15.

696 Herbert Hovenkamp, 'The Monopolization Offence' (n 691) 1039-40. Cf Lao, 'Reclaiming a Role for Intent Evidence' (n 692) (generally vindicating intent evidence for monopolisation cases); Eilmansberger (n 680) 170-77 (arguing that, in market structure abuses, intent should be an essential factor).

697 Areeda and Hovenkamp, *Antitrust Law* (n 488) para 805c; O'Donoghue and Padilla (n 543) 280-82; EU Guidance Paper (n 489) para 20. See also Lao, 'Reclaiming a Role for Intent Evidence' (n 692) 181 (alleging that intent can be a powerful tool for understanding anticompetitive effects in innovation competition).

698 *AKZO* (n 613) para 72.

able prospect ... of recouping its investment in below-cost prices',⁶⁹⁹ which in practice might involve diving into subjective considerations. There are, moreover, situations where the subjective element not only constitutes a relevant factor but steps forward as an essential requirement in competition assessment. In sham or vexatious litigation cases, for instance, both EU and US courts have found the intent of the concerned firm an indispensable requisite for any finding of anticompetitive behaviour.⁷⁰⁰ Most notably, chapter 6 of the present work shows that intent may also constitute an extremely relevant factor in competition cases involving proceedings at the patent office.

C. The Particular Case of § 5 FTC Act

As a final remark, it should also be noted that, under US law, an additional provision governing unilateral behaviour exists in the FTC Act, namely § 5.⁷⁰¹ This norm essentially prohibits, with a very general and imprecise language, 'unfair methods of competition', and its meaning remains largely unsettled. Courts have interpreted that it somehow supplements other antitrust rules,⁷⁰² and can hence proscribe behaviours that lay beyond the scope of the Sherman Act.⁷⁰³ Indeed, when enforcing this provision, the FTC has not only pursued conducts that violate the Sherman Act, but also so-called 'standalone' § 5 violations.⁷⁰⁴ In cases of patent ambush, for example, the FTC initially attempted to address the problem as a 'standalone' § 5 violation in the *Dell Computer Corporation* case.⁷⁰⁵ Later on, however, in

699 *Brooke Group Ltd v Brown & Williamson Tobacco Corp* 509 US 209, 224 (1993).

700 Case T-111/96 *ITT Promedia NV v Commission* [1998] ECR II 2937 (confirming the decision of the Commission without questioning the test suggested in its decision); *Professional Real Estate Investors Inc v Columbia Pictures Industries Inc* 508 US 49, 60-61 (1993). See text at nn 1161ff in ch 6.

701 § 5 FTC Act ('Unfair methods of competition in or affecting commerce ... are hereby declared unlawful').

702 Areeda and Hovenkamp, *Fundamentals* (n 515) para 8.04f(1).

703 William E Kovacic and Marc Winerman, 'Competition Policy and the Application of Section 5 of the Federal Trade Commission Act' (2010) 76 *Antitrust L J* 929, 929.

704 Maureen K Ohlhausen, 'Section 5 of the FTC Act: Principles of Navigation' (2013) 1 *J Antitrust Enforcement* 1, 2.

705 *Dell Computer Corporation* (FTC Docket C-3658) 121 FTC 616 (1996).

the *Rambus* case,⁷⁰⁶ the FTC seemingly changed its interpretation and assumed an integrative approach by applying § 5 FTC Act and § 2 Sherman Act.⁷⁰⁷

The vague wording of this rule, combined with the very scarce case law, remains the source of distressing legal uncertainty and has prompted many legal scholars, including Commissioners of the FTC, to advocate for clearer limiting principles.⁷⁰⁸ In this sense, a policy statement has been put forward by a Commissioner of the FTC proposing that an unfair method of competition in the terms of § 5 should only be found when a conduct (1) harms or is likely to harm competition significantly and (2) lacks cognizable efficiencies.⁷⁰⁹ Such an interpretation seems to reflect a more economic approach to the provision. In any case, it should be borne in mind that the role that this rule has played in the development of competition policy in the US is rather small when compared to § 2 Sherman Act.⁷¹⁰

Finally, it should be borne in mind that similar unfair competition tools could also be envisaged in EU under the national laws of the Member States. In Germany, e.g., national unfair competition rules provide that deliberately hindering competitors shall be considered as unfair commercial practice and, as such, illegal.⁷¹¹ Hence, in cases where art 102 TFEU becomes inapplicable due to lack of market dominance, the application of unfair competition provisions should not be ruled out.

706 *Rambus* (FTC Docket 9302) Opinion of the Commission of 2 August 2006 <www.ftc.gov/os/adjpro/d9302/060802commissionopinion.pdf> accessed 14 February 2018.

707 *Drexel* (n 673) 144.

708 Kovacic and Winerman (n 703) 944; Ohlhausen (n 704) 3; Joshua D Wright, 'Proposed Policy Statement Regarding Unfair Methods of Competition Under Section 5 of the FTC Act' (19 June 2013) 2 <www.ftc.gov/sites/default/files/documents/public_statements/statement-commissioner-joshua-d.wright/130619umcpolicystatement.pdf> accessed 14 February 2018.

709 Wright (n 708) 2-3. It might be interesting to point out that, among the examples of conducts that would fall within this novel scope, the proposal mentions the 'use by a firm of unfair methods of competition to acquire market power that does not yet rise to the level of monopoly power necessary for a violation of the Sherman Act.' *Ibid* 8.

710 Kovacic and Winerman (n 703) 934.

711 § 4 No. 4 UWG (*Gesetz gegen den unlauteren Wettbewerb* or German Act Against Unfair Competition).

Chapter V: Applying Competition Rules to Patent Proceedings: The Experience in the US and in the EU

1. *The Interaction between Intellectual Property Rights and Competition Law*

Having described the general functioning and essential features of the competition rules under EU and US law, a succinct analysis of the interplay between the latter and the intellectual property system represents an unavoidable step before immersing in the specifics of its role within the framework of patent procedures. The following paragraphs, hence, briefly explain the complex interaction between these two bodies of law, with a logical focus on patents over other intellectual property rights in view of the goals of this work.

A. *Tension and Complementarity*

In the eyes of the layperson, the goals of competition law and intellectual property law are likely to appear, at first glance, not only as conflicting but just plain contradictory. Indeed, while the former is designed to thwart monopolies, the latter seems to foster the exact opposite by creating monopoly rights over specific products or processes. However, a closer look reveals that neither of these statements is entirely accurate and that the collision between intellectual property and antitrust objectives is more ostensible than real.⁷¹² On the one hand, intellectual property rights are not real monopolies and do not necessarily confer the kind of market power that is the concern of competition law.⁷¹³ On the other hand, competi-

712 Herbert Hovenkamp and others, *IP and Antitrust: An Analysis of Antitrust Principles Applied to Intellectual Property Law* (2nd edn Supp 2013, Wolters Kluwer) para 1.3; Luc Peeperkorn, 'IP Licences and Competition Rules: Striking the Right Balance' (2003) 26 *World Competition* 527, 527-28. For a seminal study on the complementarity between competition law and patent law see Ward S Bowman, *Patent and Antitrust Law: A Legal and Economic Appraisal* (Univ of Chicago Press 1973).

713 See text at nn 734ff.

tion law does not really seek to condemn monopolies as such, but rather specific undesired conducts connected to its attainment or to its improper exploitation.⁷¹⁴

In fact, when studied in a broader context, both intellectual property rights and competition seem to have not opposing but rather reciprocal goals, as they both seek to promote innovation and enhance consumer welfare.⁷¹⁵ Although not completely evident in earlier times, this intelligence has since widely sprouted among most courts and competition agencies. The Commission in the EU, for instance, proclaims in its current Guidelines on Technology Transfer Agreements that:

The fact that intellectual property laws grant exclusive rights of exploitation does not imply ... that there is an inherent conflict between intellectual property rights and the Union competition rules. Indeed, both areas of law share the same basic objective of promoting consumer welfare and an efficient allocation of resources. Innovation constitutes an essential and dynamic component of an open and competitive market economy. Intellectual property rights promote dynamic competition by encouraging undertakings to invest in developing new or improved products and processes. So does competition by putting pressure on undertakings to innovate. Therefore, both intellectual property rights and competition are necessary to promote innovation and ensure a competitive exploitation thereof.⁷¹⁶

In a similar vein, US courts and agencies have acknowledged that ‘the patent and antitrust laws are complementary’,⁷¹⁷ that they both promote

714 See text at nn 640ff in ch 4.

715 Josef Drexler, ‘Intellectual Property and Antitrust Law - IMS Health and Trinko: Antitrust Placebo for Consumers Instead of Sound Economics in Refusal-to-Deal Cases’ (2004) 35 IIC 788, 793; Bowman (n 712) 1 (antitrust and patent laws both pursue ‘to maximize wealth by producing what consumers want at the lowest cost.’); Christopher R Leslie, ‘Antitrust and Patent Law as Component Parts of Innovation Policy’ (2009) 34 Iowa J Corp L 1259 (arguing that antitrust and patent law should both be conceived as interdependent parts of a general innovation policy).

716 Communication from the Commission, Guidelines on the application of Article 101 of the Treaty on the Functioning of the European Union to technology transfer agreements [2014] OJ C89/3, para 7 (EU Guidelines on Technology Transfer Agreements).

717 *Loctite Corp v Ultraseal Ltd* 781 F 2d 861, 877 (Fed Cir 1985).

consumer welfare over time⁷¹⁸ and that they ‘both are aimed at encouraging innovation, industry and competition.’⁷¹⁹ The Supreme Court itself has also favoured this interpretation in its recent *Actavis* judgment.⁷²⁰

I. Social and Economic Functions of the Patent System

The understanding that patents and competition law share an ultimate common ambition is deeply intertwined with the patent system’s *raison d’être*, and most significantly with its recognition as an essential tool for correcting market failure and incentivising innovation. In this regard, the development of new inventions commonly demands considerable efforts in terms of time and resources,⁷²¹ which translates into large fixed costs for the concerned inventors.⁷²² The fruit of these efforts, however, mainly consists of non-rivalrous goods in the form of intangible knowledge, which—as opposed to traditional physical property—lacks an inherent ‘excludability’ attribute.⁷²³ For this precise reason, once it is achieved, an invention would be readily accessible for competitors, who would spare those fixed costs and hence run with a competitive advantage.⁷²⁴ Against this backdrop, no businessperson would invest in innovation absent some

718 FTC, ‘To Promote Innovation: The Proper Balance of Competition and Patent Law and Policy’ (2003) ch 1, 7.

719 *Atari Games Corp v Nintendo of America Inc* 897 F 2d 1572, 1576 (Fed Cir 1990).

720 *FTC v Actavis Inc* 133 S Ct 2223 (2013). In this case, which essentially dealt with ‘reverse payment’ or ‘pay-for-delay’ settlement agreements, the majority rejected a sharp separation between the patent and the competition spheres. *Ibid* 2231. The dissent, in its turn, seemed to subscribe the more conventional view, according to which patent law and competition law remain two separate and essentially independent bodies of law, where the former ‘carves out an exception to the applicability of antitrust laws.’ *Ibid* 2238.

721 It should be borne in mind that the costs implicated might vary significantly between industries. It is widely recognised, for instance, that innovation within the life sciences industries often calls for particularly large investments. See, eg, Matthew Herper, ‘The Cost of Creating a New Drug Now \$5 Billion, Pushing Big Pharma to Change’ *Forbes* (New York, 11 August 2013) <www.forbes.com/sites/matthewherper/2013/08/11/how-the-staggering-cost-of-inventing-new-drugs-is-shaping-the-future-of-medicine> accessed 14 February 2018 (estimating that the average total R&D cost per new drug is close to US\$ 5 billion).

722 William M Landes and Richard A Posner, *The Economic Structure of Intellectual Property Law* (Harvard Univ Press 2003) 294.

723 Hovenkamp and others, *IP and Antitrust* (n 712) para 1.1.

724 Landes and Posner, *The Economic Structure of IP Law* (n 722) 294.

sort of incentive, hence leading to a suboptimal level of investment in socially desirable activities.⁷²⁵ Patent protection, therefore, emerges as a crucial attempt to remedy this market failure by enabling firms to recoup those initial costs and incentivise them to engage in further innovation activities.⁷²⁶

The above described rationale is commonly referred to as the *incentive theory* and is the most widely recognised function of the patent system⁷²⁷—although certainly not the only one.⁷²⁸ Further significant economic and social justifications for patent rights include the *exchange-for-secrets* theory,⁷²⁹ the *prospect* theory,⁷³⁰ the *commercialisation* theory⁷³¹ and the

725 Frederic M Scherer and David Ross, *Industrial Market Structure and Economic Performance* (3rd edn, Houghton Mifflin 1990) 624.

726 For a more detailed explanation of the economic rationale behind patents, see Scherer and Ross (n 725) 622-630; Landes and Posner, *The Economic Structure of IP Law* (n 722) 294-326; Gustavo Ghidini, *Innovation, Competition and Consumer Welfare in Intellectual Property Law* (Edward Elgar 2010) 33-97.

727 Hovenkamp and others, *IP and Antitrust* (n 712) para 1.1; William R Cornish, David Llewelyn and Tanya F Aplin, *Intellectual Property: Patents, Copyright, Trade Marks and Allied Rights* (8th edn, Sweet & Maxwell 2013) para 3-37. In this line of thought, Abraham Lincoln famously stated that the patent system ‘added the fuel of *interest* to the *fire* of genius.’ See B Zorina Khan and Kenneth L Sokoloff, ‘History Lessons: The Early Development of Intellectual Property Institutions in the United States’ (2001) 15 J Econ Perspectives 233, 244. The incentive theory, however, has not remained completely free from disputes. See, for instance, Rudolph J R Peritz, ‘Competition within Intellectual Property Regimes: the Instance of Patent Rights’ in Steven D Anderman and Ariel Ezrachi (eds), *Intellectual Property and Competition Law: New Frontiers* (OUP 2011) 27; Mark A Lemley, ‘The Myth of the Sole Inventor’ (2012) 110 Mich L Rev 709.

728 FTC, ‘To Promote Innovation’ (n 718) ch 1, 6.

729 The *exchange-for-secrets* theory relies on the assumption that patents result from a bargain between the inventor and society, whereby the former surrenders the secrecy of the invention in exchange for temporary legal exclusivity. Fritz Machlup, ‘An Economic Review of the Patent System’ (Study No 15 of the Subcommittee on Patents, Trademarks, and Copyright of the Committee on the Judiciary of the US Senate, 85th Congress, 2nd Session, Washington, 1958) 21. In the absence of patents, inventors would expend substantial resources on preserving secrecy, which would retard the spread of knowledge. Richard A Posner, ‘The Social Costs of Monopoly and Regulation’ (1975) 83 J Pol Econ 807, 825.

730 According to this theory first suggested by Edmund Kitch, patents are like prospects in mineral exploitation and incentivise firms to further develop technological possibilities. Edmund W Kitch, ‘The Nature and Function of the Patent System’ (1977) 20 J L & Econ 265.

731 Akin to the *prospect* theory, it is argued that patents can function as tools to bring new products to the market. Michael Abramowicz and John F Duffy, ‘Intellectual Property for Market Experimentation’ (2008) 83 NYU L Rev 337.

transaction costs theory.⁷³² In addition, intellectual property rights in general have been advocated on ethical grounds as well, ie as natural or personality rights or, from a more Lockean perspective, as a reward for the time and effort incurred by the inventor under the *labour* theory.⁷³³

II. Patents and Market Power

Patents confer upon the patentee the right to exclude others from manufacturing, selling, importing, etc the products or processes covered by the claims of the patent.⁷³⁴ Because of this exclusive right that they ascribe, it is not unusual to find court decisions referring to patents as ‘limited monopolies’,⁷³⁵ ‘temporary monopolies’,⁷³⁶ or as rights conferring ‘monopolistic, albeit lawful, market control’.⁷³⁷ As a matter of fact, in cases involving tying arrangements, early Supreme Court cases in the US had even established a presumption that patents conferred monopoly power upon the patentees,⁷³⁸ although such presumption was later repealed.⁷³⁹

The prevailing opinion in the antitrust spheres nowadays, however, clearly speaks out against equating patents with monopolies or market

732 Patents may also be justified based on the transaction costs savings that they offer in comparison to other alternatives for exploiting information assets. Paul J Heald, ‘A Transaction Costs Theory of Patent Law’ (2005) 66 *Ohio St L J* 473; Daniel F Spulber, ‘How Patents Provide the Foundation of the Market for Inventions’ (2014) *Northwest L & Econ Research Paper* 14/14, 12 <<http://ssrn.com/abstract=2487564>> accessed 14 February 2018.

733 Justin Hughes, ‘The Philosophy of Intellectual Property’ (1988) 77 *Geo L J* 287. See also Machlup (n 729) 21-23.

734 EPC, art 64; UK Patents Act, s 60; § 9PatG; § 154 US Patent Act.

735 *International Salt Co Inc v United States* 332 US 392, 395 (1947).

736 Joined Cases C-468/06 to C-478/06 *Sot Lélös kai Sia EE v GlaxoSmithKline* [2008] ECR I-7139, para 64.

737 *Times-Picayune Publishing Co v United States* 345 US 594, 608 (1953).

738 This presumption had first arisen as part of the patent misuse doctrine, outside the antitrust context. *Morton Salt Co v G S Suppiger Co* 314 US 488 (1942). Some years later, it migrated to the antitrust domain. *International Salt* (n 735) 396.

739 *Illinois Tool Works Inc v Independent Ink Inc* 547 US 28 (2006). For a critical analysis of this case, see Clifford A Jones, ‘Patent Power and Market Power: Rethinking the Relationship Between Intellectual Property Rights and Market Power in Antitrust Analysis’ in Josef Drexler (ed), *Research Handbook on Intellectual Property and Competition Law* (Edward Elgar 2008) 239.

power.⁷⁴⁰ Quite on the contrary, it is widely acknowledged that the vast majority of patents do not confer the kind of market power that can be meaningful from a competition law perspective.⁷⁴¹ Firstly, it should be borne in mind that a patent only represent a negative right to exclude, but does not necessarily imply that there is a market for the products or processes protected by it.⁷⁴² Those products or processes might in fact never make it to the market, and studies indeed show that only a very small percentage of the universe of granted patents turns out to have some commercial significance.⁷⁴³ Secondly, even if the patent protects a product that effectively sells on the market, it is likely that consumers are also able to find substitute products from other competitors, hence constraining the patentee's discretion over price.⁷⁴⁴ Moreover, even if a patent can assure a large market share for a certain period of time, such position might still be threatened by *potential* substitutes, as competitors may come up with different—or even better—products falling outside the scope of the patent.⁷⁴⁵

740 Organisation for Economic Co-operation and Development (OECD), 'Competition, Patents and Innovation' (2008, DAF/COMP(2007)40) 9 <<http://www.oecd.org/daf/competition/39888509.pdf>> accessed 14 February 2018; Hovenkamp and others, *IP and Antitrust* (n 712) para 4.2a; Landes and Posner, *The Economic Structure of IP Law* (n 722) 374-75; Josef Drexel, 'The Relationship Between the Legal Exclusivity and Economic Market Power: Links and Limits' in Inge Govaere and Hans Ullrich (eds), *Intellectual Property, Market Power and the Public Interest* (Peter Lang 2008) 16; Andreas Heinemann, 'The Contestability of IP-Protected Markets' in Josef Drexel (ed), *Research Handbook on Intellectual Property and Competition Law* (Edward Elgar 2008) 62; Sven Bostyn and Nicolas Petit, 'Patent=Monopoly: A Legal Fiction' (2013) <<http://ssrn.com/abstract=2373471>> accessed 14 February 2018. For an alternative viewpoint, see Martin J Adelman, 'The Relevant Market Paradox: Attempted and Completed Patent Fraud Monopolization' (1977) 38 Ohio St L J 289 (arguing that proof of market power should not need to be proven in monopolisation cases); Ariel Katz, 'Making Sense of Nonsense: Intellectual Property, Antitrust, and Market Power' (2007) 49 Ariz L Rev 837 (criticising the conclusion of *Illinois Tool* and arguing that, in principle, patents do confer some market power).

741 Landes and Posner, *The Economic Structure of IP Law* (n 722) 374-75.

742 Bostyn and Petit (n 740) 5.

743 Mark A. Lemley and Carl Shapiro, 'Probabilistic Patents' (2005) 19 J Econ Perspectives 75.

744 Heinemann (n 740) 62.

745 Josef Drexel, 'Is There a "More Economic Approach" to Intellectual Property and Competition Law?' in Josef Drexel (ed), *Research Handbook on Intellectual Property and Competition Law* (Edward Elgar 2008) 46; Steven Anderman, 'The IP and Competition Interface: New Developments' in Steven D Anderman and Ariel Ezrachi (eds), *Intellectual Property and Competition Law: New Frontiers* (OUP 2011) 14.

Today, courts and agencies on both sides of the Atlantic seem to unanimously subscribe to this view. In the US, the Supreme Court acknowledged it in the above cited *Illinois Tool Works* decision.⁷⁴⁶ In the same vein, the FTC's and DOJ's Antitrust Guidelines for the Licensing of Intellectual Property state the following:

The Agencies will not presume that a patent, copyright, or trade secret necessarily confers market power upon its owner. Although the intellectual property right confers the power to exclude with respect to the specific product, process, or work in question, there will often be sufficient actual or potential close substitutes for such product, process, or work to prevent the exercise of market power.⁷⁴⁷

On the European side, the CJEU has also expressly recognised that the mere ownership of an intellectual property right does not necessarily confer a dominant position.⁷⁴⁸

The above does not mean, however, that patents do not have any role to play in establishing market power. It is undisputed that patents, just like physical property,⁷⁴⁹ can occasionally raise barriers to entry into the market and constitute a relevant factor in the assessment of market power.⁷⁵⁰ What is more, in some cases they can play a critical role in this assessment.⁷⁵¹ In any case, it should be reminded that, in the absence of an anti-competitive conduct, holding market power as such is not condemned by antitrust rules.⁷⁵²

746 *Illinois Tool Works* (n 739) 45-46. For non-tying cases, the Supreme Court had already recognised that ownership of intellectual property rights was insufficient to establish market power. Hovenkamp and others, *IP and Antitrust* (n 712) para 4.2e5.

747 DOJ and FTC, Antitrust Guidelines for the Licensing of Intellectual Property (12 January 2017) para 2.2 (US Antitrust Guidelines for the Licensing of IP).

748 Joined Cases C-241/91 P and C-242/91 P, *Radio Telefis Eireann (RTE) and Independent Television Publications Ltd (ITP) v Commission* [1995] ECR I-743, para 46 (Magill).

749 Hovenkamp and others, *IP and Antitrust* (n 712) para 4.2a.

750 EU Guidelines on Technology Transfer Agreements (n 716) para 166; Heinemann (n 740) 57; Robert O'Donoghue and A Jorge Padilla, *The Law and Economics of Article 102 TFEU* (2nd edn, Hart 2013) 156.

751 That was the case, for instance, of the *AstraZeneca* decision that is analysed in detail below. See *AstraZeneca* (Case COMP/A.37.507/F3) Commission Decision 2006/857/CE [2006] OJ L332/24, para 517 ('A factor of considerable importance in determining dominance in this case relates to AZ's technology in the form of intellectual property and other rights derived from pharmaceutical law.').

752 See text at nn 640ff in ch 4.

III. Reciprocal Goals but Conflicting Means

Even if agreed that patent law and competition law have a reciprocal relationship, that they strive towards ultimate common goals and that patents regularly do not confer significant market power in an economic sense, there is no denying that the methods employed by each of them are diametrically different and can occasionally generate tension.⁷⁵³ In terms of traditional price competition, patents—as explained in the preceding paragraph—will often grant protection to only one of many products that effectively compete in the market, thus giving rise to few antitrust concerns.⁷⁵⁴ But in those situations where they enfold larger portions of the market, or even prevent in effect all possible competition, patent and antitrust approaches will inevitably tend to clash.⁷⁵⁵ On the other hand, from a dynamic competition perspective, even when patents and antitrust can both serve to spur innovation,⁷⁵⁶ they both do it by undertaking different roles: the former temporarily limits competition by *imitation*, which incentivises rivals to compete by *substitution*.⁷⁵⁷

In view of this inescapable tension, it is important to recognise that, when both areas of law come into contact, each one of them may limit the reach of the other: whereas competition law has to tolerate some restrictions in the market, particularly in terms of competition by *imitation*, it may also impose constraints on what patentees can do with their patents.⁷⁵⁸ In fact, identifying where exactly to draw the dividing line is probably one of the major challenges for competition agencies and courts. The next section describes the efforts undertaken by US and EU courts, legislators and scholars to that end.

753 Steven D Anderman and John Kallaugher, *Technology Transfer and the New EU Competition Rules: Intellectual Property Licensing after Modernisation* (OUP 2006) para 1.11.

754 *SCM Corp v Xerox Corp* 645 F 2d 1195, 1203 (2nd Cir 1981).

755 *ibid*.

756 Carl Shapiro, ‘Competition and Innovation: Did Arrow Hit the Bull’s Eye?’ in Josh Lerner and Scott Stern (eds), *The Rate and Direction of Inventive Activity Revisited* (Univ of Chicago Press 2012) 363-64.

757 Drexl, ‘Is There a “More Economic” Approach?’ (n 745) 45.

758 Hovenkamp and others, *IP and Antitrust* (n 712) para 1.3b.

B. *When is Competition Enforcement Warranted in the Intellectual Property Arena?*

Despite their showing clear signs towards convergence, US' and EU's antitrust approaches vis-à-vis intellectual property rights have evolved somewhat differently, to a large extent due to their particular legal frameworks and jurisdictional and cultural backgrounds.⁷⁵⁹ Because significant discrepancies still remain between both jurisdictions, it seems justified to break down the analysis and separately consider the path that each of them has followed in their efforts to strike a balance between the protection of intellectual property rights and the fostering of competition. The following paragraphs, hence, attempt to briefly depict the essential tools that courts and competition agencies have developed over time to unfold the entanglement.

I. *The Scenario in the US*

a. Evolution of the Interrelation between Antitrust and Intellectual Property

Since the enactment of the Sherman Act in 1890, the application of antitrust rules against intellectual property rights in the US has historically moved like a pendulum in search of the right balance.⁷⁶⁰ In the early days, for instance, courts tended to solve the disputes strongly inspired by the 'freedom to contract' principle and granting an almost absolute deference to intellectual property holders,⁷⁶¹ yet the relation soon became much more hostile and, with the dawn of the Great Depression, a halo of suspicion hovered over most patent-related endeavours as their goals were increasingly perceived to be in tension with those of antitrust policy.⁷⁶² In

759 Mariateresa Maggolino, *Intellectual Property and Antitrust: A Comparative Economic Analysis of US and EU Law* (Edward Elgar 2011) 207.

760 Hovenkamp and others, *IP and Antitrust* (n 712) para 1.3c.

761 Willard K Tom and Joshua A Newberg, 'Antitrust and Intellectual Property: From Separate Spheres to Unified Field' (1997) 66 *Antitrust L J* 167, 168-69. See, for instance, *Bement v National Harrow Co* 186 US 70 (1902) (where the Supreme Court ruled in favour of a price fixing agreement involving the licensing of patent rights).

762 FTC, 'To Promote Innovation' (n 718) ch 1, 15-16; Herbert Hovenkamp, 'IP and Antitrust Policy: A Brief Historical Overview' (2005) *Univ Iowa Legal Studies*

this context, the courts reacted by exploring new limits to the discretion of patent holders and expanding the reach of antitrust rules: it was during this period that they recognised that abuses in obtaining and in enforcing a patent could amount to an antitrust violation,⁷⁶³ along with a vast number of different licensing practices.⁷⁶⁴ Within the scope of the patent grant, it was argued, patent holders remained mainly unaffected, yet one step over the line and they became immediately subject to potential antitrust liability.⁷⁶⁵ Therefore, in order to determine the circumstances under which antitrust laws should apply, courts mainly focused on identifying and condemning those conducts that could be considered to be beyond the scope of the patent⁷⁶⁶—a formalistic approach that seems to very much resemble the criteria that the CJEU developed a few decades later in the EU around the concept of ‘specific subject-matter’.⁷⁶⁷

Around the mid-1970s, the perceived tension between patents and antitrust was gradually toned down. Firstly, a number of renowned scholars challenged the fundamental postulates of the approach in vogue and suggested that both bodies of law in fact share common, complementary goals.⁷⁶⁸ The Supreme Court, on its turn, progressively modified its antitrust policy by limiting the use of *per se* rules in favour of a rule of reason and leaning towards a more economic analysis rather than the prior, more

Research Paper 05/31, 4 <<http://ssrn.com/abstract=869417>> accessed 14 February 2018.

763 *Walker Process Equipment Inc v Food Machinery & Chemical Corp* 382 US 172 (1965).

764 A paradigmatic example are the ‘Nine No-No’s’ of intellectual property licensing: in 1970, the Deputy Assistant Attorney General of the DOJ’s Antitrust Division gave a list of practices which were considered unlawful ‘in virtually every context’. Bruce B Wilson, ‘Patent and Know-How License Agreements: Field of Use, Territorial, Price and Quantity Restrictions’ (Remarks Before the Fourth New England Antitrust Conference, 6 November 1970) 9.

765 Tom and Newberg (n 761) 172. See, in this regard, *Ethyl Gasoline Corp v United States* 309 US 436, 452 (1940); *United States v Line Material Co* 333 US 287, 308 (1948) (‘[i]t is equally well settled that the possession of a valid patent or patents does not give the patentee any exemption from the provisions of the Sherman Act beyond the limits of the patent monopoly.’).

766 See, eg, *United States v Univis Lens Co* 316 US 241, 251 (1942); *Line Material* (n 765) 310.

767 As a matter of fact, the Supreme Court even appears to have anticipated the existence-exercise dichotomy when, in a case involving cross-licensing arrangements, it stated that ‘[i]t is not the monopoly of the patent that is invalid. It is the use of that monopoly improperly.’ *Line Material* (n 765) 310. For a description of the existence-exercise dichotomy in the EU, see text at nn 853ff.

768 Bowman (n 712) is a seminal work frequently cited in this regard.

formalistic approach.⁷⁶⁹ Moreover, the creation of the Federal Circuit in 1982, with the aim of hearing all patent cases and delivering a more harmonised interpretation of the law, also offered a more reconciling view.⁷⁷⁰ Similarly, the DoJ and the FTC relinquished the ‘Nine No-No’s’⁷⁷¹ and presented a renewed viewpoint with the release of the Guidelines for the Licensing of Intellectual Property in 1995, under the premises that intellectual property rights are essentially comparable to other forms of private property,⁷⁷² that they often do not accord market power⁷⁷³ and that their licensing is ‘generally procompetitive’.⁷⁷⁴ Along similar lines, the Supreme Court more recently suggested in *Actavis* that IP and competition law should not be perceived as isolated bodies of law but should rather be applied as complementary instruments.⁷⁷⁵

Overall, the application of antitrust rules in the US is driven today by an updated economic framework,⁷⁷⁶ which is often able to offer a more accurate—yet also more complex—answer to its interplay with intellectual property law. Against this backdrop, intellectual property rights are not seen as an ‘exception’ to the antitrust laws⁷⁷⁷ and the existence of tort remedies under different areas of law is not pondered as necessarily precluding antitrust concern, ‘for the public interest in competition is not necessarily vindicated by private tort remedies.’⁷⁷⁸ At the same time, an-

769 See, eg, *Continental TV Inc v GTE Sylvania Inc* 433 US 36 (1977); *Broadcast Music Inc (BMI) v Columbia Broadcasting System (CBS)* 441 US 1 (1979).

770 See, eg, *Atari Games* (n 719) 1576 (‘...the aims and objectives of patent and antitrust laws may seem, at first glance, wholly at odds. However, the two bodies of law are actually complementary, as both are aimed at encouraging innovation, industry and competition.’).

771 Abbott B Lipsky Jr, ‘Current Antitrust Division Views on Patent Licensing Practices’ (1981) 50 *Antitrust L J* 515, 516-24 (‘When one makes the analysis, one finds that the “Nine No-Nos,” as statements of rational economic policy, contain more error than accuracy.’).

772 US Antitrust Guidelines for the Licensing of IP (n 747) para 2.1.

773 *ibid* para 2.2.

774 *ibid* para 2.0.

775 *Actavis* (n 720) 2231.

776 FTC, ‘To Promote Innovation’ (n 718) ch 1, 22.

777 *American Hoist & Derrick Co v Sowa & Sons Inc* 725 F 2d 1350, 1367 (Fed Cir 1984). See also *Re Independent Service Organizations Antitrust Litigation* 203 F 3d 1322, 1325 (Fed Cir 2000) (‘Intellectual property rights do not confer a privilege to violate the antitrust laws.’).

778 Phillip E Areeda and Herbert Hovenkamp, *Antitrust Law: An Analysis of Antitrust Principles and Their Application* (3rd edn, Aspen 2011) para 782a. In a similar

titrust is not normally perceived as a tool to correct all defects in intellectual property laws.⁷⁷⁹

b. Antitrust Immunity and the *Noerr* Doctrine

When examining the interface between antitrust and intellectual property under US law, some of the most important issues revolve around the *Noerr* immunity doctrine—especially when it comes to cases involving communications to different branches of the government. This doctrine, which emerged from that seminal Supreme Court judgment and which is also referred to as *Noerr-Pennington* or ‘antitrust petitioning immunity’, essentially refers to the set of principles that US courts have developed in order to protect private parties in their attempts to influence the passage or enforcement of laws, even if the law that they call for would produce restraints on trade.⁷⁸⁰ Under the *Noerr* doctrine, thus, efforts to restrain trade by petitioning the government cannot constitute, as a rule, the basis for antitrust liability.⁷⁸¹

In the famous *Noerr* case of 1961,⁷⁸² a group of railroad organisations had initiated a public campaign designed to encourage the adoption of laws against the trucking business and to disparage truckers among the general public, which prompted a group of truck operators to sue for conspiracy and monopolisation. The Supreme Court, however, considered that condemning such conducts could jeopardise the power of the government to take action and could raise important constitutional questions as

vein, see Rudolph J R Peritz, ‘Competition Policy and its Implications for Intellectual Property Rights in the United States’ in Steven D Anderman (ed), *The Interface Between Intellectual Property Rights and Competition Policy* (Cambridge Univ Press 2007) 193.

779 Herbert Hovenkamp, *The Antitrust Enterprise: Principle and Execution* (Harvard Univ Press 2005) 254. See also FTC, ‘To Promote Innovation’ (n 718) ch 1, 13 (stressing that mistaken antitrust enforcement may undermine the incentives that the patent system creates).

780 *Eastern Railroad Presidents Conference v Noerr Motor Freight Inc* 365 US 127, 135-36 (1961). For a systematic analysis of the doctrine, see FTC, ‘Enforcement Perspectives on the Noerr-Pennington Doctrine: An FTC Staff Report’ (2006) <www.ftc.gov/sites/default/files/documents/reports/ftc-staff-report-concerning-enforcement-perspectives-noerr-pennington-doctrine/p013518enfperspectnoerr-penningtondoctrine.pdf> accessed 14 February 2018.

781 *Allied Tube & Conduit Corp v Indian Head Inc* 486 US 492, 499 (1988).

782 *Noerr* (n 780).

well.⁷⁸³ In this regard, it drew the attention to the *state action* doctrine⁷⁸⁴ and highlighted that the right of petition is a freedom expressly recognised by the First Amendment.⁷⁸⁵ In view of this, the court held that ‘no violation of the Act can be predicated upon mere attempts to influence the passage or enforcement of laws’⁷⁸⁶ and emphasised that it is irrelevant whether the sole purpose of the defendants is to destroy its competitors.⁷⁸⁷ Shortly after *Noerr*, the Supreme Court extended the immunity beyond the legislative arena to the other branches of the government. First, in *Pennington*, it recognised that it also comprises lobbying the executive branch.⁷⁸⁸ Later, in *California Motor Transport*, it held that the doctrine reached petitioning before courts and administrative agencies as well.⁷⁸⁹

Perhaps because these early cases were relatively straight-forward, the decisions did not seem to provide a clear doctrinal framework or offer any distinct guidelines for the lower courts.⁷⁹⁰ In later cases, the Supreme

783 *ibid* 138.

784 *ibid* 136. In the landmark decision *Parker v Brown* which gave birth to the ‘state action’ doctrine, the Supreme Court had held that when restraints on trade are the result of a governmental action, as opposed to private action, antitrust laws are inapplicable. *Parker v Brown* 317 US 341, 350-51 (1943).

785 *Noerr* (n 780) 138. The First Amendment states that ‘Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the government for a redress of grievances.’

786 *ibid* 135.

787 *ibid* 138-40.

788 *United Mine Workers of America v Pennington* 381 US 657 (1965). In this case, a miners’ union and a group of large coal producers had lobbied the Secretary of Labor to establish a minimum wage that would impair smaller producers. The Supreme Court acknowledged that ‘[j]oint efforts to influence public officials do not violate the antitrust laws even though intended to eliminate competition.’ *Ibid* 670.

789 *California Motor Transport Co v Trucking Unlimited* 404 US 508 (1972). In this case, the Supreme Court held that the right to petition extends to all departments of the Government, that ‘[t]he right of access to the courts is indeed but one aspect of the right of petition’ and that the same rationale of *Noerr* and *Pennington* should govern the citizens’s approaching to administrative agencies and courts. *Ibid* 510.

790 Marina Lao, ‘Reforming the Noerr-Pennington Antitrust Immunity Doctrine’ (2003) 55 Rutgers L Rev 965, 974.

Court admittedly attempted to shed some more light on the issue,⁷⁹¹ but a considerable number of questions still remain open.

In the first place, the doctrinal underpinnings on which the doctrine is grounded are not entirely clear hitherto. Whereas some argue that the immunity is rooted on the First Amendment,⁷⁹² others contend that it is exclusively a statutory construction, since petitioning is not the kind of conduct with which the antitrust laws are concerned.⁷⁹³ The Supreme Court, for its part, has indiscriminately relied on one rationale or the other along its decisions,⁷⁹⁴ which might suggest that the doctrine is actually based on both.⁷⁹⁵ In any case, it should be noted that, although on the face of it this inquiry may seem purely theoretical, it can have significant effects in practice.⁷⁹⁶ Indeed, while grounding the doctrine solely on constitutional principles probably implies that any conduct not covered by the right of petition can fall within the scope of antitrust scrutiny, a justification based on the Sherman Act is likely to lead to a more expansive reading of the immunity—thus excluding a larger number of conducts from the antitrust radar.⁷⁹⁷

Additional questions arise in connection with the scope and boundaries of the *Noerr* doctrine. At the outset, it is imperative to define what exactly

791 *Allied Tube* (n 781); *FTC v Superior Court Trial Lawyers Association (SCTLA)* 493 US 411 (1990); *City of Columbia v Omni Outdoor Advertising Inc* 499 US 365 (1991); *Professional Real Estate Investors Inc v Columbia Pictures Industries Inc* 508 US 49 (1993).

792 Daniel R Fischel, 'Antitrust Liability for Attempts to Influence Government Action: The Basis and Limits of the *Noerr-Pennington* Doctrine' (1977) 45 U Chi L Rev 80, 81; David McGowan and Mark A Lemley, 'Antitrust Immunity: State Action and Federalism, Petitioning and the First Amendment' (1994) 17 Harv J L & Pub Pol'y 293, 360-61.

793 Milton Handler and Richard A De Sevo, 'The *Noerr* Doctrine and Its Sham Exception' (1984) 6 Cardozo L Rev 1, 5.

794 *Noerr* (n 780) 136 (emphasising the 'essential dissimilarity' between lobbying and the type of conducts traditionally condemned by the Sherman Act); *California Motor Transport* (n 789) 510 (holding that the doctrine relies on the need to protect the governmental decision-making process and the right of petition); *SCTLA* (n 791) 424 (interpreting the Sherman Act in the light of the First Amendment's petition clause); *Omni* (n 791) 383 ('antitrust laws regulate business, not politics'); *PREI* (n 791) 56 ('the Sherman Act does not punish "political activity"').

795 Lao, 'Reforming the *Noerr* Doctrine' (n 790) 1002.

796 Stephen Calkins, 'Developments in Antitrust and the First Amendment: the Disaggregation of *Noerr*' (1988) 57 Antitrust L J 327, 330; McGowan and Lemley (n 792) 298.

797 Calkins (n 796) 330.

constitutes petitioning. The general rule is that ‘no violation of the Act can be predicated upon mere attempts to influence the passage or enforcement of laws’,⁷⁹⁸ or upon conducts ‘directed toward obtaining governmental action.’⁷⁹⁹ Thus, it has been alleged that immunity is proffered to efforts to *convince* the government to do something, but not to those conducts that merely seek a ministerial response.⁸⁰⁰ In those cases, it is argued, the results are in fact ‘independent decisions’ from private parties rather than a request for governmental action.⁸⁰¹

Also connected to the boundaries of the antitrust petitioning immunity emerges the question as to the range of restraints that endure under the immunity umbrella: does it only comprise restraints produced by the governmental action sought after? Or does it also extend to restraints directly caused by private parties in their efforts to influence the government? Supreme Court case law appears to point at disparate directions. Under the *SCTLA* decision of 1990,⁸⁰² for instance, the court seemed to recognise that the principle was relatively straight-forward: antitrust immunity only protects restraints of trade which are a *consequence* of public action, but not when they are the *means* by which private parties seek to obtain favourable legislation.⁸⁰³ Yet although it grounded its decision on *Noerr*, the fact is that immunity in that seminal case did extend to some of those *means*, provided that they could be considered an ‘incidental effect’ of the efforts to induce government action.⁸⁰⁴ And the landscape becomes even cloudier when looking at *Allied Tube*,⁸⁰⁵ where the Supreme Court gave *Noerr* a more nuanced reading and held that immunity does not really shield all

798 *Noerr* (n 780) 135.

799 *ibid* 140.

800 FTC, ‘Enforcement Perspectives on the Noerr-Pennington Doctrine’ (n 780) 18.

801 *Litton Systems Inc v American Telephone & Telegraph Co* 700 F 2d 785, 807 (2nd Cir 1983). For an analysis of this matter in the patent arena, see text at nn 1379ff in ch 6.

802 *SCTLA* (n 791). In this case, a group of lawyers had agreed to stop representing indigent defendants until their fees for doing so were increased.

803 *ibid* 424-25.

804 *Noerr* (n 780) 143. See also Einer Elhauge, ‘Making Sense of Antitrust Petitioning Immunity’ (1992) 80 Cal L Rev 1177, 1188 (arguing that the characterisation of *Noerr* in *SCTLA* was inaccurate, since *Noerr* did not involve only restraints caused by public action, but also restraints directly caused by private parties via the publicity campaign).

805 *Allied Tube* (n 781). In this case, a steel producer had packed the meeting of a private standard-setting association with new, bogus members in order to secure an electrical code that would exclude plastic manufacturers. Since such code was routinely adopted by a substantial number of state and local governments, the

means which are incidental, but only those which are ‘incidental to a *valid* effort to influence governmental action.’⁸⁰⁶ What exactly distinguishes a valid from an invalid effort, however, is nowhere to be found in this or other subsequent decisions and has elicited confusion among lower courts.⁸⁰⁷

Lastly, the most critical questions surrounding the antitrust petitioning immunity are probably those concerning its exceptions and limitations. The most widely recognised exception to this doctrine—and the only one explicitly acknowledged by the Supreme Court—is the ‘sham exception’, but a number of scholars, antitrust enforcers and case law suggest that it might not be the only one.

The ‘sham exception’ was established by the Supreme Court in *Noerr* itself and essentially refers to situations where private parties are not genuinely interested in the outcome of their petitioning. In that case, the court stated that petitioning might still justify the application of the Sherman Act when it is ‘a mere sham to cover what is actually nothing more than an attempt to interfere directly with the business relationships of a competitor.’⁸⁰⁸ In the years that followed, the concept of sham developed in the lower courts into a blanket concept to deny immunity to whatever forms of petitioning judges deemed improper,⁸⁰⁹ but the Supreme Court has since warned against such an expansive reading and clarified that the sham exception is limited to ‘situations in which persons use the governmental process itself—as opposed to the outcome of that process—as an anticompetitive weapon.’⁸¹⁰ This exception, thus, seems to be reserved to restraints imposed directly by the private parties in their (insincere) at-

steel producer invoked the *Noerr* immunity. The Supreme Court, however, held that *Noerr* was not absolute and that its scope, which depends on the source, context, and nature of the anticompetitive restraint, did not reach the conduct at issue.

806 *ibid* 499 (internal quotation and omitted) (emphasis added).

807 The Supreme Court had stated in that decision that the validity of those efforts ‘varies with the context and nature of the activity.’ *Ibid* 499. Then again, it is not clear which precise contexts and natures would be denied immunity. Calkins (n 796) 337. See also Elhauge, ‘Making Sense of Antitrust Petitioning Immunity’ (n 804) 1187.

808 *Noerr* (n 780) 144.

809 Calkins (n 796) 338-39; Elhauge, ‘Making Sense of Antitrust Petitioning Immunity’ (n 804) 1178; Lao, ‘Reforming the Noerr Doctrine’ (n 790) 967.

810 *Omni* (n 791) 380. See also *Allied Tube* (n 781) 507, fn 10 (the sham exception is limited to activities which are not ‘genuinely intended to influence governmental action’).

tempts to influence the government, but not to those imposed by the governmental action itself. Some years later, in *PREI*, the Supreme Court interpreted that proof of anticompetitive intent alone is not sufficient to find an antitrust violation and outlined a two-pronged test according to which, even before analysing the subjective intent, courts should first determine whether the petitioning activities were ‘objectively baseless’.⁸¹¹

In addition to the ‘sham exception’, it has been argued that a separate exception to the *Noerr* immunity should be recognised for misrepresentations, ie situations where governmental action itself imposes restraints on trade but is triggered by from the deceitful conduct of a private party.⁸¹² The Supreme Court had indeed suggested in earlier cases that misrepresentations could, under certain circumstances, result in an antitrust violation.⁸¹³ In *PREI*, however, where a ‘sham exception’ question was at issue, the Supreme Court specifically declined to provide an answer,⁸¹⁴ leaving the question open to this day.⁸¹⁵

811 *PREI* (n 791) 60-61. For a more thorough analysis of the sham exception, see text at nn 1148ff in ch 6.

812 FTC, ‘Enforcement Perspectives on the Noerr-Pennington Doctrine’ (n 780) 22. A number of courts also deem misrepresentation as another exception to *Noerr*. See, eg, *St Joseph’s Hospital Inc v Hospital Corp of America* 795 F 2d 948, 955 (11th Cir 1986); *Whelan v Abell* 48 F 3d 1247, 1255 (DC Cir 1995); *Nobelpharma AB v Implant Innovations Inc* 141 F 3d 1059, 1071 (Fed Cir 1998). Furthermore, a number of scholars also urge to recognise an exception for misrepresentations separate from sham. See, among others, Fischel (n 792) 106; C Douglas Floyd, ‘Antitrust Liability for the Anticompetitive Effects of Governmental Action Induced by Fraud’ (2001) 69 *Antitrust L J* 403, 410; Scott Filmore, ‘Defining the Misrepresentation Exception to the Noerr-Pennington Doctrine’ (2001) 49 *Univ Kan L Rev* 423, 443; Lao, ‘Reforming the Noerr Doctrine’ (n 790) 1022; James C Cooper and William E Kovacic, ‘U.S. Convergence with International Competition Norms: Antitrust Law and Public Restraints on Competition’ (2010) 90 *Bost U L Rev* 1555, 1605; Note, ‘Deception as an Antitrust Violation’ (2012) 125 *Harv L Rev* 1235. Against: *Armstrong Surgical Center Inc v Armstrong County Memorial Hospital* 185 F 3d 154, 160 (3rd Cir 1999); Handler and De Sevo (n 793) 47; James B Kobak Jr and Robert P Reznick, ‘Antitrust Liability for Statements about Intellectual Property: Unocal, Unitherm and New Uncertainty’ (2004) 19 *Antitrust* 87, 89-90.

813 *California Motor Transport* (n 789) 513; *Allied Tube* (n 781) 500.

814 *PREI* (n 791) 61, fn 6.

815 For a thorough analysis of the misrepresentation exception, see text at nn 1290ff in ch 6.

c. The Patent Misuse Doctrine

Another concept that has played a central role in shaping the boundaries of antitrust and patent law—although not so appreciably in the framework of deceptive behaviours at the patent office—is the patent misuse doctrine. This doctrine, which derives—as the inequitable conduct defence—from the equitable doctrine of unclean hands⁸¹⁶ and which does not seem to have a parallel in Europe,⁸¹⁷ has historically stood somewhere at the intersection between these two areas of law, originally stemming from the intellectual property system but incorporating numerous elements from traditional antitrust analysis along the way.⁸¹⁸

In a nutshell, the patent misuse doctrine is an affirmative defence in patent litigation that proscribes patent holders from broadening ‘the physical or temporal scope of the patent monopoly’.⁸¹⁹ The underlying rationale thus lies on the premise that ‘the patentee may exploit his patent but may not use it to acquire a monopoly not embraced in the patent.’⁸²⁰ If found, misuse renders the patent unenforceable until the misuse is purged⁸²¹—in

816 *B Braun Medical Inc v Abbott Laboratories* 124 F 3d 1419, 1427 (Fed Cir 1997) (‘... the patent misuse doctrine is an extension of the equitable doctrine of unclean hands, whereby a court of equity will not lend its support to enforcement of a patent that has been misused.’). See also *Morton Salt* (n 738) 492 (‘It is a principle of general application that courts, and especially courts of equity, may appropriately withhold their aid where the plaintiff is using the right asserted contrary to the public interest.’).

817 Dimitrios Riziotis, ‘Patent Misuse als Schnittstelle zwischen Patentrecht und Kartellrecht: Eine Rechtsvergleichende Darstellung’ [2004] GRUR Int 367. See also, however, Anne Flanagan, Federico Ghezzi and Maria Lillà Montagnani, ‘The Search of EU Boundaries: IPR Exercise and Enforcement as “Misuse”’ in Anne Flanagan and Maria Lillà Montagnani (eds), *Intellectual Property Law: Economic and Social Justice Perspectives* (Edward Elgar 2010) 126 (arguing that several potential sources are theoretically available to recognise a patent misuse doctrine in the EU).

818 Daryl Lim, *Patent Misuse and Antitrust Law: Empirical, Doctrinal and Policy Perspectives* (Edward Elgar 2013) 38.

819 *Blonder-Tongue Laboratories Inc v University of Illinois Foundation* 402 US 313, 343 (1971); *Windsurfing International Inc v AMF Inc* 782 F 2d 995, 1001 (Fed Cir 1986).

820 *Princo Corp v International Trade Commission* 616 F 3d 1318, 1327 (Fed Cir 2010) (en banc).

821 *Senza-Gel Corp v Seiffhart* 803 F 2d 661, 668 fn 10 (Fed Cir 1986).

that sense differing from inequitable conduct, which cannot be purged.⁸²² Under current patent litigation, misuse allegations are to be found mostly within the context of patent licensing,⁸²³ eg in cases involving tying, bundling or demands for royalties beyond the patent term.

The origins of the patent misuse doctrine can be traced back to the Supreme Court's decision in the *Motion Picture Co* case of 1917,⁸²⁴ in a period when antitrust laws still found themselves at an embryonic stage. In this case, the patentee held a patent on a mechanism for a movie projector and demanded licensees to bar the use of any film not manufactured by the patentee. The Court of Appeals found this restriction anticompetitive,⁸²⁵ and the Supreme Court confirmed that it was invalid. Yet despite the obvious competitive concerns in its reasoning, the Supreme Court refused to rely on antitrust laws and instead based its decision on principles of patent policy,⁸²⁶ stating that the conduct improperly expanded the scope of the patent.⁸²⁷ In subsequent decisions, the Court continued developing this principle—particularly in *Morton Salt*, where it expressly held that patent misuse was an equitable principle entirely independent from antitrust law.⁸²⁸ The scope of the doctrine was also broadened, most notably in *Mercoïd*,⁸²⁹ where the Court held that starting a contributory infringement suit could constitute patent misuse if the allegedly infringing product was not itself patented, even if it was a necessary element of a patented mechanism with no substantial non-infringing use.

Such expansive view on patent misuse raised concerns among scholars and in 1952 encouraged the Congress to limit its scope by identifying a number of circumstances that should not be considered misuse.⁸³⁰ During the following years, the doctrine also gradually adopted elements of antitrust analysis and the trend was intensified during the 1970s, as a renewed economic approach gained attention and the focus shifted away from *per se* assessments and towards protecting competition rather than in-

822 The introduction of the Supplemental Examination procedure by the AIA, however, now seems to allow the purging of the inequitable conduct to a certain extent. See text at nn 279-281 in ch 3.

823 Marshall Leaffer, 'Patent Misuse and Innovation' (2010) 10 J High Tech L 142, 147; *Princo* (n 820) 1327.

824 *Motion Picture Patents Co v Universal Film Manufacturing Co* 243 US 502 (1917).

825 *ibid* 517.

826 Hovenkamp and others, *IP and Antitrust* (n 712) para 3.2a.

827 *Motion Picture Co* (n 824) 514.

828 *Morton Salt* (n 738) 490-92.

829 *Mercoïd Corp v Mid-Continent Investment Co* 320 US 661 (1944).

830 *Lim* (n 818) 51-52.

dividual competitors.⁸³¹ In the following decades, the concepts of patent misuse and antitrust became yet more intertwined with the creation of the Federal Circuit in 1982⁸³² and a new amendment of the law in 1988, which required proof of market power in tying cases⁸³³ and which the Federal Circuit took as an unequivocal message that misuse as a whole should be read under the light of antitrust principles.⁸³⁴

The Supreme Court's decision in *Kimble*,⁸³⁵ however, did not seem to approve of this restrictive approach. In this case, the court was asked whether a patent holder was still barred from charging royalties for the use of an invention after its patent term has expired, as it had decided in *Brulotte*.⁸³⁶ The claimant essentially argued that the referred holding should be overruled in favor of a case-by-case approach based on antitrust law's rule of reason.⁸³⁷ However, the Supreme Court declined to do so adhering to the principle of *stare decisis*.⁸³⁸ In doing so, the Supreme Court seems to have implicitly reinstated the approach based on patent policy, as laid down in *Morton Salt*, as the correct approach to patent misuse analysis.⁸³⁹

831 *ibid* 54-55.

832 *Windsurfing Int'l* (n 819) 1001 ('The doctrine of patent misuse is an affirmative defense to a suit for patent infringement ... and requires that the alleged infringer show that the patentee has impermissibly broadened the "physical or temporal scope" of the patent grant with anticompetitive effect.'). Chief Judge Markey himself, author of this decision, seemed to recoil soon after in *Senza-Gel* (n 821) 668 (evoking the Supreme Court stating that 'the patentee's act may constitute patent misuse without rising to the level of an antitrust violation.') but was not followed by later cases. Lim (n 818) 71.

833 § 271(d)(5) US Patent Act ('No patent owner otherwise entitled to relief for infringement or contributory infringement of a patent shall be denied relief or deemed guilty of misuse or illegal extension of the patent right by reason of his having ... conditioned the license of any rights to the patent or the sale of the patented product on the acquisition of a license to rights in another patent or purchase of a separate product, unless, in view of the circumstances, the patent owner has market power in the relevant market for the patent or patented product on which the license or sale is conditioned.').

834 Lim (n 818) 76; Mark D Janis, 'Transitions in IP and Antitrust' (2002) 47 Antitrust Bull 253. Indeed, in subsequent cases the Federal Circuit applied antitrust analysis in misuse cases not falling within § 271 of the US Patent Act. See, eg, *Mallinckrodt Inc v Medipart Inc* 976 F 2d 700 (Fed Cir 1992).

835 *Kimble v Marvel Entm't, LLC* 135 S Ct 2401 (2015).

836 *Brulotte v Thys Co* 379 US 29 (1964).

837 *Kimble* (n 835) 2408.

838 *Kimble* (n 835) 2406.

839 Daryl Lim, 'Revisiting the Patent Misuse Doctrine' in Josef Drexler (ed), *The Innovation Society and Intellectual Property* (Edward Elgar, forthcoming).

A number of commentators had long advocated for such a reading, highlighting the importance of retaining the patent misuse doctrine as a concept independent from antitrust law, at least for certain specific situations.⁸⁴⁰ In this regard, these commentators essentially argue that misuse and antitrust do not necessarily have identical goals and that antitrust analysis might not be able to capture the entire range of policy concerns comprised in the misuse doctrine.⁸⁴¹ It has been suggested, for instance, that misuse comprises all practices that undermine patent policy by foreclosing innovation, competition or access to the public domain, even if they do not violate antitrust laws.⁸⁴² Furthermore, it is also argued that it might guarantee an optimal deterrence of antitrust violations, as it could even be used when conducts are anticompetitive in an economic sense ‘but fall between the legislative cracks’.⁸⁴³

Other courts and commentators, however, have openly questioned the need for a patent misuse doctrine altogether.⁸⁴⁴ On the one hand, for those cases where antitrust and misuse concerns in fact overlap, the question inevitably arises as to why holding a misuse doctrine at all. Its flexibility vis-à-vis antitrust does not appear to be sufficient reason, as invigorating antitrust scrutiny would probably constitute a more reasonable solution.⁸⁴⁵ On the other hand, if misuse comprises behaviours which are not necessarily anticompetitive, it is not clear why those behaviours should be banned to any extent, let alone how uniform and coherent criteria can be defined beyond the reigning vagueness.⁸⁴⁶ Such wide a scope might have been logical at a time when IP and antitrust were perceived as separate spheres,

840 Robert P Merges, ‘Reflections on Current Legislation Affecting Patent Misuse’ (1988) 70 J Pat & Trademark Off Soc’y 793; Note, ‘Is the Patent Misuse Doctrine Obsolete?’ (1997) 110 Harv L Rev 1922; Robin C Feldman, ‘The Insufficiency of Antitrust Analysis for Patent Misuse’ (2003) 55 Hastings L J 399; Leaffer (n 823) 147; Christina Bohannon, ‘IP Misuse as Foreclosure’ (2011) 96 Iowa L Rev 475; Lim (n 818) 418.

841 Feldman (n 840) 400.

842 Bohannon, ‘IP Misuse as Foreclosure’ (n 840) 526.

843 Hovenkamp, *The Antitrust Enterprise* (n 779) 273.

844 *USM Corp v SPS Technologies Inc* 694 F 2d 505, 511 (7th Cir 1982); Mark A Lemley, ‘The Economic Irrationality of the Patent Misuse Doctrine’ (1990) 78 Cal L Rev 1599; Thomas F Cotter, ‘Four Questionable Rationales for the Patent Misuse Doctrine’ (2011) 12 Minn J L Sci & Tech 457.

845 Cotter, ‘Four Questionable Rationales for the Patent Misuse Doctrine’ (n 844) 477.

846 Cotter, ‘Four Questionable Rationales for the Patent Misuse Doctrine’ (n 844) 470; *USM v SPS* (n 844) 510 (the misuse doctrine ‘is too vague a formulation to be useful.’).

when patents were presumed to grant market power and antitrust rules were applied in a much more formalistic fashion. Today, antitrust seems to be flexible enough to embrace the entirety of the policy concerns comprised in the misuse doctrine,⁸⁴⁷ as it is acknowledged to have an active role not only in safeguarding competition, but also in fostering innovation. Against this backdrop, the existence of an auxiliary doctrine that suspects social costs without sound economic foundations seems much more questionable.

In any case, it should be noted that, although there have been attempts to invoke the patent misuse doctrine in cases involving fraud to the patent office, courts seem to be hesitant to admit it within this particular context.⁸⁴⁸ Firstly, as the Federal Circuit specifically stated in an *en banc* decision in 2010, not any wrongful—or even anticompetitive—conduct necessarily configures a patent misuse.⁸⁴⁹ But perhaps more importantly, the availability of a patent misuse defence in this context is unlikely to add much to the already broader inequitable conduct defence,⁸⁵⁰ which configures a more attractive tool for defendants as it does not allow purging.

II. The European Approach

On the European side, the CJEU has strived to draw clear and workable lines with which to bring competition rules and intellectual property rights into harmony since its very early decisions, although it has not always found the task easy.⁸⁵¹ While sufficiently complex in itself, the analy-

847 *USM v SPS* (n 844) 511.

848 *CR Bard Inc v M3 Systems Inc* 157 F 3d 1340, 1373 (Fed Cir 1998) ('Although the law should not condone wrongful commercial activity, the body of misuse law and precedent need not be enlarged into an open-ended pitfall for patent-supported commerce.').

849 *Princo* (n 820) 1329 ('the defense of patent misuse is not available to a presumptive infringer simply because a patentee engages in some kind of wrongful commercial conduct, even conduct that may have anticompetitive effects. ... While proof of an antitrust violation shows that the patentee has committed wrongful conduct having anticompetitive effects, that does not establish misuse of the patent in suit unless the conduct in question restricts the use of that patent and does so in one of the specific ways that have been held to be outside the otherwise broad scope of the patent grant.').

850 Hovenkamp and others, *IP and Antitrust* (n 712) para 3.3i.

851 David T Keeling, *Intellectual Property Rights in EU Law Vol I: Free Movement and Competition Law* (OUP 2003) 51.

sis is rendered even thornier by the unique significance that market integration has had as an overriding goal for European competition law.⁸⁵² The following paragraphs analyse the most significant milestones in this regard.

a. Existence v Exercise Dichotomy

The CJEU's first attempt to reconcile intellectual property and competition consisted in distinguishing the existence of an intellectual property right from its exercise, a standard which was originally coined in the well-known *Consten and Grundig* decision of 1966.⁸⁵³ In this case, Grundig, a German firm, had appointed Consten as its exclusive distributor in France and, to this end, had allowed it to register the trade mark GINT (Grundig International) in that country on its own name. As a result of this strategy, Consten was enabled to prevent in practice all parallel importation of Grundig's products into France. When the Commission ruled that the arrangement between Grundig and Consten constituted an infringement of art 101 TFEU, the parties appealed—among other grounds—on the basis of today's art 345 TFEU.⁸⁵⁴ The French trade mark, they argued, had been legitimately granted under the French system of property ownership and could thus not be distorted by competition rules. The CJEU, however, confirmed the decision of the Commission and stated that the ruling 'does not affect the grant of those rights but only limits their exercise to the extent necessary to give effect to the prohibition under Article [101](1).'⁸⁵⁵ Such remark shows the CJEU's caution in not trespassing the principle according to which, in the absence of harmonisation under EU law, the conditions governing the grant of intellectual property rights remain a matter exclusively for national laws.⁸⁵⁶

Shortly after this decision, the CJEU confirmed and further developed this standard in *Parke Davis*, where it stated that 'the existence of the rights

852 Richard Whish, *Competition Law* (8th edn, OUP 2015) 23-24; Valentine Korah, 'The Interface Between Intellectual Property and Antitrust: The European Experience' (2002) 69 *Antitrust L J* 801, 804.

853 Joined Cases 56 and 58/64 *Établissements Consten SàRL and Grundig-Verkaufs-GmbH v Commission* [1966] ECR 299.

854 Art 345 TFEU provides that '[t]he Treaties shall in no way prejudice the rules in Member States governing the system of property ownership.'

855 *Consten and Grundig* (n 853) 345.

856 *Keeling* (n 851) 57.

granted by a member state to the holder of a patent is not affected by the prohibitions contained in articles [101](1) and [102] of the treaty' and that 'the exercise of such rights cannot of itself fall ... under article [102], in the absence of any abuse of a dominant position.'⁸⁵⁷

b. The Specific Subject-Matter Standard

The existence-exercise dichotomy drawn by the CJEU has been intensely criticised for constituting a vague, formal distinction without a sound underlying basis and mostly unhelpful in practice.⁸⁵⁸ In this last regard, one of the main criticisms focused on the fact that the distinction left unanswered the crucial question as to in which specific circumstances the exercise of an intellectual property right could be considered abusive, hence signalling the need for supplementary criteria.⁸⁵⁹ Against this backdrop, the CJEU attempted to shed some light by referring to the notion of the 'specific subject-matter' of the intellectual property right as a yardstick. In *Deutsche Gramophon v Metro*, a case concerning the freedom of movement of goods in the EU, the CJEU referred to the existence-exercise dichotomy and affirmed that derogations to that freedom are only admitted 'to the extent that they are justified for the purpose of safeguarding rights which constitute the specific subject-matter of such property.'⁸⁶⁰ Some years later, in an effort to clarify the concept, the CJEU stated that the specific subject-matter of patents

is the guarantee that the patentee, to reward the creative effort of the inventor, has the exclusive right to use an invention with a view to manufacturing industrial products and putting them into circulation for the first time, either directly or by the grant of licences to third parties, as well as the right to oppose infringements.⁸⁶¹

⁸⁵⁷ Case 24/67 *Parke, Davis & Co v Probel* [1968] ECR 55, 72.

⁸⁵⁸ Keeling (n 851) 54; Valentine Korah, *Intellectual Property Rights and the EC Competition Rules* (Hart 2006) 3-4. Yet it has also been stated that most critics seem to ascribe the distinction ambitions that it never intended to have, as it did not mean to solve the entire universe of possible conflicts and should rather be taken as a starting point. Keeling (n 851) 61.

⁸⁵⁹ Keeling (n 851) 61.

⁸⁶⁰ Case 78/70 *Deutsche Grammophon GmbH v Metro-SB-Großmärkte GmbH* [1971] ECR 487, para 11.

⁸⁶¹ Case 15/74 *Centrafarm BV v Sterling Drug Inc* [1974] ECR 1147, para 9.

The clarification, however, did not seem to advance the debate very far. On the one hand, the court left unclear whether the specific subject-matter referred to the policy reason for granting the patent or to its nature and scope.⁸⁶² Perhaps more significantly, critics emphasised that the test can be defined arbitrarily in every case in such a way that it determines *a priori* the result sought.⁸⁶³

c. Current Stage of the Debate

Today, both standards have been virtually abandoned by the courts. The existence-exercise dichotomy had already been played down in several decisions following *Consten and Grundig*⁸⁶⁴ and was clearly disregarded in *AstraZeneca*.⁸⁶⁵ The specific subject-matter standard, on its turn, also fell in disgrace after the *Keurkoop v Nancy Kean Gifts* decision.⁸⁶⁶ In a nutshell, this case referred to a firm who had copied and registered a design in Benelux without the authorisation of the original author and had later relied on it to stop the sale of similar products. It was, therefore, the perfect case to further develop specific subject-matter standard, its ‘moment of truth’,⁸⁶⁷ although that would have probably forced the CJEU to recognise that an intellectual property right granted by a Member State was not worthy of protection.⁸⁶⁸ Perhaps not ready to take such a courageous step, the CJEU did not even mention the standard in its decision and instead revert-

862 Valentine Korah, ‘The Limitation of Copyright and Patents by the Rules for the Free Movement of Goods in the European Common Market’ (1982) 14 Case W Res J Int’l L 7, 17.

863 *ibid* 19-20; Karen Banks and Giuliano Marenco, ‘Intellectual Property and the Community Rules on Free Movement: Discrimination Unearthed’ (1990) 15 E L Rev 224, 230.

864 Inge Govaere, *The Use and Abuse of Intellectual Property Rights in EC Law* (Sweet & Maxwell 1996) 168. An important decision in this regard is *Tetra Pak I*, where the Court of First Instance condemned the acquisition of an exclusive patent license by a dominant firm. Case T-51/89 *Tetra Pak Rausing SA v Commission* [1990] ECR II-309 (*Tetra Pak I*).

865 In this case, the Commission explicitly stated that the standard has ‘gradually been abandoned in later case law’. Commission Decision in *AstraZeneca* (n 751) para 741. See also, in this connection, Katarzyna Czapracka, *Intellectual Property and the Limits of Antitrust: A Comparative Study of US and EU Approaches* (Edward Elgar 2010) 93-96.

866 Case 144/81 *Keurkoop BV v Nancy Kean Gifts BV* [1982] ECR 2853.

867 Banks and Marenco (n 863) 232.

868 Keeling (n 851) 70.

ed to the general principle according to which, in the absence of harmonisation, the conditions under which intellectual property protection is granted remain a matter for national law.⁸⁶⁹ After this case, the specific subject-matter standard never fully recovered.⁸⁷⁰

Regrettably, subsequent decisions did not propose alternative criteria,⁸⁷¹ except perhaps for the vague distinction between ‘legitimate’ and ‘improper’ exercise of intellectual property rights⁸⁷² or the general yardstick of ‘competition on the merits’.⁸⁷³ In any case, what seems clear is that European competition law enforcers nowadays do not consider intellectual property rights to be immune from antitrust intervention.⁸⁷⁴ The boundaries appear to be determined more by the constituent elements of the proscribed conduct than by the scope of the intellectual property rights.⁸⁷⁵ Under the current practice of EU courts, not only the exercise of intellectual property rights can be challenged but also their very existence, and it is not necessary for the abusive behaviour to take place in the market.⁸⁷⁶ For this reason, conducts like obtaining an exclusive license, acquiring a right or abusing administrative or judicial processes can amount to a breach of the EU competition law.⁸⁷⁷ Even in situations where intellectual property laws themselves offer alternative remedies and try to strike a balance between public and private interests, antitrust intervention is usually still

869 *Keurkoop v Nancy Kean Gifts* (n 866) para 29. A similar approach was taken in *Thetford v Fiamma*, where the court refused to revise the UK patent system in force at that time, which allowed the grant of patents under the principle of relative novelty. Case 35/87 *Thetford Corp v Fiamma SpA* [1988] ECR 3585.

870 Banks and Marengo (n 863) 232; Keeling (n 851) 72. Yet it should be noted that cases like *AstraZeneca*, which is analysed below, seem to still find some inspiration from it. Commission Decision in *AstraZeneca* (n 751) para 742 (‘AZ’s conduct can hardly be described as belonging to the subject-matter of the rights in question. ... the making of misleading representations is not included in the bundle of rights forming part of the subject-matter of an SPC.’).

871 Czapracka (n 865) 106.

872 Keeling (n 851) 73 (stressing the numerous concerns that it raised due to its ambiguity). Some scholars, however, seemed to consider it an adequate standard. See Friedrich-Karl Beier, ‘Industrial Property and the Free Movement of Goods in the Internal European Market’ (1990) 21 IIC 131, 149–50.

873 Case C-62/86 *AKZO Chemie BV v Commission* [1991] ECR I-3359, para 70.

874 EU Guidelines on Technology Transfer Agreements (n 716) para 7.

875 Anderman, ‘The IP and Competition Interface’ (n 745) 24.

876 Commission Decision in *AstraZeneca* (n 751) para 328 and case law cited therein.

877 *Tetra Pak I* (n 864) para 23; Joined Cases C-395/96 P and C-396/96 P *Compagnie Maritime Belge Transports v Commission* [2000] ECR I-1365, paras 82–88; Case T-111/96 *ITT Promedia v Commission* [1998] ECR II-2937; Case C-457/10 P *AstraZeneca v Commission* (CJEU, 6 December 2012, ECLI:EU:C:2012:770).

considered justified, as the IP legislation might not be able to comprehensively take into account all the concerns in which the competition rules are inspired.⁸⁷⁸

Finally, it should be noted that EU courts and agencies at times conceive competition policy as a tool to correct imperfect intellectual property laws from the Member States.⁸⁷⁹ Taking into account that most of those laws have not yet been fully harmonised, this might be viewed as advantageous from a community law perspective, yet caution is also required in order to avoid disrupting the internal coherence of the IP system.⁸⁸⁰

d. Is there a Petitioning Immunity Doctrine in Europe?

As a final point, it is important to consider whether EU law has developed any principles to protect private parties in their attempts to induce government action comparable to US' *Noerr* doctrine. On its face, no comparable immunity doctrine seems to exist in Europe and the case law on the matter is admittedly not as well established as in the US,⁸⁸¹ yet some analogous principles have been nevertheless developed. The Commission, for instance, has recognised that private parties' approaching public authorities in their own interest should not in itself amount to an infringement of competition law.⁸⁸² Furthermore, the Charter of Fundamental Rights of

878 Ghidini (n 726) 212 (despite of the synergic relationship, it is important to avoid attributing antitrust a *direct* role in promoting innovation and intellectual property rights a *direct* role in promoting competition); Keeling (n 851) 377-78 (since intellectual property law cannot examine whether effective competition in a particular market is being damaged as a result of the manner in which an exclusive right is being exercised, there seems to be a legitimate role for art 102 TFEU). Cf Govaere, *The Use and Abuse of IPRs in EC Law* (n 864) 305.

879 See, for instance, Case C-7/97 *Oscar Bronner v Mediaprint Zeitungs- und Zeitschriftenverlag* [1998] ECR I-7791, Opinion of AG Jacobs, para 63 ('[t]he ruling in Magill can in my view be explained by the special circumstances of that case ... the provision of copyright protection for programme listings was difficult to justify in terms of rewarding or providing an incentive for creative effort...').

880 Czapracka (n 865) 38; Lars Kjølbbye, 'Article 82 EC as Remedy to Patent System Imperfections: Fighting Fire with Fire?' (2009) 32 *World Competition* 163.

881 Maggiolino (n 759) 190.

882 *French-West African Shipowners' Committees* (Case IV/32.450) Commission Decision 92/262/EEC [1992] OJ L134/1, para 68.

the EU expressly recognises the rights of petitioning and access to courts⁸⁸³ and both the Commission and the General Court have acknowledged in the *ITT Promedia* case that ‘it is only in wholly exceptional circumstances that the fact that legal proceedings are brought is capable of constituting an abuse of an dominant position.’⁸⁸⁴ The CJEU subsequently came to a similar conclusion in *Huawei*, where it highlighted that the Charter of Fundamental Rights of the EU calls for a high level of protection for intellectual property rights and the right to effective judicial protection and that this ‘means that, in principle, the proprietor may not be deprived of the right to have recourse to legal proceedings to ensure effective enforcement of his exclusive rights...’⁸⁸⁵ However, in that same case the CJEU also suggested that the fundamental right to legal redress must be balanced against the protection of competition, as certain circumstances may justify the imposition of limitations to those rights.⁸⁸⁶

Additionally, the CJEU clarified in *Compagnie Maritime Belge*⁸⁸⁷ that conducts that merely seek a ministerial response from the government are entirely subject to competition law.⁸⁸⁸ Likewise, the CJEU has also recognised that the submission of false or misleading information to public authorities can constitute a violation of competition rules.⁸⁸⁹

883 Charter of Fundamental Rights of the European Union [2012] OJ C 326/391, art 44 (‘Any citizen of the Union and any natural or legal person residing or having its registered office in a Member State has the right to petition the European Parliament.’); art 47 (‘Everyone whose rights and freedoms guaranteed by the law of the Union are violated has the right to an effective remedy before a tribunal...’).

884 *ITT Promedia* (n 877) para 60. See also Case T-119/09 *Protégé International Ltd v Commission* [2012] OJ C319/6, para 48 (‘l’accès au juge étant un droit fondamental et un principe général garantissant le respect du droit, ce n’est que dans des circonstances tout à fait exceptionnelles que le fait d’intenter une action en justice est susceptible de constituer un abus de position dominante au sens de l’article 82 CE.’).

885 Case C-170/13 *Huawei Technologies Co. Ltd v ZTE Corp., ZTE Deutschland GmbH* (CJEU, 16 July 2015, ECLI:EU:C:2015:477) paras 57-58.

886 *Ibid* para 59.

887 *Compagnie Maritime Belge* (n 877) para 83 (‘It is ... unnecessary to consider whether, and in what circumstances, mere incitement of a government to take action may constitute abuse within the meaning of Article 86 of the Treaty’).

888 *ibid* paras 81-83.

889 CJEU Decision in *AstraZeneca* (n 877) paras 93 and 99. In fact, in that case the CJEU also argued that even conducts that are deemed legal under a specific field of law may be considered anticompetitive. For a detailed analysis of this decision, see text at nn 977ff.

Finally, the Commission has attempted to define in *ITT Promedia* the circumstances under which sham or vexatious litigation can constitute an abusive behaviour and developed to that end a test which has also been employed by the General Court. According to this test, in order to determine in which cases the bringing of legal proceedings against a competitor can constitute an abuse, it is necessary to prove that the action

- (i) cannot reasonably be considered as an attempt to establish the rights of the undertaking concerned and can therefore only serve to harass the opposite party, and
- (ii) it is conceived in the framework of a plan whose goal is to eliminate competition.⁸⁹⁰

As can be observed, this two-step test very much resembles the sham litigation test developed by the US Supreme Court in *PREI*.⁸⁹¹

2. How can Deceptive Conducts before the Patent Office Affect Competition? *The Experience and Challenges under US and EU law*

Having laid out the general framework on the interaction between intellectual property and antitrust, it is now possible to study how these two bodies of law interplay in the specific scenario that constitutes the essential object of this work: that which involves a deceptive behaviour before a patent office.

At the outset, it should be pointed out that this matter presents certain specific features that distinguish it from other discussions at the intersection of patent law and competition. Ordinarily, the focus is set on situations where both areas of law appear in tension, ie on ascertaining whether a specific behaviour that is legal under the eyes of patent law can nonetheless constitute a violation of the competition rules. Instead, in the cases at hand, the question is rather whether a conduct which might already be reprehensible from a patent law perspective⁸⁹² can also be condemned by

890 *ITT Promedia* (n 877) para 55; *Protégé* (n 884) para 49.

891 See text at n 811. For a more thorough analysis of the concept of sham, see text at nn 1148ff.

892 Indeed, as explained above, most patents obtained via deceptive demeanours are likely to be invalid, although it is also possible to conceive situations where, despite the existence of deceptive conduct, the invention still meets all patentability requirements. In those situations, the patent is likely to remain valid, al-

antitrust.⁸⁹³ In principle, the fact that a conduct is condemned by patent laws should not present a major issue, since the existence of other tort remedies does not automatically exempt a specific conduct from antitrust scrutiny.⁸⁹⁴ Remedies under different areas of law are likely to pursue different interests.⁸⁹⁵ Moreover, hardly anyone could deny that deceptive conducts are socially undesirable and should be banned,⁸⁹⁶ yet that alone is not sufficient to condemn every deceptive conduct as an antitrust violation.⁸⁹⁷ Competition law is not about morality, but essentially about making sure that competition is not obstructed.⁸⁹⁸ Thus, the essential question is whether deceptive conducts before the patent office cause the kind of anticompetitive harms that the competition rules are designed to go after.

Admittedly, the issue has been a long-standing concern under US antitrust law, with cases dating back to as early as 1965, whereas in Europe the question arose much more recently. What remains of this chapter is aimed at providing a synopsis of the most significant cases and reveal the at times converging, at times divergent approaches adopted on both sides of the Atlantic—thereby also laying the ground for Chapter VI to analyse in depth the questions that remain to be answered.

though it might be held unenforceable under US law based on the inequitable conduct doctrine. See text at nn 230ff in ch 3.

893 Christopher R Leslie, 'Antitrust, Inequitable Conduct, and the Intent to Deceive the Patent Office' (2011) 1 U C Irvine L Rev 323, 323.

894 Areeda and Hovenkamp, *Antitrust Law* (n 778) para 782a; Susan A Creighton and others, 'Cheap Exclusion' (2005) 72 Antitrust L J 975, 993; O'Donoghue and Padilla (n 750) 647.

895 O'Donoghue and Padilla (n 750) 647.

896 Josef Drexler, 'Deceptive Conduct in the Patent World: A Case for US Antitrust and EU Competition Law?' in Wolrad Prinz zu Waldeck und Pyrmont and others (eds), *Patents and Technological Progress in a Globalized World: Liber Amicorum for Joseph Straus* (Springer 2009) 139.

897 Harv L Rev note, 'Deception as an Antitrust Violation' (n 812) 1255. In this connection, the US Supreme Court has expressed the view that, in cases where a regulatory structure is already in place, the likelihood of major antitrust harm is diminished and the additional benefit to competition provided by antitrust enforcement is likely to be small. *Verizon Communications Inc v Law Offices of Curtis V Trinko, LLP* 540 US 398, 412 (2004).

898 See text at nn 492ff in ch 4.

A. US Case Law. Fraud to the Patent Office and Misuse of Orange Book Listings

In the US, deceptive conducts before the patent office were first addressed from an antitrust perspective in the Supreme Court's *Walker Process* decision of 1965. Since then, the decision has become a touchstone around which the doctrine has developed. Today, 'fraud to the patent office' constitutes one of the most popular antitrust defences in patent litigation together with the so-called *Handgards* or sham litigation claims⁸⁹⁹—although hardly ever are these antitrust defences successful.⁹⁰⁰ The following paragraphs attempt to thoroughly explain how these antitrust doctrines have developed over time and conclude with an analysis of a series of more recent cases that have arisen in the context of Orange Book listings by patent applicants—and which provide the chance to put the underlying theories of harm under the microscope.

I. *Walker Process* and its Progeny

a. The *Walker Process* decision

The first case in which the US Supreme Court ruled on misleading behaviours before the patent office as possible antitrust violations was *Walker Process Equipment v Food Machinery & Chemical*.⁹⁰¹ In this case, Food Machinery had started a patent infringement action against Walker, who had in turn denied the infringement and counterclaimed that the patent was invalid. Since the patent had expired in the meantime, Food Machinery later made a motion to dismiss its complaint, but at that point Walker amended its counterclaim and accused the former of monopolisation, alleging that the patent had been fraudulently obtained and maintained. It argued that Food Machinery had sworn before the USPTO that it neither knew nor believed that the invention had been in public use for more than one year before the filing date when, in fact, it had been itself selling the invention before that date. It further argued that the existence of such

899 David R Steinman and Danielle S Fitzpatrick, 'Antitrust Counterclaims in Patent Infringement Cases: A Guide to Walker Process and Sham-Litigation Claims' (2001) 10 Tex Intell Prop LJ 95, 95.

900 *ibid* 99; Joel Davidow, *Patent-Related Misconduct Issues in US Litigation* (OUP 2010) 118.

901 *Walker Process* (n 763).

patent had deprived Walker of business that it would have otherwise enjoyed and grounded its suit on the patent misuse doctrine: if using a valid patent to extend the protection on an unpatented product was considered illegitimate, then securing protection on an unpatentable product by a fraudulently obtained patent should also be.⁹⁰²

The district court, however, considered that Walker was attempting to use the issue of fraud to indirectly achieve what it could not do directly, since according to earlier case law only the US Government could ‘annul or set aside’ a patent based on fraud.⁹⁰³ The district court thus rejected the antitrust counterclaim and the Court of Appeals later confirmed that decision, highlighting the lack of case law on the matter.⁹⁰⁴ Against this context, the Supreme Court proposed a novel approach to the quandary and, without overruling the earlier case law, concluded that ‘the enforcement of a patent procured by fraud on the Patent Office may violate of § 2 of the Sherman Act provided that the other elements necessary for a § 2 case are present.’⁹⁰⁵

To reach this conclusion, the Supreme Court first argued that Walker’s claim was not barred by earlier case law, since it was based on antitrust laws rather than patent law and fraudulent procurement was only one of its elements.⁹⁰⁶ It emphasised in this regard that defendants in patent infringement suits were already permitted to raise defences based on fraudulent procurement when invoking inequitable conduct and that allowing antitrust claims against said conducts could further promote the purposes of the inequitable conduct doctrine.⁹⁰⁷

When looking at the crux of the matter, the Supreme Court opened with the premise that patents are ordinarily exempted from antitrust laws and approached the issue in terms of whether such an exemption would be apposite in this particular case. To answer the question, the court held that proof that a patent has been obtained ‘by knowingly and wilfully misrepresenting facts to the Patent Office’ would be ‘sufficient to strip [the patent]

902 *Food Machinery & Chemical Corp v Walker Process Equipment Inc* 335 F 2d 315, 316 (7th Cir 1964).

903 *ibid* 316. This rule had been allegedly acknowledged as a means to protect patentees from vexatious suits by defendants. B D Daniel, ‘Walker Process Proof: The Proper Prescription’ (2009) 41 Rutgers L J 105, 118.

904 *Walker Process* (Court of Appeals) (n 902) 316.

905 *Walker Process* (n 763) 174.

906 *ibid* 176.

907 *ibid* 176-77 (1965) (quoting reasoning given in *Precision Instrument*; see text at n 172 in ch 3).

tee] of its exemption from the antitrust laws.⁹⁰⁸ It further specified that, by the same token, patent assignees who maintain and enforce a patent ‘with knowledge of the patent’s infirmity’ would also be stripped from their exemption.⁹⁰⁹ On the other end of the spectrum, it stated that proof of good faith would provide a complete defence.⁹¹⁰

The decision also included a much-cited concurring opinion by J Harlan. While entirely agreeing with the conclusions of the majority, J Harlan warned against an extensive interpretation that could affect patents ‘that for one reason or another may turn out to be voidable under one or more of the numerous technicalities attending the issuance of a patent’.⁹¹¹ As such a reading could have chilling effects on the disclosure of inventions, he continued, no antitrust case should be made out of a mere finding of invalidity, eg due to obviousness or ‘technical fraud’. Even if the fraudulent behaviour is proven, the opinion concluded, no antitrust violation could exist if the assignee had no knowledge thereof.⁹¹²

In any event, the Supreme Court majority reminded that stripping a patent of its exemption from antitrust laws only constitutes a first step in the antitrust analysis and refused to see the behaviour as a *per se* violation. The court observed that, to establish an antitrust violation, all other elements of § 2 Sherman Act should be present, including the exclusionary power of the concerned patent and the definition of the relevant market.⁹¹³

At first glance, the conclusions of the decision seem to be relatively clear and precise, yet a closer look reveals a number of unsettled questions. In the first place, it is not entirely clear whether the patent misuse doctrine played any role in the case: the antitrust plaintiff had made it an essential part of the claim, but the Supreme Court does not seem to rely on it to reach its conclusion.⁹¹⁴ Most significantly, the decision does not explain how the *Noerr* petitioning immunity fits into the puzzle. While the decision in *Walker Process* was issued only four years after *Noerr*, the Supreme Court does not even mention it among its considerations—despite the fact

908 *ibid* 177.

909 *ibid* 177, fn 5.

910 *ibid* 177.

911 *ibid* 180.

912 *ibid* 179.

913 *ibid* 177-78.

914 While it is true that the decision cites a patent misuse decision, it appears to do so for merely illustrative purposes. *Ibid* 176.

that applying for a patent clearly constitutes an act of petitioning the government.⁹¹⁵

Additional questions also arise in connection with the kind of deceptive conduct that needs to be shown to make an antitrust case. The majority speaks, in rather vague terms, of knowing and wilful misrepresentation of facts to the patent office, thus possibly suggesting that any misrepresentation could open the door for an antitrust analysis. The concurring opinion attempted to shed some light by listing a handful of circumstances that should not be considered relevant from an antitrust perspective, yet the boundaries of the reproachable conduct were still imprecise.⁹¹⁶

Last, but certainly not least, the decision does not provide much of a guidance as to the underlying theory of harm that informed its reasoning. On the one hand, it seems to rely on a prevailing assumption at that time: patents are exempted from the antitrust laws as long as the patentees' behaviour remains within the patent scope, whereas any step beyond the line makes them automatically subject to antitrust liability.⁹¹⁷ On the other hand, it is not entirely clear whether the anticompetitive harm flows from the fraud at the patent office or from maintaining and enforcing the fraudulently obtained patent, and in the latter case whether the behaviour before the patent office is indeed meaningful. At parts, the decision focuses exclusively on the deceptive behaviour before the patent office,⁹¹⁸ but the conclusions suggest that it might rather be 'the enforcement of a patent procured by fraud' which triggers antitrust concerns.⁹¹⁹ What is more, the Supreme Court stated that assignees who maintain and enforce a patent 'with knowledge of the patent's infirmity' can also be anticompetitive, which might actually downplay the relevance of the fraud element altogether. In this regard, there does not seem to be much of a difference from an antitrust perspective between an assignee who enforces a patent with knowledge of a fraudulent procurement and a patentee or assignee who, despite an immaculate procurement, later finds out that the patent is invalid (eg, due to the emergence of an old piece of prior art) and nonethe-

915 Hovenkamp and others, *IP and Antitrust* (n 712) para 11.2b.

916 Raymond P Niro and J William Wigert Jr, 'Patents, Fraud and the Antitrust Laws' (1968) 37 Geo Wash L Rev 168, 176.

917 See text at n 765.

918 *Walker Process* (n 763) 177 (proof that a patentee 'obtained the patent by knowingly and willfully representing facts to the Patent Office ... would be sufficient to strip [the patentee] of its exemption from the antitrust laws').

919 *ibid* 174.

less seeks to enforce it. In both cases, the parties would be maintaining and enforcing a right knowing that it is vitiated.⁹²⁰

b. The *Walker Process* Legacy

As stated earlier, *Walker Process* has become over the years one of the most often raised antitrust defences in US patent litigation. The Supreme Court, however, has not rendered any further decision on the issue ever since and the lower courts have sometimes struggled to cope with the questions that were left open.

In the first place, it is not yet clear how the *Noerr* immunity doctrine applies (or not) to these particular behaviours. The Supreme Court has had the chance to clarify it in subsequent decisions, but explicitly refused to do so.⁹²¹ Some lower courts have then ventured to suggest that misrepresentations in adjudicatory procedures—like patent applications—simply constitute a subset of the sham exception recognised in *Noerr*.⁹²² The Supreme Court case law, however, does not seem to allow such a view, since it has traditionally thought of sham as a narrow concept, limited to situations where the anticompetitive harm is caused by the governmental process it-

920 Ned L Conley, ‘Considerations in Patent Litigation Brought About by Walker Process Equipment, Inc v Food Machinery & Chemical Corp’ (1966) 9 S Tex L J 9, 13 (‘the *Walker* decision might well be considered to be authority for finding an antitrust violation even in a case where there was no fraud on the Patent Office. For example, if, after the patent issues, the patentee learns that the patent is invalid, either for public use or for some other reason, and despite this he attempts to enforce the patent monopoly, the courts may well apply the reasoning in *Walker* and find this to be an attempt to enforce an illegal monopoly.’). See also Hovenkamp, *The Antitrust Enterprise* (n 779) 267 (‘... the “intellectual property” content of Walker Process claims is easily exaggerated. The basis of the claim is that the antitrust defendant went to court or threatened to do so on a nonmeritorious claim. It in fact knew or should have known that the patent was invalid or unenforceable.’).

921 *PREI* (n 791) 61, fn 6 (‘In surveying the “forms of illegal and reprehensible practice which may corrupt the administrative or judicial processes and which may result in antitrust violations,” we have noted that “unethical conduct in the setting of the adjudicatory process often results in sanctions” and that “[m]isrepresentations, condoned in the political arena, are not immunized when used in the adjudicatory process.” We need not decide here whether and, if so, to what extent *Noerr* permits the imposition of antitrust liability for a litigant’s fraud or other misrepresentations.’) (citations omitted).

922 *Kottle v Northwest Kidney Centers* 146 F 3d 1056, 1060-61 (9th Cir 1998).

self rather than its outcome.⁹²³ Others considered that *Walker Process* existed in a sort of ‘patent-antitrust eddy’ of its own, independent of the *Noerr* line of cases.⁹²⁴ The Federal Circuit and the FTC have both provided a more sensible interpretation, stating that sham litigation and misrepresentations actually constitute two different alternatives on which a patentee may be stripped of its *Noerr* immunity.⁹²⁵

With respect to the kind of deceptive conducts before the patent office that can configure an antitrust violation, lower courts have consistently relied on the elements of common law fraud and adapted them to this particular scenario.⁹²⁶ Accordingly, *Walker Process* claims are required to show the following elements:

- (1) a representation of a material fact, (2) the falsity of that representation, (3) the intent to deceive or, at least, a state of mind so reckless as to the consequences that it is held to be the equivalent of intent (scienter), (4) a justifiable reliance upon the misrepresentation by the party deceived which induces him to act thereon, and (5) injury to the party deceived as a result of his reliance on the misrepresentation.⁹²⁷

As for the materiality element, ie the patent office’s reliance upon the misrepresentation, J Posner has elaborated on the topic and argued that only ‘but-for’ materiality would justify antitrust intervention and that no an-

923 *Omni* (n 791) 380.

924 James B Kobak Jr, ‘Professional Real Estate Investors and the Future of Patent-Antitrust Litigation: *Walker Process* And *Handgards* Meet *Noerr-Pennington*’ (1994) 63 *Antitrust L J* 185, 193.

925 *Nobelpharma* (n 812) 1071 (‘Each provides its own basis for depriving a patent owner of immunity from the antitrust laws; either or both may be applicable to a particular party’s conduct in obtaining and enforcing a patent. The Supreme Court saw no need to merge these separate lines of cases and neither do we.’); FTC, ‘Enforcement Perspectives on the *Noerr-Pennington* Doctrine’ (n 780) 22-23 (‘There are instances in which parties may mislead government decision makers in an attempt to secure government action that harms competition. Such misrepresentations differ from traditional sham activities, such as the initiation of baseless litigation, in that the purpose of making the misrepresentations likely is to obtain government action.’).

926 *Norton Co v Carborundum Co* 530 F 2d 435, 444-45 (1st Cir 1976); *Nobelpharma* (n 812) 1069. Cf Daniel (n 903) 156 (In *Walker Process*, the Supreme Court made no reference whatsoever either to “common law fraud” or to the elements of “common law fraud.” ... the Supreme Court’s decision ... affirmatively precludes any incorporation of elements from the common law cause of action.’).

927 *Norton v Curtiss* 433 F 2d 779, 793 (CCPA 1970) (internal citations omitted).

titrust case should be made if the invention was nevertheless patentable.⁹²⁸ Indeed, if the invention is patentable, it should not matter from an antitrust perspective how pristine or dishonest the patentee was in obtaining the patent.⁹²⁹ The decision provides the example of a patent granted on a patentable invention to a person other than the real inventor, contending that the effect of that patent on the market ‘is no greater than it otherwise would be just because the person exercising the rights is not the one entitled by law to do so.’⁹³⁰ This reasoning has proved influential among other courts.⁹³¹

Also related to the nature of the fraud necessary to support a *Walker Process* claim, the Federal Circuit had attempted to shed some light by distinguishing it from the conduct required in inequitable conduct cases and emphasising that ‘[t]o demonstrate *Walker Process* fraud, a claimant must make higher threshold showings of both materiality and intent than are required to show inequitable conduct.’⁹³² Furthermore, the Federal Circuit had highlighted that the ‘sliding scale’ employed in inequitable conduct cases⁹³³ was not applicable in antitrust suits.⁹³⁴ Subsequently, however, the Federal Circuit rendered an *en banc* decision in *Therasense* which has considerably heightened the inequitable conduct standards, asserting that ‘but for’ should be the governing materiality standard and ruling out the ‘sliding scale’.⁹³⁵ Therefore, although *Therasense* does not address *Walker Process*

928 *Brunswick Corp v Riegel Textile Corp* 752 F 2d 261, 265 (7th Cir 1984).

929 *ibid.*

930 *ibid.*

931 Kobak, ‘PREI and the Future of Patent-Antitrust Litigation’ (n 924) 198.

932 *Dippin’ Dots Inc v Mosey* 476 F 3d 1337, 1346 (Fed Cir 2007). In a frequently cited passage, the Federal Circuit has claimed that ‘[i]nequitable conduct is ... an equitable defense in a patent infringement action and serves as a shield, while a more serious finding of fraud potentially exposes a patentee to antitrust liability and thus serves as a sword.’ *Nobelpharma* (n 812) 1069.

933 See text at nn 252-253 in ch 3.

934 *Dippin’ Dots* (n 932) 1348 (‘Weighing intent and materiality together is appropriate when assessing whether the patentee’s prosecution conduct was inequitable. However, when *Walker Process* claimants wield that conduct as a “sword” to obtain antitrust damages rather than as a mere “shield” against enforcement of the patent, they must prove deceptive intent independently.’) (internal citations omitted).

935 *Therasense Inc v Becton, Dickinson & Co* 649 F 3d 1276, 1290-91 (Fed Cir 2011) (*en banc*). See text at nn 243-248 and 252-253 in ch 3.

claims or antitrust, the differences in practice between these two standards might not be as sharp anymore.⁹³⁶

Finally, the most significant question mark that hovers over the courts as regards *Walker Process* claims is probably the one that refers to the underlying theory of harm. On one side of the spectrum, some have interpreted that *Walker Process* is actually a case of antitrust liability for inducing governmental action via misrepresentations.⁹³⁷ In that event, the anticompetitive harm would flow from the decision of the government to mistakenly grant a patent due to the fraudulent conduct of the applicant and the impact that the granted patent has on the market. Yet one court has argued that, because the patent should have a 'colourable validity', its mere existence might not be sufficient to deter competitors and that some additional activity from the patentee might be required.⁹³⁸ That same court also recognised, however, that a showing of enforcement is not indispensable because, after all, 'the concern of section 2 is with exclusion of competition, not with the particular means of exclusion.'⁹³⁹

On the other side of the spectrum, the prevailing reading of *Walker Process* today seems to consider that the antitrust offence consists not solely on the fraudulent behaviour before the patent office, but also on the enforcement of the fraudulently obtained patent. The Ninth Circuit, for instance, interpreted that, without some effort to enforce, the patent cannot serve as the foundation for a monopolisation case.⁹⁴⁰ The Federal Circuit later embraced this reading⁹⁴¹ and in a subsequent decision confirmed that it is the *enforcement* of a patent procured by fraud, rather than the fraud itself, that

936 Herbert Hovenkamp, 'Patent Exclusions and Antitrust after *Therasense*' (2011) U Iowa Legal Studies Research Paper 11/39, 34 <<http://ssrn.com/abstract=1916074>> accessed 14 February 2018.

937 *Woods Exploration & Producing Co Inc v Aluminum Co of America* 438 F 2d 1286, 1295 (5th Cir, 1971) ('plaintiffs' basic claim is that the applicable production allowable formula which the state would have intended to utilize was subverted to the injury of plaintiffs by defendants' filing of false nomination forecasts. The situation is analogous to the filing of fraudulent statements with the Patent Office, which has been held to be evidence of an antitrust violation.'). Along the same lines, see L Barry Costilo, 'Antitrust's Newest Quagmire: The Noerr-Pennington Defense' (1967) 66 Mich L Rev 333, 348-50; Floyd (n 812) 422; Lao, 'Reforming the Noerr Doctrine' (n 790) 977.

938 *Brunswick* (n 928) 265-66.

939 *ibid* 266.

940 *California Eastern Laboratories Inc v Gould* 896 F 2d 400, 403 (9th Cir 1990).

941 *Cygnus Therapeutic Systems v Alza Corp* 92 F 3d 1153, 1161 (Fed Cir 1996).

can amount to an antitrust offence.⁹⁴² To that end, it stated that the standards developed for declaratory judgment actions ‘also define the minimum level of “enforcement” necessary to expose the patentee to a *Walker Process* claim.’⁹⁴³ More recent cases have clarified that said ‘enforcement’ does not necessarily require the patentee to initiate legal actions, but can also be configured, eg, by sending letters to competitors’ customers notifying them of the existence of the patent.⁹⁴⁴

It is worth stressing at this point that, under the latter interpretation, the role played by the fraud element seems to be rather minor. As explained above, it is hard to see much of a difference from an antitrust perspective between (i) maintaining and enforcing a fraudulently procured patent, and (ii) maintaining and enforcing a patent known to be invalid, even if the prosecution was carried out in good faith, eg because the patentee only later became aware of the cause of invalidity. The focus here seems to be on maintaining and enforcing a patent knowing of its invalidity, and the fraud at the patent office would be just one of a ream of reasons why the patentees may be aware of it. In any case, it should also be acknowledged that, under this reading, the antitrust harm still seems to flow from the deterrent effect caused by the existence of the patent and its use by the patentee: if a patentee knowingly maintains and enforces an invalid patent while competitors are unaware—or unsure—of its invalidity, such circumstance itself can delay or dissuade the latter from entering or staying in a particular market.

c. The *Handgards* or ‘Bad Faith Litigation’ Antitrust Claim

Together with *Walker Process*, the other most common antitrust defence in US patent infringement cases is the *Handgards* or ‘bad faith litigation’ claim.⁹⁴⁵ Both have similar origins and share some of their defining elements, yet the antitrust harm induced in each of them seems to be somewhat different.

942 *Unitherm Food Systems Inc v Swift-Eckrich Inc* 375 F 3d 1341, 1357-58 (Fed Cir 2004), revd on other grounds 546 US 394 (2006).

943 *ibid* 1358 (‘In other words, if the patentee has done nothing but obtain a patent in a manner that the plaintiff believes is fraudulent, the courts lack jurisdiction to entertain either a Declaratory Judgment Action or a *Walker Process* claim.’).

944 *HydriL Co LP v Grant Prideco LP* 474 F 3d 1344, 1350 (Fed Cir 2007).

945 Steinman and Fitzpatrick (n 899) 95.

The *Handgards* case,⁹⁴⁶ which gives name to this antitrust defence, had started with an unsuccessful patent infringement suit, where the court had concluded that the patent was invalid due to the existence of a 'prior public use'. The alleged infringer thence filed an antitrust action initially invoking *Walker Process*, but the grounds of the complaint were revised when no proof of fraud at the patent office was found and a 'bad faith' theory was asserted instead. According to the antitrust plaintiff, the patentee had attempted to monopolise the relevant market by bringing a patent infringement action knowing that the patent was invalid, among other reasons, because the patentee had become aware that the defendants themselves had made a prior public use of the invention. The Court of Appeals confirmed that, by the time of the infringement suit, the patentee was aware that the patent was invalid and that this behaviour may constitute a violation of § 2 Sherman Act. In this regard, it stated that such a finding would configure a case of 'sham' that would exempt the patentees of the immunity that they would otherwise enjoy for petitioning the courts.⁹⁴⁷

It has been argued that a *Handgards* claim does not essentially differ from *Walker Process*, as both cases involve the enforcement of an invalid patent with an anticompetitive effect.⁹⁴⁸ The *Walker Process* decision had indeed included a statement that very much resembles the offence in *Handgards*.⁹⁴⁹ Yet in *Handgards*, the anticompetitive harm does not appear to be exactly the same, as it seems to flow not from the exclusionary effect of a patent whose invalidity is unknown by the general public, but rather from the harassing behaviour of the patentee. As a matter of fact, *Handgards* claims may be based not only on the enforcement of a patent known to be invalid, but also on the enforcement of a valid patent known not to be infringed,⁹⁵⁰ thus evidencing that the focus is not set on the exclusionary effect of the patent but on the abusive use of the judicial system.

946 *Handgards Inc v Ethicon Inc* 601 F 2d 986 (9th Cir 1979) (*Handgards I*); *Handgards Inc v Ethicon Inc* 743 F 2d 1282 (9th Cir 1984) (*Handgards II*).

947 *Handgards II* (n 946) 1294-95.

948 Hovenkamp and others, *IP and Antitrust* (n 712) para 11.1 ('there is essentially no economic justification for treating *Walker Process* and *Handgards* claims differently.'): S W O'Donnell, 'Unified Theory of Antitrust Counterclaims in Patent Litigation' (2004) 9(8) *Va J L & Tech* 1, 45 ('It is difficult to see how the *Handgards* claim, based upon *Walker Process*, differs so radically from its progenitor that it implicates a completely different standard of analysis.').

949 The Supreme Court had stated that the conclusion reached in that decision 'applies with equal force to an assignee who maintains and enforces the patent with knowledge of the patent's infirmity.' *Walker Process* (n 763) 177, fn 5.

950 *Loctite* (n 717) 877.

In fact, the same anticompetitive harm is conceivable even in the absence of a patent, eg if the plaintiff attempts to enforce a trade secret⁹⁵¹ or, even outside the intellectual property sphere, if she initiates any kind of baseless court action.⁹⁵² The anticompetitive harm here does not flow from the exclusionary effects of an IP right, but rather consist on the plaintiff's harassing, deterring or delaying competitors through the petitioning activities—and not through the outcome of that petitioning, ie the governmental act. In other words, *Handgards* cases seem to be just the equivalent of sham litigation in patent infringement cases.⁹⁵³

II. Orange Book Cases

Within the highly regulated pharmaceutical industry, a series of cases have emerged which, although not directly taking place before the patent office, also concern deceptive conducts involving patent rights and raise very interesting questions in that regard. These cases refer to the complex system put in place by the Hatch-Haxman Act and, more particularly, to the inappropriate listing of patent rights in the so-called Orange Book run by the FDA.⁹⁵⁴

By way of background, under the Hatch-Waxman Act each company filing an NDA with the FDA in order to market a new drug in the US is also required to submit a list of the patents that it holds protecting the drug or methods of using such drug 'and with respect to which a claim of patent infringement could reasonably be asserted if a person not licensed by the owner engaged in the manufacture, use, or sale of the drug.'⁹⁵⁵ Such list is then included by the FDA in what is commonly known as the Orange Book. If, subsequently, another company seeks approval of a generic version of that same drug, it must file an ANDA certifying that (i) no patent has been listed for that drug, (ii) the patent has expired, (iii) the patent will

951 *CVD Inc v Raytheon Co* 769 F 2d 842, 851 (1st Cir 1985) ('the assertion in bad faith of trade secret claims, that is, with the knowledge that no trade secrets exist, for the purpose of restraining competition does not further the policies of either the antitrust or the trade secrets laws.') (citations omitted).

952 See, eg, *Landmarks Holding Corp v Bermant* 664 F 2d 891, 896 (2nd Cir 1981) (where a firm initiated a series of court and administrative actions designed to delay the construction of a competitor's shopping mall).

953 O'Donnell (n 948) 22.

954 The publication is officially referred to as the list of 'Approved Drug Products with Therapeutic Equivalence Evaluations'.

955 21 USC § 355(b).

expire prior to the first sale; or (iv) the patent is invalid or will not be infringed.⁹⁵⁶ In the latter case, which is commonly known as a ‘Paragraph IV’ certification, the NDA applicant must give notice to the patent owner,⁹⁵⁷ who then has 45 days to bring an infringement action.⁹⁵⁸ If said action is brought, the generic drug application at the FDA is automatically stayed for 30 months, unless the patent expires or is invalidated or declared not infringed before that period ends.⁹⁵⁹

Within this rather complex framework, a significant number of antitrust cases arose in the US—the most frequently cited ones referring to ‘reverse payment’ or ‘pay-for-delay’ settlement agreements.⁹⁶⁰ Yet a different sort of antitrust cases, deeply connected to the theme of the present work, also developed when a number of generic companies complained that several NDA applicants had listed patents in the Orange Book knowing that those patents were invalid or would not be infringed. From the cases that emerged around this issue, the most frequently cited one is *In re Buspirone*,⁹⁶¹ where Bristol-Myers Squibb had listed a newly-obtained patent on the Orange Book in connection with buspirone only one day before the expiration of the patent originally listed and allegedly knowing that the new patent would not be infringed. When generic producers later attempted to obtain a market approval under a Paragraph IV certification, Bristol-Myers Squibb immediately brought infringement suits, thereby triggering the 30-month stay. The generic producers thus brought an antitrust complaint, which Bristol-Myers Squibb moved to dismiss essentially alleging that its activities constituted lawful petitioning immunised under the *Noerr* doctrine.

At the outset, the district court highlighted that, for the *Noerr* doctrine to apply, the conduct under analysis should first qualify as petitioning activity. To that end, it is important to distinguish between situations where the government acts only after an independent review of the merits of the decision and cases where the intervention of the government is merely ministerial or non-discretionary and directly relies on the private parties’ representations. In the latter event, the court argued, the conduct of the private party does not really amount to petitioning and the *Noerr* doctrine

956 21 USC § 355(j)(2)(A)(vii).

957 21 USC § 355(j)(2)(B).

958 21 USC § 355(j)(5)(B)(iii).

959 21 USC § 355(j)(5)(B)(iii).

960 See, in this regard, the recent of the Supreme Court in *Actavis* (n 720) attempting to shed some light on the debate.

961 *Re Buspirone Patent Litigation* 185 F Supp. 2d 363 (SD New York 2002).

is thus not applicable.⁹⁶² On this basis, the court interpreted that the act of listing a patent in the Orange Book is not in fact an act of petitioning, since it merely seeks a ministerial response and the FDA has practically no margin for discretion.⁹⁶³ And even assuming that *Noerr* was applicable, the court concluded that the listing and the subsequent litigation constituted clear cases of misrepresentation and sham that warranted an exception to immunity.⁹⁶⁴

Around the same time, a case also arose before the District Court of New Jersey which presented a relatively similar set of facts.⁹⁶⁵ Not surprisingly, the court relied to a great extent on *In re Buspirone* and stated that listing a patent in the Orange Book does not amount to petitioning within the meaning of *Noerr*, since the FDA serves in that connection a purely ministerial function.⁹⁶⁶ Interestingly, though, the analysis did not end at that point: even if the activities were not immunised against antitrust scrutiny, the court interpreted that the listings in this case did not violate any antitrust law because, at the time of listing the patent, the NDA applicant had a reasonable basis to believe that it could be infringed.⁹⁶⁷ The court made it clear, thus, that, although requests merely seeking a ministerial response from the government are not immunised by *Noerr*, something more still needs to be shown in order to make an antitrust case.

Finally, an interesting decision dealing with Orange Book filings was also issued by another judge from the Southern District of New York in *Twin City Bakery Workers*.⁹⁶⁸ The facts did not differ much from the above mentioned cases, yet in this one the judge held that the only possible exclusionary effect of an Orange Book listing was the 45-day delay in the FDA approval of the generic drug until the NDA applicant decides whether to sue or not. Since in this case the NDA applicant had made the contested patent listing at a time when the initial—and presumably valid—patent was still listed and not close to expiring, the court reasoned that the new listing did not lead to an extension of the exclusivity, as that

962 *ibid* 369-70. The court cites in this regard *Litton* (n 801), a leading case on this distinction, where the court had interpreted that tariff filings before the Federal Communications Commission do not constitute petitioning under *Noerr*. *Litton* (n 801) 807.

963 *Re Buspirone* (n 961) 371.

964 *ibid* 373-75.

965 *Organon Inc v Mylan Pharmaceuticals Inc* 293 F Supp 2d 453 (D NJ 2003).

966 *ibid* 458-59.

967 *ibid* 459-60.

968 *Twin City Bakery Workers v Astra Aktiebolag* 207 F Supp 2d 221 (SD NY 2002).

same delay would already have been triggered by the initial patent. According to the court, the 30-month stay is not the result of the Orange Book listing, but rather of the patentees' having commenced infringement lawsuits—activities which would be clearly protected under *Noerr*.⁹⁶⁹

This latter decision has been criticised by the FTC, who essentially contends that antitrust laws are in fact capable of condemning an action that causes an anticompetitive effect even if it is presented in conjunction with some other action that is beyond its reach.⁹⁷⁰ As a matter of fact, when NDA applicants in other cases had argued that the Orange Book listings were an integral part of the (immunised) infringement suits, courts had pointed out that listings were distinct from the filing of the infringement suits, as the former do not *per se* affect the merits of the latter.⁹⁷¹ Moreover, it would also be possible to argue that the mere listing in the Orange Book might have an exclusionary effect on their own among competitors, aware as they are—even before any infringement suit is started—that the 30-month stay is available for the NDA applicant and will be automatically triggered with the sole filing of an infringement suit.

In any case, it should be reminded that placing these filings outside the scope of the antitrust immunity doctrine only constitutes the first step of the antitrust analysis. Evidently, not every filing seeking a ministerial response from the government should be banned by antitrust laws. The challenge is, thus, to determine in which specific cases those 'non-petitioning' activities can actually amount to an antitrust violation.⁹⁷²

B. EU Competition Law. Improper Acquisition of Intellectual Property Rights. Impact on Member States' Competition Practice

Although the history of European competition law had started with a strict differentiation between existence and exercise of intellectual property rights which virtually immunised the former from antitrust scrutiny, subsequent decisions gradually blurred the distinction and the bold approach was progressively relativized.⁹⁷³ In *Tetra Pak I*, for instance, EU courts had decided that the acquisition of an exclusive patent licence by a dominant

969 *ibid* 225.

970 FTC, 'Enforcement Perspectives on the Noerr-Pennington Doctrine' (n 780) 21, fn 87.

971 *Re Buspirone* (n 961) 372; *Organon v Mylan* (n 965) 459.

972 For a more thorough analysis of this question, see text at nn 1379-1390.

973 See text at nn 864-880.

firm could amount to a competition law violation.⁹⁷⁴ Moreover, in a dispute between Osram and Airam that concluded with a settlement between the parties, the Commission had expressed the opinion that registering a trade mark in bad faith, knowing that that mark is already used by a competitor, could infringe art 102 TFEU.⁹⁷⁵ It was only in the *AstraZeneca* case, however, at the dawn of the new millennium, that EU courts for the first—and thus far only—time dealt with deceptive conducts before intellectual property offices as a source of competitive concern. Until then, EU case law on the interface of intellectual property and competition law had fundamentally concentrated on refusal to licence questions.⁹⁷⁶ The following paragraphs hence describe the *AstraZeneca* case in detail, as well as the impact that it has had so far among national competition agencies.

I. The *AstraZeneca* Case

At the outset, it is interesting to point out that the facts and specific legal issues discussed in the *AstraZeneca* case were of a transitory nature and, hence, unlikely to arise again in the future.⁹⁷⁷ Nevertheless, the case bears particular significance as it raises a number of crucial questions concerning the strategic use of patenting and other administrative procedures as po-

974 *Tetra Pak I* (n 864). Admittedly, that case did not deal with ‘original’ but with ‘derivative’ acquisition of rights, besides focusing on the acquisition itself rather than on the procedure for acquiring. Dirk Seidel, *Europäische Missbrauchsaufsicht nach AstraZeneca: Fallrelevante Problemkreise unter besonderer Berücksichtigung des Konfliktfeldes Immaterialgüter-/Wettbewerbsrecht* (Shaker 2008) 14.

975 Commission, Eleventh Report on Competition Policy 1981, para 97 (*Airam/Osram*).

976 Case C-238/87 *AB Volvo v Erik Veng (UK) Ltd* [1988] ECR 6211; *Magill* (n 748); Case C-418/01 *IMS Health GmbH & Co OHG v NDC Health GmbH & Co KG* [2004] ECR I-5039; Case T-201/04 *Microsoft Corp v Commission* [2007] ECR II-3601. Interestingly, when the *AstraZeneca* case emerged, some scholars even wondered whether the criteria that had been developed in the context of refusal to license cases should also be applicable to the *AstraZeneca* case. Jacques-Philippe Gunther and Charlotte Breuvart, ‘Misuse of Patent and Drug Regulatory Approval Systems in the Pharmaceutical Industry: An Analysis of US And EU Converging Approaches’ (2005) 26 *Eur Comp L Rev* 669, 680.

977 Josef Drexl, ‘*AstraZeneca* and the EU Sector Inquiry: When do Patent Filings Violate Competition Law?’ in Josef Drexl and Nari Lee (eds), *Pharmaceutical Innovation, Competition and Patent Law: A Trilateral Perspective* (Edward Elgar 2013) 291.

tential competition law violations and for the first time brings them forward to the EU courts.

In essence, the *AstraZeneca* decisions address two different types of conducts, both connected to Losec. Losec is an omeprazole-based pharmaceutical product launched by AstraZeneca in Europe at the end of the 1980s,⁹⁷⁸ principally aimed at treating acid-related gastro-intestinal diseases and conditions. In 1999, two generic companies lodged a complaint contending that AstraZeneca had abused its dominant position by preventing them to bring generic versions of the product to a number of European markets.⁹⁷⁹ In general terms, they argued that the company had (i) misled several national patent offices in order to obtain or unduly extend SPCs for the active ingredient omeprazole, and (ii) adopted an abusive strategy when switching from capsule to tablet formulations of Losec.

In 2005, after an extensive investigation, the Commission concluded that AstraZeneca had indeed infringed art 102 TFEU and imposed a 60 million euro fine.⁹⁸⁰ The decision was subsequently appealed, but the General Court,⁹⁸¹ the Advocate General⁹⁸² and the CJEU⁹⁸³ all essentially agreed with the Commission and confirmed both the infringement and the fine—although the latter was slenderly reduced because the effects on parallel imports had not been shown in certain markets.⁹⁸⁴ The decisions of the Commission and the courts can all be divided into three essential parts: they begin by addressing the question of market definition and its dominance, followed by a separate analysis of each of the two abuses.

a. Market Definition and its Dominance

Although defining relevant markets and determining market dominance are issues that exceed the scope of this work, the *AstraZeneca* case raises interesting questions in this regard that should not go overlooked. Firstly, because it is the first time that European institutions address this matter in

978 As a matter of fact, the product was launched by Astra AB, which later merged with the Zeneca Group and formed AstraZeneca.

979 Commission Decision in *AstraZeneca* (n 751) paras 1-2.

980 *ibid* paras 913-24.

981 Case T-321/05 *AstraZeneca v Commission* [2010] ECR II-2805.

982 Case C-457/10 P *AstraZeneca v Commission* (CJEU, 6 December 2012, ECLI:EU:C:2012:293), Opinion of AG Mazák.

983 CJEU Decision in *AstraZeneca* (n 877).

984 GC Decision in *AstraZeneca* (n 981) paras 840-62.

the pharmaceutical sector within the framework of art 102 TFEU.⁹⁸⁵ And perhaps most importantly, because a finding of market dominance constitutes a crucial issue under EU competition law in cases like the one at hand, as abuses can only be sanctioned when they stem from a firm who is already dominant on the market.⁹⁸⁶

As mentioned above, this case revolves around the active ingredient omeprazole, a so called proton pump inhibitor (PPI) for the treatment of acid-related gastro-intestinal diseases. Together with the H2 blockers, PPIs belong to the group of medicines which proactively inhibit the acid secretion into the parietal cells of the stomach, which is pumped by a specific enzyme normally known as the proton pump.⁹⁸⁷ But whereas H2 blockers merely block some of the stimulants of the enzyme, PPIs act in a more direct way by inhibiting the enzyme itself. Omeprazole, which was launched at the end of the 1980s under the Losec brand, was the pioneer PPI and it was only during the 1990s that other PPIs entered the market—all containing molecules similar to omeprazole.⁹⁸⁸ The first H2 blockers, on the other hand, had been launched considerably earlier, around the 1970s.⁹⁸⁹

Within this framework, the first step was to determine the relevant market in which Losec was immersed. To that end, it is important to take into consideration that competition in the pharmaceutical sector presents a number of special features that make it different from other industries, particularly due to the high degree of market regulation and the fact that the consumers (patients) are neither the decision-makers nor the ones typically bearing the costs.⁹⁹⁰ Against this background, EU competition enforcers tend to focus, in practice, on the function of the drugs to define the relevant market, thus ordinarily employing the third level of the WHO's Anatomical Therapeutic Chemical Classification System (ATC), which looks at their therapeutic indication.⁹⁹¹ In the present case, however, the Commission opted for the fourth level, which looks at the drug's mode of action, and therefore concluded that, in the period relevant for its assess-

985 Johanna Müller-Graff and Filipe Fischmann, 'Der Fall AstraZeneca: "Tool boxes" in Arzneimittelsektor – Wer hat die Bessere Werkzeuge und Welche sind Erlaubt? Zum Urteil des Gerichts der Europäischen Union vom 1. Juli 2010, Rs. T-321/05' [2010] GRUR Int 2010 792, 794.

986 See text at nn 670ff in ch 4.

987 Commission Decision in *AstraZeneca* (n 751) para 34.

988 *ibid* para 36.

989 Frances Murphy and Francesco Liberatore, 'Abuse of Regulatory Procedures: The AstraZeneca Case' (2009) 30 Eur Comp L Rev 223, 223.

990 Commission Decision in *AstraZeneca* (n 751) para 362.

991 *ibid* para 371.

ment (ie, between 1993 and 2000), the relevant product market was conformed exclusively by PPIs and that H2 blockers did not inflict significant competitive constraints.⁹⁹² In order to reach this conclusion, which both the General Court and the CJEU shared, the Commission highlighted the fundamental differences between PPIs and H2 blockers,⁹⁹³ as well as the differences in price,⁹⁹⁴ and interpreted that the shift in sales from H2 blockers towards PPIs during the relevant period had been slow largely due to inertia in prescribing practices.⁹⁹⁵ According to the Commission and the courts, the gradual shift was not inconsistent with the finding of a separate market for PPIs,⁹⁹⁶ but rather constituted a sign of the scant competitive constraints that H2 blockers were able to impose on them.⁹⁹⁷ On a different note, the Commission also concluded that supply-side substitutability should not be taken into account.⁹⁹⁸

In view of the narrow market definition, which has been fiercely criticised by a number of scholars and practitioners,⁹⁹⁹ it came as no surprise that AstraZeneca was found to enjoy a dominant position in the PPI mar-

992 *ibid* para 504.

993 *ibid* paras 380-86 (PPIs yield superior results and constitute the only effective remedy against a significant number of diseases); GC Decision in *AstraZeneca* (n 981) para 72.

994 Commission Decision in *AstraZeneca* (n 751) para 401; GC Decision in *AstraZeneca* (n 981) para 165.

995 Commission Decision in *AstraZeneca* (n 751) para 467.

996 *ibid* paras 388 and 467; GC Decision in *AstraZeneca* (n 981) para 96; CJEU Decision in *AstraZeneca* (n 877) para 48.

997 Commission Decision in *AstraZeneca* (n 751) paras 388-97. The General Court and the CJEU speak in this regard of 'asymmetrical substitution'. GC Decision in *AstraZeneca* (n 981) para 96; CJEU Decision in *AstraZeneca* (n 877) para 59.

998 Commission Decision in *AstraZeneca* (n 751) para 403 (essentially due to the long period required to develop new pharmaceutical products).

999 See, among others, David Hull, 'The Application of EU Competition Law in the Pharmaceutical Sector' (2011) 2 J Eur Comp L & Prac 480 (a narrow market definition represents a risk for new products); Jacob Westin, 'Defining Relevant Market in the Pharmaceutical Sector in the Light of the Losec-Case: Just How Different is the Pharmaceutical Market?' (2011) 32 Eur Comp L Rev 57, 60 (too narrow market definitions, especially concerning innovative products, not only risk being counterproductive but also stifle innovation); Ilaria Ottaviano, 'Industrial Property and Abuse of Dominant Position in the Pharmaceutical Market: Some Thoughts on the AstraZeneca Judgment of the EU General Court' in Giandonato Caggiano, Gabriella Muscolo and Marina Tavassi (eds), *Competition Law and Intellectual Property: A European Perspective* (Wolters Kluwer 2012) 197-98 (the temporary competitive advantage of an innovative drug compared to the methods of alternative treatment does not seem adequate to justify the con-

ket. This inference was already insinuated by AstraZeneca's market share, which during the relevant period had always remained over 50% and in most cases well above 70%,¹⁰⁰⁰ yet other factors were also taken into consideration. Based on the premise that the primary threat for Losec is the one stemming from generic omeprazole, it was interpreted that AstraZeneca enjoyed a particularly strong patent protection, which in practice implied a virtually unavoidable entry barrier.¹⁰⁰¹ Even the alternative source of threat, derived from the other PPIs that subsequently entered the market, had played in practice a minor role, also thanks to AstraZeneca's robust patent portfolio.¹⁰⁰² Also mentioned as influential factors were the first mover advantages¹⁰⁰³ and the inertia in doctor's prescribing behaviour that hindered alternative PPIs' market penetration.¹⁰⁰⁴ AstraZeneca had argued that, in any case, the particular features of the pharmaceutical industry left firms very little room for manoeuvre, which diminished the relevance of market dominance, but the Commission was of a different opinion.¹⁰⁰⁵ As a matter of fact, AstraZeneca had been able to maintain high prices during a large period of time¹⁰⁰⁶ and was, in practice, the sole undertaking in a position to implement an exclusionary strategy.¹⁰⁰⁷

sideration of that drug as an autonomous market); Adrian Spillmann, 'Transparency Obligation for Holders of EU IP Assets in the Pharmaceutical Industry' (2014) 9 J Intell Prop L & Prac 125, 127 (it would have been fairer to acknowledge a common product market for H2 blockers and PPIs in the beginning of the relevant period, and only accept a separate product market once the superiority of the PPIs was clearly established).

1000 Commission Decision in *AstraZeneca* (n 751) para 567; GC Decision in *AstraZeneca* (n 981) para 253.

1001 Commission Decision in *AstraZeneca* (n 751) para 526; GC Decision in *AstraZeneca* (n 981) para 271.

1002 Commission Decision in *AstraZeneca* (n 751) paras 521-25.

1003 *ibid* para 541; GC Decision in *AstraZeneca* (n 981) para 278.

1004 Commission Decision in *AstraZeneca* (n 751) para 542; GC Decision in *AstraZeneca* (n 981) para 278.

1005 Commission Decision in *AstraZeneca* (n 751) paras 553-61.

1006 *ibid* paras 544-48; GC Decision in *AstraZeneca* (n 981) para 261.

1007 Commission Decision in *AstraZeneca* (n 751) para 528.

b. The First Abuse

AstraZeneca's first abuse referred to a deceptive handling of SPC applications before the national patent offices of Germany, Belgium, Denmark, Norway, the Netherlands and the United Kingdom.

The SPC regime had been introduced in the EU in 1992 as a means for compensating pharmaceutical firms for the delays that regularly occur between the filing of a patent application and the date the medicinal product is finally authorised to enter the market.¹⁰⁰⁸ In a nutshell, an SPC is a *sui generis* right¹⁰⁰⁹ that extends the duration of a patent and confers essentially the same rights, yet its scope is limited to the product covered by the market authorisation that suffered the delays.¹⁰¹⁰ As to its duration, it compensates delays between the patent's filing date and the date of the first market authorisation exceeding five years, although the total duration of an SPC itself cannot go beyond five years.¹⁰¹¹

Importantly for the case at hand, when the SPC Regulation entered into force, it was aimed to be applied not only to future products but also to a large range of products which were already on the market¹⁰¹²—a decision which may be seen as rather arbitrary.¹⁰¹³ According to the transitional provisions, those products which were already on the market were still eligible for SPC protection provided that they had obtained their 'first authorization to place it on the market as a medicinal product in the Community' after 1 January 1985.¹⁰¹⁴ Some countries, however, had managed to negotiate tailored transitional provisions on the grounds of internal public

1008 Council Regulation (EEC) 1768/92 of 18 June 1992 concerning the creation of a supplementary protection certificate for medicinal products [1992] OJ L182/1 (Old SPC Regulation, subsequently amended by Regulation (EC) 469/2009). Such delays, the regulation specifies, make the period of effective patent protection 'insufficient to cover the investment' and in practice penalise pharmaceutical research. See text at nn 125-132 in ch 2.

1009 Katarzyna Zbierska, *Application and Importance of Supplementary Protection Certificates for Medicinal Products in the European Union* (Shaker 2012) 40.

1010 Regulation (EC) 469/2009 of 6 May 2009 concerning the supplementary protection certificate for medicinal products [2009] OJ L152/1, arts 4-5 (SPC Regulation).

1011 SPC Regulation, arts 13(1) and (2).

1012 Zbierska (n 1009) 250-51 (certain countries had advocated for a regime to only reward future products, but ultimately the view of the Commission prevailed).

1013 See Drexl, 'Deceptive Conduct in the Patent World' (n 896) 155 (arguing that the retroactive effect of this provision does not seem to incentivise innovation).

1014 Old SPC Regulation 1768/92, art 19.

health issues.¹⁰¹⁵ In this sense, SPCs could only be obtained in Denmark and Germany if the first market authorisation had been obtained after 1 January 1988, whereas Italy and Belgium went in the opposite direction and admitted SPCs for products that had obtained their first market authorisation already in 1982.¹⁰¹⁶ The SPC Regulation was later incorporated into the EEA Agreement, where Finland and Norway joined the ‘1988 countries’ and Austria became a ‘1982 country’.¹⁰¹⁷

Having been launched on the European market by the end of the 1980s, Losec was one of the products to which the transitional provisions applied when the SPC regime entered into force. The patents protecting omeprazole had been filed before the EPO and different national patent offices in 1979 and were due to expire in the course of 1999.¹⁰¹⁸ Its first technical market authorisation, however, had been issued in France in 1987, which suggested that AstraZeneca might not be entitled to obtain SPCs in the ‘1988 countries’. In this context, and taking into consideration that, in many countries, product registrations are not considered complete—and products cannot be launched—until the price negotiations are concluded,¹⁰¹⁹ the company decided to try out a novel interpretation of the SPC regime and instructed its patent agents to submit the SPC applications declaring March 1988 as the first relevant authorisation in the EU.¹⁰²⁰ March 1988 was, in this regard, the date of publication of a list of authorised products in Luxembourg, which AstraZeneca believed to be the first ‘effective’ marketing date in the Community.¹⁰²¹ For the sake of consistency,¹⁰²² the strategy was implemented not only in the ‘1988 countries’, but also in the ‘1982’ and ‘1985 countries’. It should be kept in mind that, until then, courts had not defined the concept of ‘first authorisation’; it was only in 2003 that the CJEU clarified that the term refers solely to the technical market authorisation and not to other authorisations such as those referring to pricing or reimbursement.¹⁰²³

1015 Zbierska (n 1009) 251.

1016 Old SPC Regulation 1768/92, art 19.

1017 Decision of the EEA Joint Committee 7/94 of 21 March 1994 amending Protocol 47 and certain Annexes to the EEA Agreement [1994] OJ L160/1, Annex 15.

1018 Commission Decision in *AstraZeneca* (n 751) paras 20–21.

1019 *ibid* para 166–68. In France itself, for instance, the product had only been introduced to the market in 1989. *Ibid* para 171.

1020 *ibid* para 173.

1021 *ibid*.

1022 *ibid* para 180.

1023 Case C-127/00 *Hässel AB v Ratiopharm GmbH* [2003] ECR I-14781, para 79.

The general practice of national patent offices when receiving SPC applications was to rely, without verification, on the information submitted by the applicants with regard to the first market authorisation.¹⁰²⁴ Therefore, when in 1993 and 1994 AstraZeneca set in motion its strategy, many patent offices proceeded to grant AstraZeneca's SPC, although the course of events was not in any way smooth.¹⁰²⁵ In some countries, for instance, the patent agents did not follow AstraZeneca's instructions and refused to use Luxembourg's price list: while some of them relied on France's first technical market authorisation,¹⁰²⁶ others, unaware of the latter date, relied instead on Luxembourg's first technical authorisation—even though it was clearly not the first one in the EU.¹⁰²⁷ In other countries, the patent office itself questioned AstraZeneca's attempt or revoked the SPC following complaints lodged by competitors.¹⁰²⁸ And even in those countries where the SPC had been granted, competitors later started court actions that eventually resulted on the respective SPCs being revoked.¹⁰²⁹ It is also important to point out that, at some point during the implementation of its strategy, AstraZeneca had become aware that Luxembourg's price list was in fact a private publication,¹⁰³⁰ irrelevant for the commercialisation of Losec,¹⁰³¹ yet it did not reveal this information to all patent offices concerned.¹⁰³²

Against this background, the Commission interpreted that AstraZeneca had developed a 'pattern of misleading misrepresentations' in order to acquire SPCs to which it was not entitled, or to which it was only entitled for a shorter period, and concluded that said behaviour constituted a violation of art 102 TFEU.¹⁰³³ Both the General Court¹⁰³⁴ and the CJEU later confirmed such findings.¹⁰³⁵ In essence, the abuse was divided into two

1024 Commission Decision in *AstraZeneca* (n 751) para 154.

1025 *ibid* paras 185-245.

1026 *ibid* paras 194 and 208.

1027 The General Court further highlights that AstraZeneca did not subsequently intervene at those patent offices to rectify the SPCs. GC Decision in *AstraZeneca* (n 981) para 594.

1028 Commission Decision in *AstraZeneca* (n 751) paras 209-15 (United Kingdom), 218 (Ireland), 219 (Denmark).

1029 *ibid* paras 227 (Germany), 234 (Norway).

1030 GC Decision in *AstraZeneca* (n 981) para 497.

1031 CJEU Decision in *AstraZeneca* (n 877) para 92.

1032 *ibid* paras 88-92.

1033 Commission Decision in *AstraZeneca* (n 751) para 626.

1034 GC Decision in *AstraZeneca* (n 981) para 609.

1035 CJEU Decision in *AstraZeneca* (n 877) paras 100 and 113.

different stages, the first one consisting of the first round of SPC applications¹⁰³⁶ and the second one comprising the second round of SPC applications in the context of the EEA Agreement, together with the misleading responses to patent offices who had raised objections and the misleading representations before the courts.¹⁰³⁷

At the outset, the Commission clarified that the old dichotomy between existence and exercise of IPRs had been abandoned by EU competition law practice and that the acquisition of a right can indeed amount to a violation of art 102 TFEU, even if the accused conduct does not take place in the market.¹⁰³⁸ Rather, what defines a conduct's legality is whether it qualifies as 'normal competition'¹⁰³⁹ or, in the words of the General Court and the CJEU, as 'competition on the merits'.¹⁰⁴⁰ As for the question of causation, the General Court emphasised that an abuse of a dominant position does not necessarily require the use of the economic power conferred by such position.¹⁰⁴¹

Moving on to AstraZeneca's intent and based on the objective nature of the concept of abuse, it was highlighted that proof of bad faith or of a deliberate conduct were not inexorably required, although they can at times constitute relevant factors.¹⁰⁴² In the case at hand, the courts considered that AstraZeneca's behaviour was characterised by highly misleading representations and a manifest lack of transparency,¹⁰⁴³ which indicated that it indeed had had the intention to mislead the patent offices.¹⁰⁴⁴ In this regard, the CJEU stressed that the 'special responsibility' that rests upon dominant firms would have required AstraZeneca to disclose all the relevant information to the different patent offices so as to allow them to decide.¹⁰⁴⁵ Even if AstraZeneca's interpretation of the SPC regime was legally defensible, the CJEU further explained that that fact itself did not consti-

1036 The Commission had interpreted that the first stage of the abuse had started with AstraZeneca's instructions to its patent agents, but the General Court understood that it could only begin with the actual filing of the SPC applications. GC Decision in *AstraZeneca* (n 981) para 370.

1037 CJEU Decision in *AstraZeneca* (n 877) paras 77 and 85.

1038 Commission Decision in *AstraZeneca* (n 751) paras 741-43.

1039 *ibid* para 677.

1040 CJEU Decision in *AstraZeneca* (n 877) paras 75 and 93; GC Decision in *AstraZeneca* (n 981) paras 355 and 608.

1041 GC Decision in *AstraZeneca* (n 981) para 354.

1042 *ibid* paras 356 and 359.

1043 CJEU Decision in *AstraZeneca* (n 877) para 92.

1044 *ibid* para 84.

1045 *ibid* para 95.

tute a *carte blanche* to use any means imaginable to obtain the right it believed it was entitled to.¹⁰⁴⁶

A particularly relevant factor in that respect was the margin of manoeuvre enjoyed by the authorities concerned. In the view of the CJEU, every case should be analysed *in concreto*,¹⁰⁴⁷ because misleading representations before public authorities to obtain an exclusive right can only constitute an abuse if, in view of the specific circumstances of the case, those representations are actually liable to lead them to grant the right applied for.¹⁰⁴⁸ In this case, the margin of manoeuvre enjoyed by the different patent offices was particularly limited,¹⁰⁴⁹ as they relied in practice on the information provided by the applicants without further verification.¹⁰⁵⁰ AstraZeneca's conduct, thus, was indeed liable to lead them to grant the exclusive rights. The CJEU, however, tried to make clear that this conclusion does not imply that dominant firms need to be infallible in their dealings with all public authorities.¹⁰⁵¹ The CJEU hence seemed to suggest that the broader the margin of manoeuvre of the public authorities, the narrower the burden on the petitioner.

As to the market impact of AstraZeneca's, the Commission highlighted that an extra SPC protection in practice prevents market entry by all potential competitors,¹⁰⁵² which in the end also affects national health systems and consumers.¹⁰⁵³ Those exclusionary effects are caused by the mere existence of the SPC, particularly considering that IPRs are presumed valid,¹⁰⁵⁴ even if in practice some generic firms ignored the SPCs.¹⁰⁵⁵ For this very reason, the General Court stated that the enforcement of the improperly obtained IPR is not a necessary requirement to attain anticompetitive effects on the market¹⁰⁵⁶—which somehow seems to call into question the prevailing view of US courts. The General Court further pointed out that

1046 *ibid* para 98.

1047 *ibid* para 99.

1048 *ibid* para 106.

1049 *ibid* para 105.

1050 Commission Decision in *AstraZeneca* (n 751) para 680.

1051 *ibid* para 99.

1052 *ibid* para 762.

1053 *ibid* paras 771-72.

1054 *ibid* paras 762 and 765.

1055 *ibid* para 767.

1056 GC Decision in *AstraZeneca* (n 981) para 362. In that connection, the General Court argued that the *ITT Promedia* decision, which deals with vexatious litigation, in fact addresses a different problem and its conclusions are not applicable to the present case.

the fact that alternative remedies under different areas of law could—and in fact did—limit the effects of the exclusionary strategy did not exclude the existence of an abuse.¹⁰⁵⁷

The CJEU, seemingly agreeing with the conclusions of the Commission and the General Court as to the anticompetitive effects, paid particular attention to the question as to their materialisation. As it was mentioned above, the pattern of deceptive conducts fundamentally took place between 1993 and 1994, whereas the SPCs applied for were expected to enter into force only in 1999, upon the expiry of the basic patents. In the interim, most SPCs were either rejected by the patent offices, revoked by the patent offices or struck down by the courts, which effectively meant that, by the time the basic patents expired, most SPCs had already been eliminated. On this particular issue, the CJEU held that ‘the existence of an abuse is not affected by the fact that the strategy did not succeed in some countries.’¹⁰⁵⁸ On the one hand, in those countries where the SPCs had been rejected from the start, it was deemed sufficient to demonstrate that the misleading representations ‘were very likely to result’ in their issuance.¹⁰⁵⁹ On the other hand, in those countries where the SPCs had been initially granted and only revoked at a later stage, it was highlighted that also the effects taking place before the expiry of the basic patents should be considered, as those imminent SPCs were liable to alter the structure of the market by affecting potential competition¹⁰⁶⁰ and generating uncertainty.¹⁰⁶¹ On the whole, the CJEU concluded that, even though the finding of an abuse necessarily requires proof of anticompetitive effects on the market, it is not necessary for them to be concrete: potential anticompetitive effects suffice.¹⁰⁶²

Finally, another noteworthy point as to AstraZeneca’s conduct was its timing. As it was mentioned above, the abuse was deemed to have taken place at different stages, which led the Commission and the General Court to interpret that, as a whole, such pattern of conduct configured a ‘single and continuous’ infringement.¹⁰⁶³ On the other hand, the CJEU stated that the anticompetitive nature of those acts is to be evaluated at the time when

1057 *ibid* para 366.

1058 CJEU Decision in *AstraZeneca* (n 877) para 111.

1059 *ibid*.

1060 *ibid* para 108.

1061 Commission Decision in *AstraZeneca* (n 751) para 760.

1062 CJEU Decision in *AstraZeneca* (n 877) para 112.

1063 Commission Decision in *AstraZeneca* (n 751) para 628, 774; GC Decision in *AstraZeneca* (n 981) para 895.

they were committed.¹⁰⁶⁴ Hence, the fact that AstraZeneca may no longer have been dominant by the time those acts were able to produce their effects was deemed irrelevant.¹⁰⁶⁵

c. The Second Abuse

The second abuse does not really consist of a deceptive conduct before a patent office, but of a sequence of strategic registrations and withdrawals of marketing authorisations of medicinal products before national health authorities. Some of the questions addressed, however, may have a strong impact on how competition rules generally apply to cases involving petitioning public authorities.

In order to be able to market a medicinal product in the EU, firms need to obtain an authorisation from the competent authority in the relevant Member State. To that end, Directive 65/65/EEC, the legislation in force at the time of the abuse, required firms to submit a series of data and documents including the results of chemical, pharmaceutical and toxicological tests and clinical trials.¹⁰⁶⁶ Yet Directive 65/65 also provided for a number of simplified procedures, the most important being the abridged procedure used by generic producers by relying on products already existing on the market.¹⁰⁶⁷ The abridged procedure essentially enables them to bring cheaper products to the market and avoids the need to repeat tests on humans or animals.¹⁰⁶⁸ Through this procedure, firms basically rely on the data that has been submitted for the already authorised reference product, provided that they show that the generic version is ‘essentially similar’.¹⁰⁶⁹ However, in order to ensure that innovative firms are not placed at a disadvantage, abridged procedures are only made available after the innovative company has enjoyed a period of exclusivity.¹⁰⁷⁰ Importantly for the case at hand, the legislation also required that the reference product ‘is marketed’

1064 CJEU Decision in *AstraZeneca* (n 877) para 110.

1065 GC Decision in *AstraZeneca* (n 981) para 379.

1066 Council Directive 65/65/EEC of 26 January 1965 on the approximation of provisions laid down by Law, Regulation or Administrative Action relating to proprietary medicinal products [1965] OJ Spec Ed 24, art 4.

1067 Directive 65/65/EEC (as amended by Council Directive 87/21/EEC of 22 December 1986 [1987] OJ L15/36) art 4(8)(a)(iii).

1068 Directive 87/21/EEC, recital 4.

1069 Directive 65/65/EEC, art 4(8)(a)(iii).

1070 Directive 87/21/EEC, recital 2.

in the Member State concerned.¹⁰⁷¹ The exact meaning of this last requirement was only clarified in 2003, when the CJEU ruled that, in order to obtain a generic market authorisation, it is 'necessary and sufficient' that the reference market authorisation is in force on the date the application is filed.¹⁰⁷²

Against this background, AstraZeneca was accused of developing a strategy to prevent or delay competition by generics and parallel importers in Denmark, Norway and Sweden through technical and legal hurdles,¹⁰⁷³ which essentially consisted of registering and launching a new form of omeprazole (Losec MUPS tablets) and simultaneously withdrawing the registration of the product that had been commercialised until then (Losec capsules).¹⁰⁷⁴ Losec MUPS tablets had a magnesium salt of omeprazole as their active substance,¹⁰⁷⁵ yet it was recognised that the difference between capsules and tablets was clinically irrelevant.¹⁰⁷⁶ Due to the uncertainty that reigned until 2003 as to the need of having the reference product on the market for generic applications, AstraZeneca's capsule/tablet switch was accused of preventing competing firms from obtaining marketing authorisations for generic capsules in those countries where the reference authorisation had been withdrawn.¹⁰⁷⁷

In the first place, the courts recognised that, as a rule, strategies for minimising erosion of sales are not necessarily anticompetitive, as long as they do not depart from practices 'coming within the scope of competition on the merits'.¹⁰⁷⁸ In the case at hand, however, AstraZeneca's strategy was deemed not to come within that scope,¹⁰⁷⁹ even though Directive 65/65 clearly allowed the firm to withdraw its market authorisations and register

1071 Directive 65/65/EEC, art 4(8)(a)(iii).

1072 Case C-223/01 *AstraZeneca* [2003] ECR I-11809, para 58. Yet the CJEU also recognised that, in order to grant market authorisations, 'what matters is that all the particulars and documents relating to the reference medicinal product remain available to the competent authority for the Member State where the application for the marketing authorisation is made and not that the reference medicinal product has in fact been placed on the market.' Ibid para 27.

1073 Commission Decision in *AstraZeneca* (n 751) para 788.

1074 The Commission also judged this second abuse as one of a single and continuous nature. Ibid para 861. The conclusion was not revised by the courts. GC Decision in *AstraZeneca* (n 981) para 896.

1075 Commission Decision in *AstraZeneca* (n 751) para 17.

1076 Commission Decision in *AstraZeneca* (n 751) para 30.

1077 GC Decision in *AstraZeneca* (n 981) para 670.

1078 CJEU Decision in *AstraZeneca* (n 877) para 129.

1079 ibid para 130.

different ones.¹⁰⁸⁰ In this regard, attention was drawn to the fact that in the majority of the cases anticompetitive abuses consist of behaviours which are otherwise lawful under other branches of law.¹⁰⁸¹

Contrary to AstraZeneca's contentions, the abuse did not consist of a misuse of property rights, but of government procedures.¹⁰⁸² In this regard, the central element constituted the deregistration of market authorisations, which was liable to produce alone the anticompetitive effects.¹⁰⁸³ Those market authorisations are not designed to protect any legitimate investment after the expiry of the period of exclusivity,¹⁰⁸⁴ nor do they constitute property rights.¹⁰⁸⁵ Hence, a finding of abuse could not be considered an 'effective expropriation' of AstraZeneca's market authorisations¹⁰⁸⁶ and AstraZeneca's behaviour did not configure an 'essential facilities' case¹⁰⁸⁷ nor was it comparable to the situations which gave rise to 'refusal to license' cases such as *IMS Health*.¹⁰⁸⁸ Rather, the CJEU suggested a different test and, highlighting the special responsibility that rests with dominant firms when making use of governmental procedures, stressed that

an undertaking which holds a dominant position ... cannot ... use regulatory procedures in such a way as to prevent or make more difficult the entry of competitors on the market, in the absence of grounds relating to the defence of the legitimate interests of an undertaking engaged in competition on the merits or in the absence of objective justification.¹⁰⁸⁹

The CJEU recognised that, in cases like the one at hand, onerous pharmacovigilance obligations could have constituted a valid justification for deregistering the marketing authorisations.¹⁰⁹⁰ AstraZeneca, however, only raised this argument for the first time when appealing the case to the General Court, plus its internal documents did not make any reference to

1080 *ibid* para 132.

1081 *ibid*.

1082 *ibid* para 149; GC Decision in *AstraZeneca* (n 981) para 682; Commission Decision in *AstraZeneca* (n 751) para 817.

1083 CJEU Decision in *AstraZeneca* (n 877) para 140.

1084 *ibid* para 131.

1085 *ibid* para 149.

1086 *ibid*.

1087 GC Decision in *AstraZeneca* (n 981) para 684.

1088 CJEU Decision in *AstraZeneca* (n 877) para 148.

1089 *ibid* para 134.

1090 *ibid* para 135.

those justifications.¹⁰⁹¹ Furthermore, the fact that Losec capsules had remained registered in other European countries suggested that the additional burden of maintaining the registration in Denmark, Sweden and Norway would not have required additional efforts.¹⁰⁹²

Incidentally, the Commission also highlighted that requests for deregistration are automatic procedures where authorities have no discretion,¹⁰⁹³ and further stressed that a finding of an abuse cannot be ruled out merely because the legislation was not perfect and could have amended any incorrect balancing of interests,¹⁰⁹⁴ eg by admitting generic market authorisations despite of the reference authorisation having been withdrawn.

As to the anticompetitive effects of this abuse, the verdict was relatively straight-forward, despite a few passages of the General Court's decision which seem to mix up the anticompetitive effects of deregistration with other legitimate conducts such as patent enforcement.¹⁰⁹⁵ AstraZeneca's strategy, and particularly the deregistration of its market authorisations, had the effect of making the abridged procedure unavailable for competitors and, thus, of delaying the grant of marketing authorisations in Denmark, Norway and Sweden.¹⁰⁹⁶ The fact that the regulatory framework offered alternative abbreviated procedures, such as the reference to published scientific literature,¹⁰⁹⁷ did not prevent the conduct from being abusive, particularly because said alternative means were longer and more expensive.¹⁰⁹⁸ Equally irrelevant to those effects was the fact that some competitors had been able to use the abridged procedure before the withdrawal of the reference product, since AstraZeneca's strategy still made the abridged procedure unavailable to other potential competitors.¹⁰⁹⁹ Furthermore, even if AstraZeneca was able to stop generics from entering the market based on other legitimate grounds, such as its formulation patents, deregistration still constituted one additional and illegitimate entry barrier.¹¹⁰⁰

1091 *ibid* para 136.

1092 *ibid* para 137.

1093 Commission Decision in *AstraZeneca* (n 751) para 819.

1094 *ibid* para 836.

1095 See GC Decision in *AstraZeneca* (n 981) paras 791-801.

1096 *ibid* para 828; Commission Decision in *AstraZeneca* (n 751) para 849.

1097 Directive 65/65/EEC, art 4(8)(a)(ii) (the applicant should provide detailed references to published scientific literature showing that the medicinal product has 'a well established medicinal use, with recognised efficacy and an acceptable level of safety').

1098 CJEU Decision in *AstraZeneca* (n 877) para 154.

1099 GC Decision in *AstraZeneca* (n 981) para 837.

1100 *ibid* para 836.

It is interesting to point out that, in its decision, the Commission found that AstraZeneca's strategy had not only had anticompetitive effects on generic competition, but also on the parallel trade of Losec capsules in Denmark, Norway and Sweden.¹¹⁰¹ The General Court, however, understood that the Commission had not demonstrated that parallel trade licenses had been revoked in Denmark and Norway due to the deregistration of the reference product.¹¹⁰² Hence, if there had been any decrease in parallel importation in those countries, it could not be blamed on AstraZeneca's deregistration.¹¹⁰³ As for Sweden, the Commission had indeed demonstrated that the parallel import licenses had been withdrawn and, therefore, that AstraZeneca had effectively impeded parallel imports.¹¹⁰⁴ The CJEU later confirmed these conclusions.¹¹⁰⁵

II. AstraZeneca's Aftermath: Cases in EU Member States

There seems to be a high level of uncertainty surrounding the actual effects of AstraZeneca on intellectual property practice and on the general application of competition law. While some seem to take a rather positive stance on its outcome,¹¹⁰⁶ others fear that it might have a negative impact on in-

1101 Commission Decision in *AstraZeneca* (n 751) paras 857-58.

1102 GC Decision in *AstraZeneca* (n 981) paras 843 and 857.

1103 *ibid* paras 852 and 861.

1104 *ibid* para 862.

1105 CJEU Decision in *AstraZeneca* (n 877) para 155.

1106 See, eg, Emmanuel Dieny, 'The Pharmaceutical Industry and Competition Law between the Present and the Future' (2007) 28 *Eur Comp L Rev* 223; Matteo Negrinotti, 'Abuse of Regulatory Procedures in the Intellectual Property Context: The AstraZeneca Case' in Inge Govaere and Hans Ullrich (eds), *Intellectual Property, Market Power and the Public Interest* (Peter Lang 2008); Müller-Graff and Fischmann (n 985) 794; John Kallaugher and Andreas Weitbrecht, 'Developments under Articles 101 and 102 TFEU in 2010' (2011) 32 *Eur Comp L Rev* 333; Mariateresa Maggiolino and Maria Lilla Montagnani, 'Astrazeneca's Abuse of IPR-Related Procedures: A Hypothesis of Anti-Trust Offence, Abuse of Rights and IPR Misuse' (2011) 34 *World Competition* 245; Jonathan Galloway, 'Driving Innovation: A Case for Targeted Competition Policy in Dynamic Markets' (2011) 34 *World Competition* 73; Drexl, 'When do Patent Filings Violate Competition Law?' (n 977) 290; Matthew Cole, 'Pharmaceuticals and Competition: First Strike to the Commission?' (2013) 34 *Eur Comp L Rev* 227.

novation and disrupt general IP practice,¹¹⁰⁷ yet most of them tend to converge in highlighting the need for clearer guidelines. Be that as it may, the decision seems to have made an impression on some national competition authorities. In the UK, for instance, the OFT imposed a fine upon Reckitt Benckiser for delisting a product from the NHS in order to hinder the development of generic competition.¹¹⁰⁸ But a case which had enormous repercussions in this regard and which is worth describing in further detail is the one prosecuted by the Italian competition authorities against Pfizer.¹¹⁰⁹

The *Pfizer* saga began in 2012, when the AGCM (the Italian Competition Authority) fined the international pharmaceutical firm for delaying generic competition in the market for glaucoma eye drops in Italy by ‘artificially prolonging’ its patent protection.¹¹¹⁰ In a nutshell, Pharmacia (later merged into Pfizer) had filed a patent application in 1989 before the EPO which claimed the active ingredient latanoprost. The patent was granted in 1994 and validated in a number of Member States, including Italy. In 1996, the firm launched on the EU market the product Xalatan, based on the active ingredient latanoprost, and subsequently filed the corresponding

1107 See, eg, Sophie Lawrance and Pat Treacy, ‘The Commission’s AstraZeneca Decision: Delaying Generic Entry is an Abuse of Dominant Position’ (2005) 1 J Intell Prop L & Prac 7; Maria Isabel Manley and Anna Wray, ‘New Pitfall for the Pharmaceutical Industry’ (2006) 1 J Intell Prop L & Prac 266; Kjølbye (n 880); David Hull, ‘The AstraZeneca Judgment: Implications for IP and Regulatory Strategies’ (2010) 1 J Eur Comp L & Prac 500; Joseph Straus, ‘Patent Application: Obstacle for Innovation and Abuse of Dominant Position under Article 102 TFEU?’ (2010) 1 J Eur Comp L & Prac 189; Christian Mieke, Anette Gärtner and Marc Besen, ‘Missbrauch einer marktbeherrschenden Stellung durch Irreführende Angaben bei Patentanmeldungen: Anmerkung zu EuG, Urt v 01.07.2010 – EUG 01.07.2010 – T-321/05’ (2010) 11 PharmR 586; Christopher Stothers and Marco Ramondino, ‘Aftermath of AstraZeneca and the Pharmaceutical Sector Inquiry: the Big Chill?’ (2011) 32 Eur Comp L Rev 591; Ottaviano (n 999) 191; Pieter-Augustijn Van Malleghem and Wouter Devroe, ‘AstraZeneca: Court of Justice Upholds First Decision Fiding Abuse of Dominant Position in Pharmaceutical Sector’ (2013) 4 J Eur Comp L & Prac 228; Claudia Seitz, ‘Klare Grenzlinie und Minenfeld: Die Marktmissbrauchskontrolle im Arzneimittelsektor nach dem AstraZeneca-Urteil des EuGH’ [2013] EuZW 377; Spillmann (n 999).

1108 Case CE/8931/08 *Reckitt Benckiser Healthcare (UK) Ltd* (OFT Decision of 12 April 2011 CA98/02/2011).

1109 Decision of the Consiglio di Stato (Italy) 693/2014 of 12 February 2014 *Pfizer Italia srl*.

1110 Decision of the Autorità Garante della Concorrenza e del Mercato (AGCM) 23194 of 11 January 2012 - A431: *Ratiopharm/Pfizer* (Bollettino 2/2012).

SPC applications in a number of Member States, although it missed the deadline in Italy and hence could not obtain the SPC in that Member State.¹¹¹¹ As a result, the patent in Italy would expire in September 2009, whereas the SPCs in the other Member States would expire in July 2011. In the meantime, however, the firm had applied for a divisional patent application based on that main patent, which was granted after a long procedure in January 2009. This patent, which originally claimed a group of molecules comprising latanoprost,¹¹¹² was only validated in Italy and, based on it, Pfizer requested and obtained an SPC.

Against this context, the AGCM interpreted that Pfizer's behaviour constituted an abuse of a dominant position contrary to art 102 TFEU. First of all, to define the relevant market, the AGCM relied on *AstraZeneca* by employing the fourth level of the ATC and found Pfizer to enjoy a dominant position in it.¹¹¹³ On that basis, it judged that the firm had made an 'instrumental' use of the patent system¹¹¹⁴ so as to 'artificially extend' its patent protection,¹¹¹⁵ thus coming outside the scope of 'competition on the merits'.¹¹¹⁶ The AGCM alleged that divisional patent applications normally lead to the placing of new products on the market, yet in this case its scope was 'identical' to that of the parent patent¹¹¹⁷ and the intention of the firm was simply to 'correct' the patent situation in Italy¹¹¹⁸ and exclude generic competition from the market.¹¹¹⁹

In reaching its conclusion, the AGCM seems to have relied ambiguously on a number of different theories of harm. In the first place, it cited the EU Pharmaceutical Sector Inquiry and argued that Pfizer's behaviour constituted a 'defensive patenting strategy' aimed at blocking the development

1111 SPC applications are to be filed within six months of the first authorisation to place the product on the market or, if the patent is granted after that date, within six months of the grant of the patent. Art 7(1) and (2), Regulation (EC) No 469/2009 of 6 May 2009.

1112 *Ratiopharm/Pfizer* (n 1110) para 79.

1113 *ibid* paras 151-52, 172

1114 *ibid* para 203.

1115 *ibid* para 139.

1116 *ibid* para 175.

1117 *ibid* para 193. See, however, Amedeo Arena, Bettina Bergmann and Jay L Himes, 'Two Bodies of Law Separated by a Common Mission: Unilateral Conduct by Dominant Firms at the IP/Antitrust Intersection in the EU and the US' (2013) 9 *Eur Comp J* 623, 634 (explaining that, because of their very nature, divisional patents cannot extend the content of the original application nor the protection period).

1118 *Ratiopharm/Pfizer* (n 1110) para 200.

1119 *ibid* para 198.

of new competing drugs,¹¹²⁰ even though the competitors in this case did not seem to be interested in developing new drugs but on introducing generic versions on the market. Secondly, the AGCM contended that Pfizer's conduct resembles *AstraZeneca*'s first abuse, as it also provided 'evasive' information that led to the grant of an IPR to which it was not entitled.¹¹²¹ It should be noted that, at the time of AGCM's decision, Pfizer's divisional patent had been revoked by the EPO, although later on the validity of the patent was confirmed by the EPO Boards of Appeal. Thirdly, the AGCM argued that Pfizer's behaviour created a state of legal uncertainty among competitors, thus delaying the entry of generic products on the market and raising the production costs.¹¹²² In this last regard, it should be noted that the Pfizer's abuse was in fact deemed to be of a 'single and continuous' nature and encompassing a number of additional conducts,¹¹²³ including the application for an extension of the Italian SPC based on paediatric trials,¹¹²⁴ the delivery of warning letters and the involvement in civil and administrative litigation.¹¹²⁵ According to the AGCM, Pfizer was asserting its rights aware of the poor chances of success and, if the criteria devised in *ITT Promedia* for vexatious litigation were to be applicable, both requirements would hence be met.¹¹²⁶ Altogether, Pfizer's patenting and litigation strategy was deemed to have delayed market entry by generics and, therefore, caused significant damages to the national healthcare system.¹¹²⁷

It is interesting to point out that, although the decision of the AGCM was revoked by the court of first instance (Regional Administrative Court of Lazio),¹¹²⁸ the higher tribunal in administrative matters (Council of State) ultimately annulled the latter judgment and confirmed AGCM's

1120 *ibid* para 178.

1121 *ibid* para 179.

1122 *ibid* para 177.

1123 *ibid* para 176.

1124 *ibid* para 212. According to the AGCM, the paediatric trials had only been carried out to obtain a further extension of the SPC. *Ibid* para 214. As finally granted, the patent claimed the use of a specific dose of latanoprost together with another compound for the preparation of an ophthalmological composition.

1125 *ibid* paras 204-05.

1126 *ibid* paras 208 and 211.

1127 *ibid* paras 233 and 245.

1128 Decision of the Tribunale Amministrativo Regionale per il Lazio 7467/2012 of 3 September 2012 *Pfizer Italia srl*.

finding of abuse.¹¹²⁹ In essence, the Council of State highlighted that Pfizer's divisional patent had not been followed by the introduction of a new product on the market¹¹³⁰ and reminded that conducts which are legitimate under patent law can still amount to an anticompetitive abuse, as antitrust and patent laws have different goals.¹¹³¹ In the present case, it stated that Pfizer had used the patent procedures for a purpose different from that intended by the legislator, as the firm's sole purpose had been to exclude competitors from the market.¹¹³²

As a final remark, it is worth mentioning that a very similar case arose against Pfizer in Spain, with a very similar fact pattern, yet the Spanish Competition Authority ultimately decided to conclude the procedure based on the lack of evidence of abuse.¹¹³³

3. Closing Remarks and Open Questions

There can be little doubt that the case law developed around the *Walker Process* decision in the US, as well as around the *AstraZeneca* case on the EU side, raise genuine concerns from a competition law perspective. As most of the cases described above show, a deceptive conduct before the patent office has the potential to cause severe restraints on competition. Against this context, it is crucial to have a clearly defined set of criteria and to identify the correct theory of harm underlying those conducts.

In this last regard, the *Pfizer* decision in Italy may be a paradigmatic example of the importance of having clear guidelines. In that case, the Italian authorities seem to have misinterpreted not only the underlying legal principles informing *AstraZeneca*, but also a number of basic principles on the functioning and rationale of the patent system. The AGCM, for instance, referred to a defensive patent strategy and a misleading behaviour before the patent office similar to *AstraZeneca*'s first abuse, although neither of them seem to have taken place in this case.¹¹³⁴ The Council of State possi-

1129 *Pfizer* (n 1109).

1130 *ibid* para V(A).

1131 *ibid* para V(C).

1132 *ibid*.

1133 Decision of the Comisión Nacional de los Mercados y la Competencia (Spain) of 13 February 2014 Case S/0441/12: *Pfizer Health AB*.

1134 Stothers and Ramondino (n 1107) 594; Daniela Ampollini, 'Looking for Sense in the Italian Antitrust Authority Decision in the *Pfizer Xalatan* Case' [2012] Antitrust Chronicle vol 7(2); Damien Geradin, 'When Competition Law Analy-

bly offered a more sensible interpretation by emphasising the idea of an abuse of administrative and judicial procedures, thereby also bringing the case closer to *AstraZeneca*'s second abuse—yet the circumstances appear to be slightly different. In *AstraZeneca*, the firm had employed administrative procedures for a purpose different from that intended by the legislator, whereas Pfizer's conduct appears to conform precisely to the legislator's purpose.¹¹³⁵ In this sense, the Italian authorities mistakenly state that divisional patents ordinarily lead to new products on the market¹¹³⁶ and assert that, in this case, parent and divisional patents have 'identical' scope, although that is not legally possible.¹¹³⁷ Therefore, considering that the scope of an SPC is defined by the scope of the underlying patent,¹¹³⁸ an SPC based on a parent patent necessarily has a different scope from an SPC based on a divisional patent. The Council of State seems to have overlooked the fact that the SPC regime itself acknowledges that there might be more than one patent covering different aspects of a product, and for that reason permits only one SPC per product¹¹³⁹ and allows the applicant to use as a basis the patent it deems appropriate.¹¹⁴⁰ On a different note, the AGCM also questioned Pfizer's 'utilitarian' purposes in applying for a

sis Goes Wrong – The Italian Pfizer/Pharmacia Case' (2014) 14 <<http://ssrn.com/abstract=2393383>> accessed 14 February 2018.

- 1135 David Hull, 'The Application of EU Competition Law in the Pharmaceutical Sector' (2012) 3 J Eur Comp L & Prac 473, 478.
- 1136 Gianni De Stefano, 'Tough Enforcement of Unilateral Conduct at the National Level: Italian Antitrust Authority Sanctions Bayer and Pfizer for Abuse of Dominant Position (aka AstraZeneca Ruling and Essential Facility Doctrine in Italian Sauce)' (2012) 3 J Eur Comp L & Prac 396, 400.
- 1137 According to the EPO's Examination Guidelines, '[t]he parent and divisional applications may not claim the same subject-matter. This means not only that they must not contain claims of substantially identical scope, but also that one application must not claim the subject-matter claimed in the other, even in different words. The difference between the claimed subject-matter of the two applications must be clearly distinguishable.' EPO, Guidelines for Examination in the European Patent Office (EPO November 2014) pt C(IX) para 1(6). The Italian authorities also mistakenly assume that divisional patents normally lead to the launching of new products, when the limitations of this kind of patents in fact make that very difficult. See EPC, art 76 ('A European divisional application ... may be filed only in respect of subject-matter which does not extend beyond the content of the earlier application as filed ...').
- 1138 SPC Regulation, art 5 ('...the certificate shall confer the same rights as conferred by the basic patent and shall be subject to the same limitations and the same obligations.').
- 1139 *ibid*, art 3(c).
- 1140 Zbierska (n 1009) 160.

paediatric extension of the SPC, although that seems to be precisely the legislator's rationale behind those extensions: because the market itself does not provide sufficient incentives to stimulate research into paediatric products, additional protection is offered.¹¹⁴¹ Finally, the decisions seem to overly rely on malleable and subjective terms, eg by alleging that the patent situation had been 'crystallised' after the firm failed to apply for an SPC on the parent patent, or that the patent protection was 'artificially' extended,¹¹⁴² thereby raising additional problems in terms of legal certainty.

In any case, the *Pfizer* saga serves to highlight the importance of having clear standards and evidences that the guidelines offered by the EU courts in *AstraZeneca* might need to be further developed. As indicated above, the landscape in the US does not seem to be very different, as a number of significant questions still remain open, particularly as to identifying the correct theory of harm. It is not completely clear in that jurisdiction whether the emphasis should be placed on the act of obtaining the patent or on maintaining and enforcing it. In the latter case, it is worth asking what distinguishes a fraudulently obtained patent from any other invalid patent and, on a more general level, whether it would just constitute a particular form of sham litigation. The next chapter attempts to provide an answer to these questions by critically appraising the existing case law described in this chapter, distinguishing the possible theories of harm and offering workable, across the board criteria for the cases to come.

1141 Regulation (EC) 1901/2006 of 12 December 2006 on medicinal products for paediatric use [2006] OJ L378/1, recitals 2-4.

1142 Geradin, 'When Competition Law Analysis Goes Wrong' (n 1134) 15.

Chapter VI: Searching for a Workable Theory of Harm

1. Introduction

Having analysed the most prominent case law in the US and in the EU on the question of deceptive behaviour before the patent office, it is now possible to turn to the underlying theory of harm in a more methodical fashion and from a more academic perspective. Most of the cases described along the previous chapter certainly provide valuable insights, yet—for different reasons—the theoretical criteria underpinning the decisions are at times ambiguous or imprecise and have left a number of questions open.

At the outset, it is noteworthy that antitrust cases involving a deceptive conduct before the patent office frequently arise amidst accusations of sham and abuses of administrative and judicial procedures. As a matter of fact, deceptive behaviour and sham are often invoked concurrently and, in the view of a considerable number of courts and scholars, there are in fact no significant differences among them, since the former would simply be a specific variant of the broader sham doctrine—or at least should be analysed under equivalent principles.¹¹⁴³

1143 As for US law, see, eg, *Kottle v Northwest Kidney Centers* 146 F 3d 1056, 1060-61 (9th Cir 1998) (treating misrepresentations as a variant of sham); *Chemisorb Ltd v Ethyl Corp* 168 F 3d 119, 123 (3rd Cir 1999) (applying the sham criteria to a case involving misrepresentations); Robert H Bork, *The Antitrust Paradox: A Policy at War with Itself* (Basic 1978) 353 (arguing that, in a case involving the enforcement of a fraudulently obtained patent, the fraud is simply a way to show bad faith in litigation); Herbert Hovenkamp, *The Antitrust Enterprise: Principle and Execution* (Harvard Univ Press 2005) 267 (arguing that *Walker Process* is not really different from any other abusive litigation technique); S W O'Donnell, 'Unified Theory of Antitrust Counterclaims in Patent Litigation' (2004) 9(8) Va J L & Tech 1, 61 (interpreting that the sham litigation criteria is also applicable to cases like *Walker Process*); Christopher C Klein, 'The Economics of Sham Litigation: Theory, Cases, and Policy' (Bureau of Economics Staff Report to the FTC, April 1989) 9 <www.ftc.gov/sites/default/files/documents/reports/economics-sham-litigation-theory-cases-and-policy/232158_0.pdf> accessed 14 February 2018 (reasoning that sham litigation strategies either involve fraudulent use of the courts or they are special cases of nonprice predation); Rudolph J R Peritz, 'Competition Policy and its Implications for Intellectual Property Rights in the United States' in Steven D Anderman (ed), *The Interface Between Intellectual Property Rights and Competition Policy* (Cambridge

Against this background, it seems appropriate to first examine the sham doctrine in greater depth, scrutinise its underlying economic principles and verify whether deceptive conducts before the patent office can indeed qualify as a mere variant of a sham strategy. The first part of the present chapter, therefore, is devoted to this enterprise.

Parenthetically, it is important to recall that the US and the EU do not have the exact same starting points when approaching questions that involve petitioning public authorities. The US, on the one hand, starts from the premise that petitioning activities are, as a principle, immune from antitrust laws.¹¹⁴⁴ Doctrines like sham, hence, are merely exceptions that strip the private party from that immunity and only mean that the act can be subject to antitrust scrutiny.¹¹⁴⁵ In the EU, on its turn, no comparable immunity doctrine has been developed and authorities hence set off from a seemingly more open starting line. This, however, does not mean that EU competition rules know no boundaries, as limits to their reach can also be found on basic rights and constitutional principles. As a matter of fact, in the few cases in which the problem has been addressed, EU authorities have found in US case law an important source of inspiration.¹¹⁴⁶ Therefore, the fact that the starting point may be different does not necessarily mean that the final outcome should also differ: ultimately, the common question in both jurisdictions seems to be whether a specific conduct has a negative effect on competition and, if yes, whether there are any overriding reasons that vindicate it.

Univ Press 2007) 193 (referring to the *Walker Process* doctrine as a type of sham litigation). As for EU law, see, eg, Mariateresa Maggolino, *Intellectual Property and Antitrust: A Comparative Economic Analysis of US and EU Law* (Edward Elgar 2011) 103-05 (suggesting that *AstraZeneca's* first abuse constitutes an abusive enforcement of a patent, similar to any other vexatious litigation situation); Valéria Guimarães de Lima e Silva, 'Sham Litigation in the Pharmaceutical Sector' (2011) 7 Eur Comp J 455, 496 (proposing to interpret vexatious litigation in a broader way, so as to include other abuses of governmental procedures 'that cause even more harmful effects than groundless litigation itself').

1144 *Professional Real Estate Investors Inc v Columbia Pictures Industries Inc* 508 US 49, 56 (1993).

1145 *ibid* 61.

1146 Katarzyna Czapracka, *Intellectual Property and the Limits of Antitrust: A Comparative Study of US and EU Approaches* (Edward Elgar 2010) 28.

2. *The Sham or Vexatious Litigation Doctrine*

The question of sham¹¹⁴⁷ was briefly introduced in the previous chapter, when analysing the exceptions to the *Noerr* immunity in the US and its EU counterpart. The following paragraphs succinctly recount the most relevant decisions in both jurisdictions¹¹⁴⁸ and later tease out their most important elements, study their underlying theory of harm and juxtapose it against different scenarios involving deceptive conducts before the patent office.

A. *The Development of Sham as an Antitrust Doctrine in the US and in the EU*I. *Sanctions under Other Areas of Law*

Before addressing the question of sham as a competition law concern, it is worth pointing out that this sort of behaviour—ie, the use of court or governmental procedures with the intent of harassing rivals rather than obtaining a favourable outcome—is not the exclusive domain of competition law. Quite the contrary, these conducts have long raised concerns among other areas of law, predominantly in the context of procedural or civil law abuses. Admittedly, the fact that a certain behaviour is illegal under other areas of law does not exempt it from competition law scrutiny, as the sanctions imposed in those other areas are likely to pursue different objectives. Yet looking at these fields might nonetheless prove relevant for a couple of

1147 By way of clarification, it should be noted that the terms ‘sham’ and ‘vexatious’ litigation essentially refer to one and the same legal concept, ie the specious use of court and governmental procedures with the purpose of harassing competitors and indifferent of their outcome. See Case T-111/96 *ITT Promedia v Commission* [1998] ECR II-2937, para 30; *City of Columbia v Omni Outdoor Advertising Inc* 499 US 365, 380 (1991). While the former is often used in the context of US litigation, the latter is a more customary expression among European courts and scholars. Throughout this work, both terms are used interchangeably.

1148 It may be interesting to note that cases of sham litigation have arisen in other jurisdictions as well, although their analysis exceeds the scope of this work. See, eg, Decision of the Conselho Administrativo de Defesa Econômica (Brasil) of 20 August 2014 Case 08012.011508/2007-91 *Eli Lilly do Brasil Ltda* (recommending to condemn the firm for sham litigation); *Monsanto Co s/ Apel Resol Comisión Nacional de Defensa de la Competencia* (decision of the Argentine Federal Court of Appeals of 30 September 2008, case 13676/07) (revoking de decision of the NCA that had condemned the firm for sham litigation).

reasons. In the first place, it evidences that competition law is not the only tool available to address these concerns and that, under certain circumstances, other areas of law might be better suited to tackle them. Secondly, and perhaps more importantly, it may also help to shape competition law's constitutional boundaries. It has been argued in this regard that if a particular behaviour can be sanctioned under procedural laws without raising any constitutional concerns, it would be incongruous to argue that that same conduct cannot be sanctioned by competition law for the same reasons.¹¹⁴⁹

In the US, abuses of the judicial proceedings may be countered through different channels. Firstly, the Federal Rules of Civil Procedure establish that, when parties make presentations before the courts, they implicitly certify that they are not being made for any improper purpose and courts can impose sanctions in case of violation.¹¹⁵⁰ Furthermore, under common law, two basic torts exist: malicious prosecution and abuse of process. Malicious prosecution refers to legal actions characterised in that they are undertaken without probable cause and for an improper purpose,¹¹⁵¹ whereas

1149 *Grip-Pak Inc v Illinois Tool Works Inc* 694 F 2d 466, 470-71 (7th Cir 1982) (arguing that, if a legal action with improper motivations can be sanctioned by procedural law even if brought with probable cause, that same conduct cannot be considered immunised for competition law purposes). See also Daniel R Fischel, 'Antitrust Liability for Attempts to Influence Government Action: The Basis and Limits of the *Noerr-Pennington* Doctrine' (1977) 45 U Chi L Rev 80, 101-06; C Douglas Floyd, 'Antitrust Liability for the Anticompetitive Effects of Governmental Action Induced by Fraud' (2001) 69 Antitrust L J 403, 434-35; Marina Lao, 'Reforming the *Noerr-Pennington* Antitrust Immunity Doctrine' (2003) 55 Rutgers L Rev 965, 1011. Cf Milton Handler and Richard A De Sevo, 'The *Noerr* Doctrine and Its Sham Exception' (1984) 6 Cardozo L Rev 1, 36-37 (1984) (challenging such a view on the basis that immunity does not stem from constitutional principles but on an interpretation of the antitrust rules).

1150 US Federal Rules of Civil Procedure, r 11(b) and (c) ('By presenting to the court a pleading, written motion, or other paper ... an attorney or unrepresented party certifies that to the best of the person's knowledge, information, and belief, formed after an inquiry reasonable under the circumstances ... it is not being presented for any improper purpose, such as to harass, cause unnecessary delay, or needlessly increase the cost of litigation ...').

1151 *Restatement (2d) of Torts* (1977) para 674 ('One who takes an active part in the initiation, continuation or procurement of civil proceedings against another is subject to liability to the other for wrongful civil proceedings if (a) he acts without probable cause, and primarily for a purpose other than that of securing the proper adjudication of the claim in which the proceedings are based, and (b) except when they are ex parte, the proceedings have terminated in favor of the person against whom they are brought.').

the tort of abuse of process only requires the action to have an improper purpose, even if the claim is asserted with probable cause.¹¹⁵²

On the European side, the regulation of court proceedings remains essentially a matter of national law. In the UK, courts also recognise the common law torts of malicious prosecution and abuse of process and their parameters are very similar to their US equivalents.¹¹⁵³ Indeed, the tort of malicious prosecution requires to establish both a purpose not within the scope of the action and a lack of reasonable cause, whereas the tort of abuse of process does not include this last requirement.¹¹⁵⁴ Moreover, in the specific field of patent litigation, the UK Patents Act even provides for sanctions for groundless threats.¹¹⁵⁵ In Germany, on the other hand, ungrounded infringement accusations (*Unberechtigte Schutzrechtsverwarnungen*) also entitle the wrongly accused parties to claim damages on the basis of § 823 of the BGB and §§ 3, 4 and 9 of the UWG (*Gesetz gegen den unlauteren Wettbewerb* or German Act Against Unfair Competition).¹¹⁵⁶ Moreover, courts may dismiss actions on the basis of the ZPO (*Zivilprozessordnung* or German Civil Procedural Rules)¹¹⁵⁷ and the BGB¹¹⁵⁸ if they believe that they lack of a legitimate interest for legal protection.¹¹⁵⁹ It is also interesting to note that, for the Unitary Patent system which is yet to enter into force, the proposed Rules of Procedure seem to recognise to the courts

1152 *Restatement (2d) of Torts* (1977) para 682 ('One who uses a legal process, whether criminal or civil, against another primarily to accomplish a purpose for which it is not designed, is subject to liability to the other for harm caused by the abuse of process.').

1153 Neil Andrews, 'Abuse of Process in English Civil Litigation' in Michele Taruffo (ed), *Abuse of Procedural Rights: Comparative Standards of Procedural Fairness* (Kluwer 1999) 75-79.

1154 *Crawford Adjusters v Sagicor General Insurance (Cayman) Ltd* [2013] UKPC 17, [2014] 1 AC 366 [62].

1155 UK Patents Act, s 70.

1156 Ansgar Ohly and others, *Gesetz gegen den unlauteren Wettbewerb* (6th edn, Beck 2014) para 10/41. See also Hans-Peter Brack, 'Patent Infringement Warnings in a Common Law versus a Civil Law Jurisdiction - An Actionable Threat?' (2006) 37 IIC 1, 15-22.

1157 § 138 ZPO (duty to tell the truth).

1158 §§ 226 and 242 BGB (prohibition of chicanery and general good faith obligation).

1159 Burkhard Hess, 'Abuse of Procedure in Germany and Austria' in Michele Taruffo (ed), *Abuse of Procedural Rights: Comparative Standards of Procedural Fairness* (Kluwer 1999) 157.

the same power to dismiss claims when they are manifestly inadmissible or unfounded.¹¹⁶⁰

II. Sham as an Antitrust Injury in US Case Law

The concept of sham as an antitrust concern was originally introduced in the US in *Noerr*. Indeed, in the same decision in which the Supreme Court first recognised an antitrust immunity for petitioning the government, it also acknowledged that said immunity could be stripped away if the petition ‘is a mere sham to cover what is actually nothing more than an attempt to interfere directly with the business relationships of a competitor.’¹¹⁶¹ However, since the Supreme Court considered that *Noerr* was not a case of sham, it failed to explain in detail which elements would actually establish one.

A few years later, in the *California Motor Transport* decision, the Supreme Court shed some light on the question. In this case, a group of highway carriers had been accused of systematically instituting proceedings and legal actions against competitors in order to stop them from acquiring or registering operating rights.¹¹⁶² The court immediately acknowledged its resemblance to *Noerr*, but pointed out that this time the behaviour of the group of highway carriers could justify the applicability of the sham exception. It stated in this regard that, in the case at hand, the transporters had instituted proceedings and legal actions ‘with or without probable cause, and regardless of the merits of the cases’¹¹⁶³ and that they had used their power, strategy and resources ‘to harass and deter respondents in their use of administrative and judicial proceedings.’¹¹⁶⁴ This kind of behaviour, reckoned the court, could indeed come within the sham exception to *Noerr* immunity.¹¹⁶⁵ It should be noted that, although the decision seemed to recognise the relevant anticompetitive harm solely in restricting competitors’ access to agencies and courts,¹¹⁶⁶ the court later clari-

1160 17th draft of the Rules of Procedure of the Unified Patent Court, rr 361-63.

1161 *Eastern Railroad Presidents Conference v Noerr Motor Freight Inc* 365 US 127, 144 (1961).

1162 *California Motor Transport Co v Trucking Unlimited* 404 US 508, 509 (1972).

1163 *ibid* 512.

1164 *ibid* 511-12.

1165 *ibid* 516.

1166 See, in this regard, Thomas A Balmer, ‘Sham Litigation and the Antitrust Laws’ (1980) 209 *Buffalo L Rev* 39, 42-43.

fied that any other kind of anticompetitive effect (eg, by raising rivals' costs) could equally qualify as sham.¹¹⁶⁷

In the decades that followed, the Supreme Court had the opportunity to decide on a number of additional cases involving the *Noerr* immunity. Although most of those cases were not directly concerned with sham, they did provide some additional guidance as to its characterisation. In *Allied Tube*,¹¹⁶⁸ for instance, the issue arose whether the manipulation of a private standard setting organisation to exclude competitors could be subject to competition law, considering that the results of those standards were widely used by local governments. The Supreme Court decided that the conduct was not immunised, although it refused to qualify it as sham because the standard had actually been approved by many local statutes and ordinances.¹¹⁶⁹ According to the court, the concept of sham should be restricted to actions which are not genuinely aimed at procuring favourable government action.¹¹⁷⁰ The court also warned against a broad reading that would encompass actions which genuinely seek to achieve a governmental result, even if through improper means.¹¹⁷¹ Later, in *Omni*,¹¹⁷² the Supreme Court continued along those lines by reaffirming that sham refers only to 'situations in which persons use the governmental process—as opposed to the outcome of that process—as an anticompetitive weapon.'¹¹⁷³ Since the case concerned a conspiracy between a private firm and city officials to restrict potential competition through the enactment of local ordinances, the court understood that the restriction to competition would stem from the ultimate *product* of lobbying and hence did not constitute a case of sham.¹¹⁷⁴ In the view of the court, the purpose of harassing competitors can only constitute sham if it is sought by the lobbying process itself, and not by the governmental action that the lobbying seeks.¹¹⁷⁵

In 1993, the Supreme Court was finally faced again with a pure sham question in *PREI*,¹¹⁷⁶ which probably constitutes the most important deci-

1167 *Otter Tail Power Co v United States* 410 US 366, 380 (1973).

1168 *Allied Tube & Conduit Corp v Indian Head Inc* 486 US 492 (1988).

1169 *ibid* 502.

1170 *ibid* 500, fn 4.

1171 *ibid* 507, fn 10.

1172 *Omni* (n 1147).

1173 *ibid* 380.

1174 *ibid* 381.

1175 *ibid*.

1176 *PREI* (n 1144).

sion in the US on this issue to date. In this case, a hotel operator had installed videodiscs players on the rooms and rented videodiscs to its guests for in-room viewing. Columbia Pictures, who held copyrights on many of those movies, sued the hotel operator for copyright infringement. The hotel operator, on its turn, counterclaimed accusing Columbia of sham litigation, essentially arguing that the suit had been brought with anticompetitive purposes. Against this background, the main question presented to the Supreme Court was whether litigation may be considered sham merely because a subjective expectation of success does not motivate the petitioner.¹¹⁷⁷ The court answered in the negative and interpreted that the sham doctrine contains not only a subjective element but also an ‘indispensable objective component’,¹¹⁷⁸ whereby the baseless nature of the claim should also be shown. For the sake of clarity, the court outlined a two-pronged test:

First, the lawsuit must be objectively baseless in the sense that no reasonable litigant could realistically expect success on the merits. If an objective litigant could conclude that the suit is reasonably calculated to elicit a favorable outcome, the suit is immunized under *Noerr*, and an antitrust claim premised on the sham exception must fail. Only if challenged litigation is objectively meritless may a court examine the litigant's subjective motivation. Under this second part of our definition of sham, the court should focus on whether the baseless lawsuit conceals “an attempt to interfere *directly* with the business relationships of a competitor,” through the “use [of] the governmental *process*—as opposed to the *outcome* of that process—as an anticompetitive weapon.” This two-tiered process requires the plaintiff to disprove the challenged lawsuit’s *legal* viability before the court will entertain evidence of the suit’s *economic* viability.¹¹⁷⁹

In other words, according to the Supreme Court’s sham test, anticompetitive litigation contains both an objective component—a baseless suit—and a subjective component—the anticompetitive motivation. The objective baselessness should be the first element to consider; only if proven can the courts proceed to determine the anticompetitive purposes.

As it may be recalled, US courts in the patent litigation forum have developed an antitrust defence normally referred to as *Handgards* which, al-

1177 *ibid* 57.

1178 *ibid* 58.

1179 *ibid* 61-62 (internal citations omitted) (emphasis in original).

though initially viewed as an aftermath of *Walker Process*, ultimately developed into the equivalent of sham litigation in the patent sphere.¹¹⁸⁰ Although the Supreme Court in *PREI* did not explicitly refer to it in its decision, there is little doubt that it had a profound impact on it and that *Handgards* claims should now be judged under the *PREI* standards.¹¹⁸¹

III. Vexatious Litigation in the EU

Considering that no comparable immunity doctrine has been developed under European law,¹¹⁸² the starting point in this jurisdiction seems to be somehow easier. Indeed, as a general principle, any act can be subject to EU competition rules, even if it does not take place on the market, provided that it at least has some effects on it.¹¹⁸³ The sham use of administrative and judicial procedures, hence, would be undoubtedly comprehended by that definition. As a matter of fact, this behaviour would even have been deemed within the scope of EU competition law under the old existence-exercise dichotomy,¹¹⁸⁴ since it would clearly not affect the existence of any intellectual property right.

In spite of this, when shaping the boundaries of the competition rules, EU authorities have taken into consideration essentially the same concerns as their US counterparts in terms of fundamental rights and freedoms, habitually highlighting the importance of the right to access to courts—a right protected by art 47 of the Charter of Fundamental Rights of the

1180 See text at nn 945ff in ch 5.

1181 James B Kobak Jr, 'Professional Real Estate Investors and the Future of Patent-Antitrust Litigation: *Walker Process* And *Handgards* Meet *Noerr-Pennington*' (1994) 63 Antitrust L J 185, 201 (both the objective and the subjective test developed in *PREI* must also be satisfied in *Handgards* claims); S W O'Donnell (n 1143) 44 ('it is conventional wisdom that *Handgards* bad faith prosecution is the patent apposite of sham litigation. ... As a result, courts and scholars now formulate *Handgards* bad faith prosecution within the *Professional Real Estate* rubric.').

1182 See text at nn 881-891 in ch 5.

1183 *AstraZeneca* (Case COMP/A.37.507/F3) Commission Decision 2006/857/CE [2006] OJ L332/24, para 328. It has been argued, however, that the fact that the conduct occurs outside the market may indicate that competition law might not be the optimal remedy. Mario Siragusa, 'The EU Pharmaceutical Sector Inquiry: New Forms of Abuse and Article 102 TFEU' in Giandonato Caggiano, Gabriella Muscolo and Marina Tavassi (eds), *Competition Law and Intellectual Property: A European Perspective* (Wolters Kluwer 2012) 186.

1184 See text at nn 853-857 in ch 5.

European Union.¹¹⁸⁵ In this sense, the CJEU has recognised that the right to assert one's claims in court reflects a general law principle that underlies the constitutional traditions of all EU Member States¹¹⁸⁶ and that 'in principle, the proprietor may not be deprived of the right to have recourse to legal proceedings to ensure effective enforcement of his exclusive rights'.¹¹⁸⁷ Similarly, the EU Commission has recognised that, as a principle, enforcing patents in court is a legitimate and fundamental right.¹¹⁸⁸ In this light, it is no surprise that the cases adjudicated in the EU on the issue of sham or vexatious litigation bear many similarities to those decided in the US.¹¹⁸⁹

That being said, case law addressing sham as a competition law concern in Europe is scarce and relatively new.¹¹⁹⁰ The first opportunity in which EU authorities seem to have acknowledged the issue is in the *BBI/Boosey & Hawkes* decision.¹¹⁹¹ In this case, a manufacturer of musical instruments had been accused of restraining competition mainly by refusing to supply products to potential competitors, although the complaint also included accusations of pursuing unjustified litigation for copyright infringement 'which had the effect of imposing a heavy financial burden on the appli-

1185 Charter of Fundamental Rights of the European Union [2012] OJ C 326/391.

1186 Case C-222/84 *Johnston v Chief Constable of the Royal Ulster Constabulary* [1986] ECR I-1651, para 18. See also Case T-5/97 *Industrie des Poudres Sphériques (IPS) SA v Commission* [2000] ECR II-3755, para 213 ('recourse to a remedy in law and, in particular, participation by an undertaking in an investigation conducted by the Community institutions, cannot be deemed, of itself, to be contrary to Article 86 of the Treaty.').

1187 Case C-170/13 *Huawei Technologies Co. Ltd v ZTE Corp., ZTE Deutschland GmbH* (CJEU, 16 July 2015, ECLI:EU:C:2015:477).

1188 See, eg, *Motorola - Enforcement of GPRS standard essential patents* (Case AT.39985) Commission Decision C(2014) 2892 [2014] OJ C344/6, paras 504-505; *Samsung - Enforcement of UMTS standard essential patents* (Case AT.39939) Commission Decision C(2014) 2891 [2014] OJ C350/8, paras 55 and 71-73.

1189 Abbe E L Brown, *Intellectual Property, Human Rights and Competition* (Edward Elgar 2012) 101.

1190 One of the reasons of the reduced number of cases might be the fact that, in order to find an abuse of dominance under art 102 TFEU, the firm already needs to be dominant at the time of the abuse. Eva Luterkort, 'Vexatious (Patent) Litigation & Art. 82 EC Following *AstraZeneca*: EC and US Converging Approaches?' (Master thesis, University of Lund 2007) 85 <<http://lup.lub.lu.se/luur/download?func=downloadFile&recordId=1559936&fileId=1565148>> accessed 14 February 2018.

1191 *BBI/Boosey & Hawkes: Interim Measures* (Case IV/32.279) Commission Decision 87/500/EEC [1987] OJ L286/36.

cants and of delaying the launching' of new products.¹¹⁹² Since the decision solely concerned the imposition of interim measures compelling the dominant company to resume the supply of its products, the Commission did not rule on the issue of sham, yet it did recognise that such behaviour could eventually fall foul of competition laws.¹¹⁹³

Soon after, in *Decca Navigator System*,¹¹⁹⁴ the Commission rendered a decision on a case that presented clear elements of vexatious litigation, although regrettably it was decided on different grounds. The case concerned a navigation system originally created by Racal Decca and mostly used for maritime navigation, whereby land-based stations transmit signals which are received by devices placed on board. When a number of firms attempted to enter the market of receivers after Racal Decca's basic patents expired, the latter attempted to maintain its dominant position by implementing a mixed strategy essentially consisting in (i) varying the transmission signals of the land-based stations to obstruct the operation of competing receivers, and (ii) initiating numerous legal proceedings for unfair competition. These lawsuits were primarily grounded on the fact that Racal Decca was allegedly put in a competitive disadvantage by having to bear alone with the costs of signal transmission, yet complainants claimed that they were rather aimed to 'fatigue' and 'exhaust' competitors.¹¹⁹⁵ In any case, Racal Decca and the different defendants ultimately settled these legal actions by entering into coordinated license agreements that fragmented the market, which on its turn led to several antitrust complaints from third parties. After analysing the market and the conducts in detail, the Commission interpreted that both the agreements and the changes in the signals were anticompetitive: the former because they amounted in practice to illegal market partitioning and the latter because it caused the malfunctioning of competitors' devices and discouraged competition.¹¹⁹⁶ It refused to analyse, however, whether the ungrounded litigation could constitute an anticompetitive conduct on its own.

The issue of vexatious litigation was finally addressed in depth in the EU in the well-known *ITT Promedia* case.¹¹⁹⁷ Promedia had been the exclusive publisher of telephone directories in Belgium for many years, but when its

1192 *ibid* para 9.

1193 *ibid* para 19.

1194 *Decca Navigator System* (Case IV/30.979 and 31.394) Commission Decision 89/113/EEC [1989] OJ L43/27.

1195 *ibid*, para 50.

1196 *ibid* paras 102 and 108.

1197 *ITT Promedia* (n 1147).

exclusive license was close to expire in 1993, a series of conflicts arose with Belgium's telecommunications operator, Belgacom. Claims and counter-claims were filed by both parties on different issues such as spreading false information, demands for supplying information on FRAND terms and demands for performance of agreement, with Promedia emerging victorious from all of them. Against this backdrop, Promedia submitted a complaint to the EU Commission asserting that Belgacom had abused its dominant position by, among other reasons, 'initiating vexatious litigation'.¹¹⁹⁸

The Commission stated at the outset that 'in principle the bringing of an action, which is the expression of the fundamental right of access to a judge, cannot be characterised as an abuse'.¹¹⁹⁹ In order to qualify as an anticompetitive abuse, continued the Commission, it would be necessary to show the following cumulative conditions:

- i. that the action 'cannot reasonably be considered as an attempt to establish [the dominant undertaking's] rights and can therefore only serve to harass the opposite party'; and
- ii. that the action 'is conceived in the framework of a plan whose goal is to eliminate competition'.¹²⁰⁰

Although not expressly referred to in the decision, the influence of the US Supreme Court's *PREI* judgment, which had been rendered only a few years before, is undeniable.¹²⁰¹ In fact, the first part of the *ITT Promedia* test seems to embrace the whole of the *PREI* test, as it makes reference to both objective and subjective elements.¹²⁰² In any case, the Commission concluded that, in the light of the proposed standard, Belgacom's conduct could not be considered anticompetitive, since its actions could reasonably be regarded 'as having been brought with a view to asserting its rights'.¹²⁰³

1198 *ibid* para 23.

1199 *ibid* para 30.

1200 *ibid* para 30.

1201 Adrian J Vossestein, 'Corporate Efforts to Influence Public Authorities, and the EC Rules on Competition' (2000) 37 CML Rev 1383, 1395; Simonetta Vezzoso, 'Towards an EU Doctrine of Anticompetitive IP-Related Litigation' (2012) 3 J Eur Comp L & Prac 521, 530.

1202 It may well be that the *raison d'être* of *ITT Promedia*'s second part of the test responds to the different starting points already mentioned above: whereas US courts see sham as an exception to antitrust immunity, and hence solely as a first step, EU law conceives it as a definite test to find an abuse. See Vezzoso (n 1201) 533.

1203 *ITT Promedia* (n 1147) para 41.

Interestingly, when the decision was appealed before the General Court (then called Court of First Instance), the appellant did not challenge the two cumulative criteria, but simply its application by the Commission.¹²⁰⁴ The court hence reckoned that it was not necessary to rule on its correctness,¹²⁰⁵ although it did acknowledge the importance of respecting the fundamental right of access to the court and agreed with the Commission in the sense that ‘it is only in wholly exceptional circumstances that the fact that legal proceedings are brought is capable of constituting an abuse of a dominant position’.¹²⁰⁶ Moreover, when scrutinising the way in which the Commission had applied the two cumulative criteria, the General Court offered some further guidance. Firstly, it explained that the test laid down by the Commission contains one objective and one subjective element: on the one hand, the action should be ‘manifestly unfounded’,¹²⁰⁷ which should be proven by analysing whether the action ‘was intended to assert what the undertaking could, at that moment, reasonably consider to be its rights’;¹²⁰⁸ on the other hand, the aim of the action must be ‘to eliminate competition’.¹²⁰⁹ The court ultimately interpreted that the first part of the test had not been met and confirmed the Commission’s decision.¹²¹⁰

Over the following years, the issue attracted little attention from courts and competition authorities and *ITT Promedia* became the leading precedent on vexatious litigation under EU competition law.¹²¹¹ It has been argued, however, that the CJEU’s decision in *AstraZeneca* might have modified the landscape, particularly when examining AstraZeneca’s second abuse.¹²¹² As it may be recalled, AstraZeneca’s second abuse had essentially consisted in deregistering marketing authorisations for Losec with the sole purpose of obstructing and delaying generic competition.¹²¹³ The anticompetitive harm, hence, seems to be somehow similar to that which constitut-

1204 *ibid* para 57.

1205 *ibid* para 58.

1206 *ibid* para 60.

1207 *ibid* para 56.

1208 *ibid* para 73.

1209 *ibid* para 56.

1210 *ibid* para 116.

1211 Robert O’Donoghue and A Jorge Padilla, *The Law and Economics of Article 102 TFEU* (2nd edn, Hart 2013) 652.

1212 Matteo Negrinotti, ‘Abuse of Regulatory Procedures in the Intellectual Property Context: The AstraZeneca Case’ in Inge Govaere and Hans Ullrich (eds), *Intellectual Property, Market Power and the Public Interest* (Peter Lang 2008) 143.

1213 See text at nn 1066ff in ch 5.

ed the main concern in *ITT Promedia*,¹²¹⁴ ie a competition restraint imposed by the collateral effects of a bogus use of governmental procedures. In *AstraZeneca*, however, neither the General Court nor the CJEU used the two-pronged criteria nor paid any attention to the objective element—ie, whether AstraZeneca could have reasonably believed to be exercising its rights—but rather focused on the subjective aspect and the absolute lack of any economic rationalisation for its conduct other than stymieing competitors.¹²¹⁵ Perhaps the courts implicitly understood that, in cases where the role of the administration is limited to rubber-stamping, the objective element of a sham test becomes less relevant. Be that as it may, the relation between *ITT Promedia* and *AstraZeneca* remains unclear, as the CJEU did not make any reference to the former case and the previous instances only referred to it in connection to the first abuse—and merely to underline its irrelevance on that specific issue.¹²¹⁶

Finally, the situation might have become yet thornier after the General Court's decision in *Protégé International*.¹²¹⁷ This decision was rendered shortly after *AstraZeneca* and referred to a complaint for abusive use of opposition procedures in different countries during the registration of a number of trademarks. The General Court, however, did not allude to *AstraZeneca* at all and simply reiterated and confirmed the two-pronged criteria formulated in *ITT Promedia*.¹²¹⁸ This might suggest that, in its view, *ITT Promedia* remains the governing test for sham cases, at least where they involve the assertion of an undertaking's right during an adjudicatory procedure, whereas *AstraZeneca*'s conclusions on the second abuse might come

1214 Negrinotti (n 1212) 163; Dirk Seidel, *Europäische Missbrauchsaufsicht nach AstraZeneca: Fallrelevante Problemkreise unter besonderer Berücksichtigung des Konfliktfeldes Immaterialgüter-/Wettbewerbsrecht* (Shaker 2008) 68.

1215 Case C-457/10 P *AstraZeneca v Commission* (CJEU, 6 December 2012, ECLI:EU:C:2012:770) para 132.

1216 Case T-321/05 *AstraZeneca v Commission* [2010] ECR II-2805, para 363; Case C-457/10 P *AstraZeneca v Commission* (CJEU, 6 December 2012, ECLI:EU:C:2012:293), Opinion of AG Mazák, para 52.

1217 Case T-119/09 *Protégé International Ltd v Commission* [2012] OJ C319/6.

1218 *ibid* para 49 ('Afin de conclure qu'une action en justice peut constituer, en réalité, un abus de position dominante, deux conditions cumulatives doivent être réunies. En premier lieu, il faut que l'action ne puisse être raisonnablement considérée comme visant à faire valoir les droits de l'entreprise en cause et ne puisse dès lors servir qu'à harceler la partie adverse. En deuxième lieu, l'action doit être conçue dans le cadre d'un plan ayant pour but d'éliminer la concurrence ... Ces deux conditions doivent être interprétées et appliquées restrictivement, de manière à ne pas tenir en échec l'application du principe général d'accès au juge.') (internal citations omitted).

into play in situations where the role of the governmental agency is merely ministerial.

Regardless of the above, it may be worth asking whether the subsequent decision rendered by the CJEU in *Huawei* may represent an overruling of *ITT Promedia* taking into consideration that it calls for a balance of the fundamental right to legal redress and the application of competition rules.¹²¹⁹

B. The Theory of Harm Underlying the Sham Doctrine

The cases examined in the preceding paragraphs altogether denote that, despite their somehow different points of departure, when competition authorities and courts in the US and the EU address the issues of sham or vexatious litigation, they essentially refer to the same conduct, ie the use of court and governmental proceedings irrespective of its outcome and with the main purpose of harassing, deterring or hindering competitors, and the standards developed seem to be very much alike.¹²²⁰ The following paragraphs will hence attempt to analyse the economic rationale underlying this exclusionary behaviour in order to more accurately understand how it affects competition and, ultimately, determine whether a deceptive behaviour before the patent office may have the same economic effects and be analysed under the same patterns.

I. Antitrust Injury

That a sham use of court and governmental procedures may represent a real and serious threat to competition does not appear to be in dispute. Not only courts on both sides of the Atlantic but even scholars with a more sceptical view on antitrust laws have acknowledged the considerable threats it entails.¹²²¹ An undertaking well-established on a certain market may, for instance, decide to start legal actions on dubious grounds against

1219 *Huawei* (n 1187) para 59.

1220 Institute for Applied Economic Research (IPEA Brasilia), 'Study on the Anti-Competitive Enforcement of Intellectual Property (IP) Rights: Sham Litigation' (Report for the WIPO Committee on Development and Intellectual Property CDIP/9/INF/6 REV, 2012) 14 <www.wipo.int/edocs/mdocs/mdocs/en/cdip_9/cdip_9_inf_6_rev.pdf> accessed 14 February 2018.

1221 See, eg, Bork (n 1143) 347.

a myriad of new entrants, which would not only force the latter to incur in legal costs to defend themselves but could also delay their entry to the market, obstruct their access to financial funding and even deter other parties from even entering the market altogether. It is true that, in most cases, those effects must be tolerated as inevitable by-products of the judicial system, since private parties have an undeniable right to access the courts and assert their rights. Yet those rights are clearly not absolute and, if they are abused, competition law intervention may be justified.¹²²²

At this point it should be clarified that this kind of exclusionary behaviour is not the exclusive domain of intellectual property rights, as the same kind of anticompetitive harm is conceivable with the assertion of any other non-meritorious claim.¹²²³ Indeed, a plaintiff can harass competitors not only by baselessly suing for the infringement of an IP right, but also by starting legal actions, eg, for an alleged breach of contract or a non-existing tort: the harmful effect does not depend so much on the right asserted but on the collateral damage inflicted because of the process. Moreover, even though courts and scholars often speak of sham or vexatious 'litigation', the anticompetitive conduct does not necessarily need to occur in court. As observed in some of the cases described above, it can also take place in administrative or regulatory settings, eg by filing ungrounded oppositions or complaints. As a matter of fact, when the concept of sham was first coined in the US, it did not refer to judicial procedures.¹²²⁴

From an economic perspective, sham can be classified as a variant of the more general strategy of raising rivals' costs.¹²²⁵ As Salop and Scheffman explained, a company can incur in predatory practices not only by temporarily lowering their own revenues to deter competitors, but also by non-price predatory practices that aim at raising competitors' costs.¹²²⁶ Broadly speaking, these non-price predatory strategies can be of two different types. On the one hand, they can refer to the attempt to raise the pro-

1222 *ibid* 358-59.

1223 Hovenkamp, *The Antitrust Enterprise* (n 1143) 267.

1224 *Noerr* (n 1161) 144.

1225 Christopher C Klein, 'Strategic Sham Litigation: Economic Incentives in the Context of the Case Law' (1986) 6 *Int'l Rev L & Econ* 241, 244.

1226 Steven C Salop and David T Scheffman, 'Raising Rivals' Costs' (1983) 73 *Am Econ Rev* 267. As a matter of fact, non-price predatory practices like strategic litigation may constitute a much more attractive and profitable tool to restrain competition, as it is much easier and cheaper for the predator than, eg, predatory pricing. Susan A Creighton and others, 'Cheap Exclusion' (2005) 72 *Antitrust L J* 975, 977; Einer Elhauge, 'Making Sense of Antitrust Petitioning Immunity' (1992) 80 *Cal L Rev* 1177, 1230.

duction costs of some or all of the participants on the market.¹²²⁷ On the other hand, a predator may attempt to impose costs on rivals without affecting post-entry production costs.¹²²⁸ Cases of sham or vexatious litigation would clearly fall under the second category, as they impose costs on competitors which are not production-related.¹²²⁹

In practice, determining in which cases the act of petitioning a governmental agency or court should be considered anticompetitive can be extremely difficult. One interesting proposal, based on a deeply economic understanding of sham, suggests that the decisive question should be whether the predator's expenditures on litigation can be expected to pay off absent any effect on competition¹²³⁰ or, in other words, whether the benefits that the plaintiff would obtain from a favourable outcome alone surpass its litigation costs. For that, it would be necessary to firstly determine the expected gains from succeeding on the merits, properly discounted, and secondly the expected costs of litigation. If the expected costs outweigh the expected benefits that would be obtained directly by the judgment, the plaintiff would necessarily be suing to provoke collateral effects, as otherwise the decision would not make economic sense.¹²³¹ In simple economic equations proposed by Klein,¹²³² an *honest* plaintiff would sue only if

$$B > L$$

where B are the expected benefits from a successful suit and L the expected litigation costs. *Dishonest* or sham litigants, on their turn, would sue if

$$X > L$$

where X are the expected collateral benefits to be obtained that do not depend on the outcome of the lawsuit. In reality, a plaintiff could even start a sham legal suit if

$$X < L$$

1227 Christopher C Klein, 'Predation in the Courts: Legal Versus Economic Analysis in Sham Litigation Cases' (1990) 10 Int'l Rev L & Econ 29, 32 (also stressing that the conduct might even raise the predators' production costs themselves, provided that the costs fall disproportionately on their rivals).

1228 *ibid.*

1229 *ibid* 33.

1230 Klein, 'Strategic Sham Litigation' (n 1225) 243.

1231 Klein, 'The Economics of Sham Litigation' (n 1143) 16.

1232 For a more thorough explanation of the economics of litigation and sham, see *ibid* 16-20.

provided that

$$(B + X) > L$$

This strictly economic reading of sham litigation has been supported by different scholars¹²³³ and J Posner arrived to a very similar conclusion in the *Grip-Pak* decision.¹²³⁴ In his view, the relevant question should be whether the ‘purpose is not to win a favorable judgment against a competitor but to harass him, and deter others, by the process itself—regardless of outcome—of litigating’ and should not depend on whether the plaintiff has a probable cause.¹²³⁵ Many claims which are not wholly baseless, he emphasised, may still constitute sham.¹²³⁶ What is more, sanctioning this kind of behaviour under antitrust laws should not present any constitutional impediment,¹²³⁷ as US procedural laws already include a tort against bad faith litigation even when it is not entirely groundless—and the same

1233 Gary Myers, ‘Antitrust and First Amendment Implications of Professional Real Estate Investors’ (1994) 51 Wash & Lee L Rev 1199, 1227; Scott D Helsel, ‘Preventing Predatory Abuses in Litigation between Business Competitors: Focusing on a Litigant’s Reasons for Initiating the Litigation to Ensure a Balance between the Constitutional Right to Petition and the Sherman Acts Guarantee of Fair Competition in Business’ (1995) 36 Wm & Mary L Rev 1135, 1164; Christopher C Klein, ‘Anticompetitive Litigation and Antitrust Liability’ (2007) Middle Tennessee State University, Department of Economics and Finance Working Paper 2007/13, 2 <<http://capone.mtsu.edu/berc/working/SHAM07WP.pdf>> accessed 14 February 2018.

1234 *Grip-Pak* (n 1149).

1235 *ibid* 472.

1236 *ibid* (‘Suppose a monopolist brought a tort action against its single, tiny competitor; the action had a colorable basis in law; but in fact the monopolist would never have brought the suit — its chances of winning, or the damages it could hope to get if it did win, were too small compared to what it would have to spend on the litigation — except that it wanted to use pretrial discovery to discover its competitor’s trade secrets; or hoped that the competitor would be required to make public disclosure of its potential liability in the suit and that this disclosure would increase the interest rate that the competitor had to pay for bank financing; or just wanted to impose heavy legal costs on the competitor in the hope of deterring entry by other firms. In these examples the plaintiff wants to hurt a competitor not by getting a judgment against him, which would be a proper objective, but just by the maintenance of the suit, regardless of its outcome.’).

1237 *Grip-Pak* (n 1149) 471 (‘If all nonmalicious litigation were immunized from government regulation by the First Amendment, the tort of abuse of process would be unconstitutional —something that, so far as we know, no one believes.’).

could probably be argued in the EU at least with regard to UK law, where a very similar tort exists.¹²³⁸

In any case, some of the promoters of this interpretation have themselves recognised that, even if the approach is economically sensible, it would make it easier for defendants to claim sham litigation and could incentivise them to target legitimate suits—thereby leading to ‘sham-sham’ suits.¹²³⁹ The most severe drawback, however, probably resides in the fact that this proposal instinctively assumes that all benefits not directly deriving from the outcome of the procedure are illegitimate and anticompetitive when, in fact, the inference is at least arguable. A trade mark owner, for instance, could decide to sue a small-scale counterfeiter aware that the litigation costs will not be recovered, but also knowing that it would dissuade other potential counterfeiters. Provided that the trade mark is valid and infringed, it would be difficult to argue that the deterrent effect sought by the owner is illegitimate. For the same reason, a patent owner could take legal actions against an infringer without even demanding damages, with the purpose of having a swift procedure and send a signal to the market. In this case, too, it would be hard to conclude that the purpose is anticompetitive if the patent is both valid and infringed, despite the fact that the litigation costs would clearly surpass the direct benefits stemming from the favourable judgment.

The question hence arises as to which of the collateral effects should be considered legitimate and which anticompetitive. Against this background, the two-pronged test advocated by the US Supreme Court in *PREI*—and largely mirrored by the EU’s General Court in *ITT Promedia* and *Protégé*—might emerge, after all, as a reasonable first footstep to solve the conundrum.¹²⁴⁰ Under such view, legal actions with some probable cause would be automatically shielded and the ‘economic’ test suggested above could still enter into play, but only if the action is manifestly baseless.

1238 See text at nn 1153–1154.

1239 Klein, ‘Strategic Sham Litigation’ (n 1225) 249. Nevertheless, the same author argues that this upshot can be mitigated if courts award attorney fees. Klein, ‘Anticompetitive Litigation and Antitrust Liability’ (n 1233) 18.

1240 Against, arguing that this test may unduly shelter predatory conducts, see Myers (n 1233) 1221; David McGowan and Mark A Lemley, ‘Antitrust Immunity: State Action and Federalism, Petitioning and the First Amendment’ (1994) 17 *Harv J L & Pub Pol’y* 293, 397; Helsel (n 1233) 1138; Lao, ‘Reforming the Noerr Doctrine’ (n 1149) 986.

II. The Two-Pronged Test in the US and in the EU

As mentioned above, the tests advocated by US and EU courts, at least for adjudicatory procedures, are very much alike and, in general terms, include one objective and one subjective step. Therefore, the following paragraphs separately describe each of those steps and attempt to determine whether a scenario involving a deceptive behaviour before the patent office can be subsumed under their defined parameters. As will be seen, in most cases an antitrust enforcer would not face major difficulties when applying the objective part of the test against that setting, as a patent application that comprises deceiving representations is very likely to be without merit too. When moving on to the second portion of the test, however, problems would probably arise, since the patent applicant might not be interested in harassing or raising rivals' costs—as is the case in regular sham cases—but plainly in obtaining an exclusive right and, in that way, having the government directly bar those rivals from even entering the market.

a. Objective Baselessness or 'Legal Inviability'

According to the test proposed by the US Supreme Court in *PREI*, an action can only be classified as sham if it is, in the first place, 'objectively baseless', ie when 'no reasonable litigant could realistically expect success on the merits.'¹²⁴¹ In other points of the decision, however, the court defines the objective test in slightly different terms, by speaking of lack of 'probable cause'¹²⁴² and of 'some chance of winning',¹²⁴³ which render the standard somewhat imprecise.¹²⁴⁴ On the European side, the objective part of the test is quite similar, as it refers to actions 'which cannot reasonably be considered as an attempt to establish' the undertaking's rights.¹²⁴⁵ Ac-

1241 *PREI* (n 1144) 61.

1242 *ibid* 62.

1243 *ibid* 65.

1244 Kobak, 'PREI and the Future of Patent-Antitrust Litigation' (n 1181) 205; Mark A Lemley, 'Antitrust Counterclaims in Patent and Copyright Infringement Cases' (1994) 3 *Tex Intell Prop L J* 1, 3-4; Lao, 'Reforming the Noerr Doctrine' (n 1149) 985. See also the concurring opinion of J Stevens and J O'Connor in *PREI* (n 1144) (arguing that the definition of objective baselessness offered by the majority is imprecise and broad and suggesting that actions which might have an insignificant chance of success may still be *unreasonable* and, hence, objectively baseless).

1245 *ITT Promedia* (n 1147) para 30.

cording to the General Court, this means that the action should be ‘manifestly unfounded’¹²⁴⁶ and that the plaintiff could not ‘reasonably consider’ to be asserting her rights.¹²⁴⁷

Whichever definition of the objective test is ultimately employed, the first conclusion that may be drawn is that, if a plaintiff succeeds on the merits, the action must be considered as a reasonable petition to the courts and, hence, not a sham.¹²⁴⁸ That does not mean, however, that all actions which are ultimately dismissed automatically indicate that they were sham,¹²⁴⁹ as citizens have, as a principle, an undeniable right to petition the authorities. Courts on both jurisdictions thence agree that, in those cases, what matters in broad terms is whether the plaintiffs could have reasonably believed that they had some chance of winning.

In this context, the question that follows for the purposes of the present work is whether a patent applicant incurring in misrepresentations before the patent office could be considered to be making a petition which is ‘objectively baseless’ or ‘manifestly unfounded’. The patent applicant would probably allege she is not, since—in the words of the US Supreme Court—there was indeed ‘some chance of winning’, ie some chance of obtaining the patent—particularly because of the dishonest manners. Provided that the misrepresentations referred to material elements relevant to the grant of the patent, however, a court would probably be more likely to find that the patent application is indeed baseless, since the applicant was aware that the patent would not be granted if the examiner became aware of all the pertinent facts.¹²⁵⁰

1246 *ibid* para 56.

1247 *ibid* para 73.

1248 *PREI* (n 1144) 60, fn 5. As explained above, this conclusion would not be shared by J Posner, Klein and other scholars who advocate for an exclusively ‘economic’ or subjective test and would hence rule out the objective prong altogether. See text at nn 1230-1238.

1249 *ibid* 60; *ITT Promedia* (n 1147) paras 60-61 (also emphasising that bringing legal proceedings may only constitute an anticompetitive conduct in exceptional circumstances and that the criterion should be construed strictly, in a manner which does not defeat the fundamental right of access to courts).

1250 *Hydranautics v FilmTec Corp* 70 F 3d 533, 538 (9th Cir 1995) (highlighting that the question had been left open by the courts and interpreting that the enforcement of a patent obtained by ‘intentional fraud’ cannot be considered to have probable cause); James B Kobak Jr, ‘The Doctrine that Will Not Die: Nobel-pharma, Walker Process, and the Patent-Antitrust Counterclaim’ (1998) 13 *Antitrust* 47, 47.

An additional question would also emerge as to whether a patent infringement action based on a fraudulently-obtained patent could be considered as manifestly unfounded as well. The plaintiff could again allege that there were some chances of winning—as long as the fraud and the cause of invalidity remained unnoticed—yet a court would most probably conclude that the action is indeed unfounded, as the plaintiff could not reasonably consider to be asserting her rights.¹²⁵¹

Consequently, both a deceptive behaviour before the patent office and the enforcement of a patent obtained through that behaviour would most likely meet the first prong of a sham test both in the US and in the EU.

b. Intent or ‘Economic Inviability’

Proof that an action is objectively baseless, however, only constitutes the first step of the test. In order to establish an anticompetitive conduct, courts in the US and in the EU understand that a subjective component should also be established. In the case of the US, the Supreme Court stated that the baseless action should conceal ‘an attempt to interfere *directly* with the business relationships of a competitor through the use of the governmental process—as opposed to the outcome of that process.’¹²⁵² In the EU, the action would be inadmissible when it ‘can ... only serve to harass the opposite party.’¹²⁵³ Additionally, the EU courts specifically require that the action ‘is conceived in the framework of a plan whose goal is to eliminate competition.’¹²⁵⁴

As already noted, this part of the test seems to very much resemble the more ‘economic’ test for sham advocated by Judge Posner and Klein,¹²⁵⁵ as it draws the attention to the collateral benefits that the plaintiff could expect to obtain besides the outcome of the procedure itself. As a matter of fact, the US Supreme Court itself acknowledges that this part of the test refers to the ‘economic viability’ of the contested lawsuit—as opposed to the ‘legal viability’ embodied in the objective prong portrayed above.¹²⁵⁶ Even so, this second prong has not been able to escape criticism. Firstly, it has been argued that it might be redundant, at least within a two-step test,

1251 O'Donnell (n 1143) 25; *Hydranautics* (n 1250) 538.

1252 *PREI* (n 1144) 60-61 (emphasis in original) (internal citations omitted).

1253 *ITT Promedia* (n 1147) para 30.

1254 *ibid.*

1255 See text at nn 1230-1238.

1256 *PREI* (n 1144) 61.

because an action that fails the objective part of the test would necessarily fail the subjective one too.¹²⁵⁷ In other words, if a plaintiff starts a legal action aware that it is manifestly baseless, it would be extremely difficult to argue that it was not started with improper purposes.¹²⁵⁸ In fact, the language of the test proposed in *ITT Promedia* seems to insinuate itself that the intent to harass competitors would be a natural consequence of the action being baseless.¹²⁵⁹ Secondly, it has also been pointed out that a literal application of this test might unduly shield baseless suits, considering that it requires that the plaintiff's *sole* purpose should be to harass competitors.¹²⁶⁰ In practice, it might be difficult to conceive a situation where the only intent of litigation is to harass rivals, since a plaintiff may always have at least some minimal hope of success.¹²⁶¹ And if the plaintiff did seek to win the lawsuit despite of it being manifestly unfounded, a literal construction of the test would not permit the court to deem it sham—particularly under the language of the US Supreme Court in *PREI*. Finally, and on a more general level, it has been argued that intent often constitutes an unreliable guide to assess competition cases.¹²⁶² This might be particularly so in the case of intellectual property rights, as the improper exclusionary intent might be difficult to distinguish from the intent to exclude competitors that is present in every IP infringement claim.¹²⁶³

Be that as it may, the sham tests sketched by US and EU courts both clearly require to look into the subjective stance or 'economic viability' of the plaintiff. At this point, hence, a question necessarily arises within the context of this work: would it be possible to apply that subjective test vis-à-vis a mischievous handling of a patent application at the patent office? Hypothetically, a firm could apply for a patent for an assumed invention which is clearly ineligible for protection (eg, because it had been publicly

1257 Myers (n 1233) 1226; Lao, 'Reforming the Noerr Doctrine' (n 1149) 986.

1258 Myers (n 1233) 1226; Kobak, 'PREI and the Future of Patent-Antitrust Litigation' (n 1181) 208.

1259 *ITT Promedia* (n 1147) para 30 (emphasising that an action would be anticompetitive when it cannot reasonably be considered as an attempt to establish the firm's rights 'and can *therefore* only serve to harass the opposite party.') (emphasis added).

1260 Lao, 'Reforming the Noerr Doctrine' (n 1149) 986-87.

1261 Elhauge, 'Making Sense of Antitrust Petitioning Immunity' (n 1226) 1231; Jonathan Galloway, 'Driving Innovation: A Case for Targeted Competition Policy in Dynamic Markets' (2011) 34 *World Competition* 73, 88.

1262 Denis Waelbroeck, 'Tough Competition: What is the Relevance of Intention in Article 82 cases?' (2006) 5(8) *Comp Law Insight* 5, 6.

1263 Lao, 'Reforming the Noerr Doctrine' (n 1149) 987.

used and sold by the applicant for several years before the filing date), yet the patent may be nonetheless granted because the cause of invalidity could not be detected during the examination at the patent office.¹²⁶⁴ Assuming that the patent applicant was well aware of the invalidity, it would be hard to argue that the decision to nonetheless pursue the application by deceptive demeanours was made with the purpose to ‘harass’ competitors or to ‘interfere’ with them through the use of the patent procedure. Admittedly, it is possible to conceive a firm making sham patent applications with the sole purpose of harassing competitors, eg by inducing them to incur in legal costs by lodging observations and oppositions, by generating legal uncertainty or even by hindering competitors’ innovation efforts.¹²⁶⁵ Yet if patent applicants deliberately conceal relevant information or make misrepresentations to the patent office, it seems more likely that their ultimate purpose is to obtain the unwarranted patent rather than to cause collateral harm through the process. Put another way, their focus would not be so much on raising their rivals’ costs but on obtaining a governmental adjudication that directly forbids third parties from manufacturing or selling a specific product. Under these circumstances, the application of the subjective test of *PREI* and *ITT Promedia* against scenarios involving a deceptive behaviour before the patent office would probably leave the latter without antitrust sanction.

At this point, it seems fair to enquire why the *PREI* and *ITT Promedia* criteria do not adequately apply to cases involving deceptive conducts. Is it because a deceptive conduct does not actually raise any antitrust concerns? Because the tests are not correctly formulated? Or is it simply that the antitrust concerns that they raise are somehow different from those posed by sham or vexatious litigation strategies? As previously mentioned, when the US Supreme Court drafted the two-pronged test in *PREI*, it explicitly refused to decide whether—and, if so, how—that test could apply to cases of

1264 See *Les Laboratoires Servier v Apotex Inc* [2008] EWCA Civ 445 [9].

1265 See, eg, *Boehringer Ingelheim* (Case COMP/39.246), Commission Press Release IP/11/842 ‘Antitrust: Commission welcomes improved market entry for lung disease treatments (6 July 2011) (where *Boehringer* was accused by the Commission of having filed for patent applications for combinations of substances with a new active substance that had been discovered by *Almirall* a potential competitor and could block or considerably delay its market entry; the case was concluded with a settlement agreement between the parties).

fraud or misrepresentations,¹²⁶⁶ thereby leaving the question open.¹²⁶⁷ EU courts, on their turn, adopted a less ambiguous approach. When discussing *AstraZeneca's* first abuse—which concerned a deceptive conduct before the patent office—the General Court indeed refused to apply the *ITT Promedia* criteria, emphasising that these two cases involved different antitrust concerns. The harm to competition in *AstraZeneca's* first abuse, explained the General Court, did not stem from the legal procedures but from the mere possession of the intellectual property right, which may alone lead to keeping competitors away.¹²⁶⁸ The harm that a deceptive conduct may impose on competition, hence, might simply be of a different nature and incapable of being analysed as a sham case.

Finally, and despite of the above, the question might arise as to whether the subsequent enforcement of a patent obtained through deceptive means could anyway fulfil the subjective part of the sham test. In that scenario, the patent holder could indeed decide to start legal proceedings aware that the suit will be ultimately dismissed because of the invalidity of the enforced right, with the sole purpose of harassing competitors and forcing them to incur in expensive legal costs, deterring third parties from entering or remaining in the market, or even hampering innovation.¹²⁶⁹ In that case, the situation would not essentially differ from a typical sham litigation case: it would restrain competition in a very similar way and the subjective element of the sham test would be easily applicable. In fact, under that scenario the relevance of the deceptive behaviour seems to be rather secondary. The analysis would be essentially the same if the patentee, instead of having deceived the patent office, only later became aware of the invalidity of the patent and nonetheless decided to proceed with the infringement suit.¹²⁷⁰

1266 *PREI* (n 1144) 61, fn 6.

1267 The Supreme Court did clarify, however, that misrepresentations outside the political arena would not be entitled to antitrust immunity. *Allied Tube* (n 1168) 504.

1268 GC Decision in *AstraZeneca* (n 1216) paras 362-63. See also Opinion of AG Mazák in *AstraZeneca* (n 1216) para 52 (essentially agreeing with the understanding of the General Court).

1269 Christina Bohannon and Herbert Hovenkamp, *Creation without Restraint: Promoting Liberty and Rivalry in Innovation* (OUP 2012) 247.

1270 It is important to remember at this point that not any enforcement of an invalid patent justifies antitrust intervention as long as the patentee had a reasonable ground for bringing the suit. As mentioned above, patentees have an undeniable right to enforce their patents, which should include those patents that are declared invalid but which the patentee could have reasonably believed to

It is also conceivable, however, that a plaintiff enforces a fraudulently-obtained patent with the undisputed purpose of obtaining a favourable judgment, trusting that the cause of invalidity will remain undetected. In this case, applying the *PREI* and *ITT Promedia* criteria would again become problematic,¹²⁷¹ as the competitive harm suffered by rivals would not stem from the procedures themselves but from their outcome and the continued existence of the underlying intellectual property right: the lawsuit would just be a continuation of the exclusionary effect that the patent right already had. As the General Court explained in *AstraZeneca*, the anti-competitive harm can be inflicted without even attempting to enforce the patent, as the mere grant and subsequent possession of a patent can already have an impact on competition.¹²⁷²

Notwithstanding the correctness or not of the sham criteria—a question which is beyond the scope of the present work—what seems clear from the above is that, even when a deceptive conduct before the patent office may, under certain circumstances, pave the way for a sham case, the anticompetitive concerns that it raises are of a different nature and merit a distinct analysis.¹²⁷³

III. Individual vs Patterns of Anticompetitive Litigation

An interesting discussion that emerged in the US after the *PREI* decision refers to the question whether the test therein developed should also be applied—particularly as to its objective part—to situations where an undertaking institutes not one but multiple administrative or judicial proceed-

be valid, or at least to discuss it in court. Otherwise, the right of petitioning and access to courts would be severely curtailed. *BE&K Construction Co v National Labor Relations Board* 536 US 516, 532-33 (2002).

1271 See, however, O'Donnell (n 1143) 29 (arguing that the *PREI* criteria should be interpreted more broadly as encompassing any unlawful purpose, which would hence include the enforcement of improperly obtained patents).

1272 GC Decision in *AstraZeneca* (n 1216) paras 362-63. See also, in the same vein, Christopher R Leslie, 'The Anticompetitive Effects of Unenforced Invalid Patents' (2006) 91 Minn L Rev 101, 113.

1273 Scott Filmore, 'Defining the Misrepresentation Exception to the Noerr-Pennington Doctrine' (2001) 49 Univ Kan L Rev 423, 446; Floyd (n 1149) 407; James C Cooper and William E Kovacic, 'U.S. Convergence with International Competition Norms: Antitrust Law and Public Restraints on Competition' (2010) 90 Bost U L Rev 1555, 1606; Lemley, 'Antitrust Counterclaims in Patent and Copyright Infringement Cases' (n 1244) 6.

ings.¹²⁷⁴ The debate essentially emerged because, before *PREI*, the US Supreme Court had ruled in *California Motor Transport* that a pattern of repetitive petitioning and litigation can amount to an antitrust violation even despite the fact that more than half of the claims conforming the pattern had been ultimately successful.¹²⁷⁵ Given that *PREI*—which concerned one single sham suit—had cited *California Motor Transport* approvingly, the FTC and a number of scholars have interpreted that the latter decision has not been overruled and that cases involving multiple suits should be governed by it rather than by the *PREI* criteria.¹²⁷⁶ According to this view, if a plaintiff starts numerous legal actions, the fact that some of them may be meritorious should not affect the overall antitrust assessment as long as it can be proved that the plaintiff sought to impose collateral harm on defendants and was indifferent to the outcome.¹²⁷⁷ At least two appellate courts in the US have followed this interpretation.¹²⁷⁸ Others scholars, however, consider that *PREI* may have actually overruled *California Motor Transport* on that particular aspect, since nothing in the former decision suggests that the number of lawsuits makes a substantial difference.¹²⁷⁹ In this sense, it has been argued that the *PREI* criteria should simply be applied to each of the different actions initiated, and the ones which are found to be baseless can make for an antitrust case. Moreover, the find-

1274 Lemley, ‘Antitrust Counterclaims in Patent and Copyright Infringement Cases’ (n 1244) 5.

1275 Kobak, ‘PREI and the Future of Patent-Antitrust Litigation’ (n 1181) 203.

1276 FTC, ‘Enforcement Perspectives on the Noerr-Pennington Doctrine: An FTC Staff Report’ (2006) 29 <www.ftc.gov/sites/default/files/documents/reports/ftc-staff-report-concerning-enforcement-perspectives-noerr-pennington-doctrine/p013518enfperspectnoerr-penningtondocctrine.pdf> accessed 14 February 2018; Eugene Crew, ‘The Use of Patent Litigation to Violate the Antitrust Laws’ (2006) 11 *Intell Prop L Bull* 69, 74; Cooper and Kovacic (n 1273) 1603.

1277 FTC, ‘Enforcement Perspectives’ (n 1276) 31.

1278 *USS-Posco Industries v Contra Costa County Building & Construction Trades Council* 31 F 3d 800, 811 (9th Cir 1994) ([w]hen dealing with a series of lawsuits, the question is not whether any one of them has merit –some may turn out to, just as a matter of chance– but whether they are brought pursuant to a policy of starting legal proceedings without regard to the merits and for the purpose of injuring a market rival.’); *Primetime 24 Joint Venture v National Broadcasting Co Inc* 219 F 3d 92, 101 (2nd Cir 2000) (interpreting that the two-step inquiry proposed by *PREI* is only applicable in case of a single legal action).

1279 Russell Wofford, ‘Considering the “Pattern Litigation” Exception to the *Noerr-Pennington* Antitrust Defense’ (2003) 49 *Wayne L Rev* 95, 99.

ing of numerous baseless actions could even be used as evidence of subjective motivation.¹²⁸⁰

On the European side, it has been argued that the slightly different language used in *ITT Promedia*'s test vis-à-vis *PREI* may respond to the fact that, in that case, the suits initiated against ITT Promedia had been in fact multiple.¹²⁸¹ The test in *ITT Promedia*, therefore, would be equally applicable to scenarios involving both single and patterns of suits, although its language may allow courts to apply it in a way that, even if some of the numerous suits are not objectively baseless, the baselessness of the litigation pattern as a whole may be considered.¹²⁸²

In any case, even if both jurisdictions admitted that the objective part of the sham test must be applied in a less rigid fashion in cases involving patterns of litigation, the difficulties to categorise a deceptive conduct as sham would probably remain. As explained above, it is the subjective part of the sham test—as well as the differences in the ultimate effects that they may have on competition—that proves more problematic for cases involving misrepresentations.

IV. Litigation as part of a Broader Pattern of Conduct

Finally, it has been argued that antitrust rules may also apply differently in cases where litigation is only a part of a broader anticompetitive scheme.¹²⁸³ This interpretation dates back to *Kobe*, a US decision of 1952 where a Court of Appeals had held that a pattern of conduct involving the acquisition of every relevant patent in a particular market, the forming of a 'closed' patent pool and the subsequent enforcement of those rights could amount to an antitrust violation.¹²⁸⁴ In the view of the court, even when the infringement suits themselves could have been lawful and would not suffice to sustain an antitrust case when considered in isolation, they could still form a broader, unlawful 'monopolistic scheme'.¹²⁸⁵ The decision was rendered even before *Noerr* and some have argued that it might not be

1280 Herbert Hovenkamp and others, *IP and Antitrust: An Analysis of Antitrust Principles Applied to Intellectual Property Law* (2nd edn Supp 2013, Wolters Kluwer) para 11.3b3.

1281 Vezzoso (n 1201) 533.

1282 *ibid.*

1283 See, eg, Crew (n 1276) 74.

1284 *Kobe Inc v Dempsey Pump Co* 198 F 2d 416 (10th Cir 1952).

1285 *ibid* 425.

good law any more,¹²⁸⁶ yet competition law enforcers both in the US and Europe have occasionally shown signs in favour of analyses which focus on overall strategies or conduct patterns that may cumulatively restrain competition—even when, individually considered, those conducts may not amount to an abuse.¹²⁸⁷

In this light, if a deceptive conduct before the patent office is perceived simply as one additional element of a broader anticompetitive strategy, it would not be necessary to analyse it in isolation but under a more general standard to determine whether the whole strategy could be deemed to remain within the scope of ‘competition on the merits’. Such an approach may, however, raise concerns in terms of legal certainty and could be used as a subterfuge to avoid the ordinary antitrust standards.¹²⁸⁸

C. Wrapping-up: A Simple Genus-Species Relationship?

On the basis of the foregoing, it can be observed that courts and competition authorities in the US and in the EU both recognise the question of sham or vexatious litigation as a genuine competition law concern which, in general terms, refers to situations where a firm is able to raise rivals’ costs by a harassing use of court or governmental procedures without a sincere interest on their outcome. At the same time, the same courts and authorities do not hesitate to recognise that citizens have an undeniable right to petition the government which may, in practice, limit competition law’s

1286 Fischel (n 1149) 113.

1287 See, eg, *Intel Corporation* (FTC Docket 9341) Statement of Chairman Leibowitz and Commissioner Rosch of 16 December 2009 <www.ftc.gov/system/files/documents/public_statements/568601/091216intelchairstatement.pdf> accessed 14 February 2018 (finding that the antitrust concern is raised by a ‘course of conduct’ that includes deception and coercion to stall competitors); *Intel* (Case COMP/C-3/37.990) Commission Decision of 13 May 2009 [2009] OJ C227/13, para 1747 (holding that Intel’s conducts should not be viewed in isolation but as a ‘long-term comprehensive strategy’ to foreclose competition); Decision of the Autorità Garante della Concorrenza e del Mercato (AGCM) 23194 of 11 January 2012 - A431: *Ratiopharm/Pfizer* (Bollettino 2/2012) paras 233 and 245 (finding that the anticompetitive violation arose from a general strategy conformed by patenting and litigation activities).

1288 Herbert Hovenkamp and others, *IP and Antitrust* (n 1280) para 11.4f; Nicolas Petit, ‘Microsoft v Google – Karate Competition Law?’ (*Chillin’ Competition*, 7 April 2011) <<http://chillingcompetition.com/2011/04/07/microsoft-v-google-karate-competition-law/>> accessed 14 February 2018.

range of application. In an attempt to find a proper balance, each has developed a set of criteria along similar lines. In order to amount to an antitrust violation, they both agree, an act of petitioning the government should be objectively baseless and aimed at harassing competitors by means of the procedure itself.

As noted above, these tests do not seem to be particularly well suited against scenarios involving a deceptive conduct before the patent office—or before any other governmental office for that matter. Admittedly, there are situations where a mischievous behaviour may precede a sham enforcement, yet deceptive behaviours seem to be capable of harming competition in their own way and may not always be reachable by the sham or vexatious litigation tests. This, however, does not necessarily prove that those tests are in themselves inadequate, but rather that the antitrust concerns raised by the deceptive conduct itself may be of a somehow different nature. The sham doctrine, indeed, is probably more akin to doctrines against predatory strategies, in this case aimed at preventing undertakings from artificially raising rivals' costs by resorting to public procedures in which they are not really interested. A misleading conduct before the patent office, in turn, may lead to a different injury to competition, in which a governmental act—triggered by the deceptive petitioning—impedes third parties from even competing in the market. In that case, the anticompetitive injury (ie, the reduction of price competition) flows directly from the governmental act rather than as a collateral effect of the act of petitioning. For this very reason, a set of standards that can equally fit both scenarios seems difficult to conceive.¹²⁸⁹

Against this backdrop, it is necessary to analyse scenarios involving deceptive representations before public authorities under a different light. The next section of this chapter constitutes an effort in this direction.

3. *Deceptive Conduct before the Patent Office as a Case of Inducing Government Action through Improper Means*

From a theoretical point of view, statutes, regulations, court rulings, and any other type of governmental action—including patent grants—are all equally capable of restraining competition. They can create legal monopolies, fix prices, create barriers to entry, grant exclusive rights or privileges to a particular undertaking, etc. As a matter of fact, governments restrain

1289 Cooper and Kovacic (n 1273) 1606.

competition in different ways all the time, yet in many cases they have legitimate reasons to do so and are, as a principle, excluded from competition law scrutiny in the US¹²⁹⁰ and, to a lesser extent, also in the EU.¹²⁹¹ But when a governmental act imposes a restraint on competition triggered by a private party who, eg, submits misleading information to the decision-maker, the question inevitably arises as to whether, from an antitrust perspective, said party may be held responsible for those restraints. In other words, whether the act of providing false or misleading information to obtain a certain ruling from a public authority can amount to a violation of the competition laws. As explained above, these situations appear to bring forward a problem different from sham and may entail even greater

1290 See text at nn 780-815. In the US, immunity is recognised as a principle under the *state action* doctrine, which was coined by the Supreme Court in *Parker v Brown* 317 US 341 (1943). Later, the Supreme Court explained that, in order to recognise antitrust immunity, the restraint must be “one clearly articulated and affirmatively expressed as state policy” and said policy must be actively supervised by the state itself. *California Retail Liquor Dealers Assn v Midcal Aluminum Inc* 445 US 97, 105 (1980). See also Hovenkamp, *The Antitrust Enterprise* (n 1143) 236 (‘antitrust is concerned about the private, discretionary exercise of market power, *not* with government decision making.’) (emphasis in original); McGowan and Lemley (n 1240) 320-21 (the state action doctrine in the US ‘protects both governments and the private enterprises that lobby them from liability for anticompetitive government conduct, without regard to the consequences for competition or the legitimate concerns of the antitrust laws.’).

1291 See text at nn 881-891. See also Case 13/77 SA *GB-INNO-BM v Association des Détaillants en Tabac (ATAB)* [1977] ECR 2115, para 31 (‘while it is true that article 86 is directed at undertakings, nonetheless it is also true that the Treaty imposes a duty on Member States not to adopt or maintain in force any measure which could deprive that provision of its effectiveness’); Case 267/86 *Pascal Van Eycke v ASPA NV* [1988] ECR 4769, para 16 (explaining that such would be the case ‘if a Member State were to require or favour the adoption of agreements, decisions or concerted practices contrary to Article 85 or to reinforce their effects, or to deprive its own legislation of its official character by delegating to private traders responsibility for taking decisions affecting the economic sphere’); Case C-185/91 *Bundesanstalt für den Güterfernverkehr v Gebrüder Reiff GmbH & Co KG* [1993] ECR I-5801, para 24 (further clarifying that Member States are not precluded from establishing restraints when imposed on the basis of considerations of public interest and under the supervision of public authorities). For a general view, see Fernando Castillo de la Torre, ‘State Action Defence in EC Competition Law’ (2005) 28 *World Competition* 407. For a comparative analysis, see Eleanor M Fox and Deborah Healey, ‘When the State Harms Competition: the Role for Competition Law’ (2014) 79 *Antitrust L J* 769; Daniel A Crane, ‘Judicial Review of Anticompetitive State Action: Two Models in Comparative Perspective’ (2013) 1 *J Antitrust Enforcement* 418.

threats to competition.¹²⁹² As the FTC explains, misrepresentations can ‘subvert governmental processes, resulting in well-intentioned but ill-informed rules or regulations that grant firms monopoly power or otherwise harm consumers.’¹²⁹³

Provided that this kind of behaviour indeed falls within the scope of competition laws,¹²⁹⁴ a myriad of new questions emerge. On the one hand, it may not always be easy to recognise the causal link between the private party’s behaviour and the governmental act, ie whether the latter was the direct result of the former or whether the former had only a marginal or insignificant impact on the judgment of the decision-maker. On the other hand, even assuming that a deceptive conduct directly leads to the passing of a governmental act, its potential and actual effects on competition should be evaluated as well—particularly bearing in mind that not every public act has the same effects on the market and that tools under other areas of law may be capable of diluting their actual impact.

In the light of the above, this section is first devoted to briefly analyse how US and EU competition agencies and courts have dealt with the general issue of antitrust liability due to improper inducement of governmental action and then moves to understand how a deceptive conduct before the patent office may be deemed as a specific variety within that category of misconducts. Subsequently, the section attempts to articulate the suitable theory of harm in the context of patent grants and examines in detail the different elements that should be taken into account in order to turn a deceptive conduct before the patent office into a competition law case, particularly with regard to the materiality of the offensive conduct, the level of discretion of the decision-maker and the concrete effects of the conduct on competition. Finally, and in view that an invalid patent which remains in force may have a continued effect on the market, the chapter concludes by raising the question whether the subsequent ownership or enforcement of an illicitly-obtained patent may also warrant competition law interven-

1292 Phillip E Areeda and Herbert Hovenkamp, *Antitrust Law: An Analysis of Antitrust Principles and Their Application* (3rd edn, Aspen 2011) para 204a; Richard A Posner, *Antitrust Law* (2nd edn, Univ of Chicago Press 2001) 260 (‘Some contractual methods of monopolizing, such as fraud on the Patent Office, are among the most serious exclusionary practices.’).

1293 FTC, ‘Enforcement Perspectives on the Noerr-Pennington Doctrine’ (n 1276) 16.

1294 Christopher R Leslie, ‘Patents of Damocles’ (2008) 83 Ind L J 133, 139 (‘When a patent applicant commits fraud against the Patent Office and subsequently achieves monopoly power because of the fraudulently issued patent, antitrust laws are implicated.’).

tion—a question that may become of utmost importance in the EU, considering the limitations of art 102 TFEU when dealing with situations that involve an illegal acquisition of monopoly power by non-dominant undertakings.

Before proceeding, a brief clarification deserves to be made. Because this issue mainly refers to the unlawful acquisition of patents, it may be appealing to draw a parallel with abuses in derivative acquisition—or exclusive licensing—of patents from third parties, which have occasionally been the object of concern of both EU and US competition agencies and courts.¹²⁹⁵ Despite the apparent similarity, though, the scenarios do not seem to be entirely comparable. In cases of derivative acquisition of intellectual property rights, the focus is put on seemingly legitimate legal acts which result in an undertaking relinquishing part of its influence on the market—its exclusive right—in favour of another market participant, therefore somehow resembling the concerns of traditional merger control. The same way competition law tends to pay more attention to firms who increase their market power by acquiring or merging with competitors rather than to those who improve their market share on their own merits, the acquisition of intellectual property rights from third parties raises more competitive concerns than the development of an IP portfolio through internal R&D efforts. In cases of deceptive conduct before the patent office, however, the focus is not set on the accumulation of valid intellectual property rights but on the illegitimate procurement of an exclusive right which should not have been granted at all.

A. Deceptively Inducing Government Action as a Competition Law Concern

I. The General Question under US Law

As previously mentioned, US courts have consistently acknowledged that the act of petitioning a public authority is, as a principle, immune from the antitrust rules.¹²⁹⁶ To date, the only exception expressly admitted by

¹²⁹⁵ Case T-51/89 *Tetra Pak Rausing SA v Commission* [1990] ECR II-309 (*Tetra Pak I*) (finding that the acquisition by a dominant firm of an exclusive patent license may constitute an abuse of a dominant position); *SCM Corp v Xerox Corp* 645 F 2d 1195 (2nd Cir 1981) (recognising that the acquisition by a dominant competitor in a market of a patent covering a substantial share of the same market can configure a monopolisation case).

¹²⁹⁶ See text at nn 780ff in ch 5.

the Supreme Court is the sham defence described in the previous section. Less clear is the question whether a separate exception endures for cases where the private party furnishes the governmental body with false information in an attempt to secure a governmental act that harms competition.

As it may be recalled, the US Supreme Court had decided in *Omni* that a conspiracy between a private party and a governmental agency does not justify an exception to the general petitioning immunity.¹²⁹⁷ This conclusion has been interpreted by the Court of Appeals for the Third Circuit as implying that sham should remain the only exception to the *Noerr* immunity and that no antitrust liability can be predicated when the anticompetitive injuries are inflicted directly by the state—even if a deceitful conduct affects the decision-making process.¹²⁹⁸ The Supreme Court, however, had hinted in *California Motor Transport* and in *Allied Tube*—though in both cases in *dicta*—that deceptive practices are not always immunised, particularly when the petitioning takes place in adjudicatory processes and other non-political arenas.¹²⁹⁹ Even so, when the Supreme Court later had the opportunity to shed some more light on the question, it expressly declined to decide whether such an exception really exists.¹³⁰⁰

It has been suggested that recognising an exception to *Noerr* for misrepresentations is in fact a natural consequence of *Walker Process*,¹³⁰¹ despite the fact that *Noerr* was not even mentioned in that case. As explained above, the Supreme Court held in that decision that the enforcement of a patent procured by fraud on the patent office can amount to a violation of the Sherman Act.¹³⁰² On this basis, Lao interprets that *Walker Process* is more than a case about the intersection of patent and antitrust law and

1297 *Omni* (n 1147) 383.

1298 *Armstrong Surgical Center Inc v Armstrong County Memorial Hospital* 185 F 3d 154, 162 (3rd Cir 1999). See also *Premier Electrical Construction Co v National Electrical Contractors Assn Inc* 814 F 2d 358, 376 (7th Cir 1987) (arriving to the same conclusion before *Omni* was decided). In a similar vein, see Handler and De Sevo (n 1149) 10-14.

1299 *California Motor Transport* (n 1162) 513 ('Misrepresentations, condoned in the political arena, are not immunized when used in the adjudicatory process'); *Allied Tube* (n 1168) 500 ('in less political arenas, unethical and deceptive practices can constitute abuses of administrative or judicial processes that may result in antitrust violations').

1300 *PREI* (n 1144) 61, fn 6.

1301 Floyd (n 1149) 422; Lao, 'Reforming the Noerr Doctrine' (n 1149) 977.

1302 *Walker Process Equipment Inc v Food Machinery & Chemical Corp* 382 US 172, 174 (1965).

supports the general principle that fraud in any petitioning process deprives the petitioner from antitrust immunity.¹³⁰³ Others, however, understand that the fraud element in *Walker Process* is overestimated and that it does not differ much from any other sham case.¹³⁰⁴ If interpreted under this light, *Walker Process* would not truly support a separate and more general exception for misrepresentations.¹³⁰⁵

Be that as it may, the FTC has carried out a comprehensive study on the existing case law on the issue and concluded that—whether on the basis of *Walker Process* or not, deemed as a separate exception or treated under the sham rubric—the vast majority of lower courts understand that misrepresentations in non-political arenas are not worthy of antitrust immunity.¹³⁰⁶ Yet considering that the rigid definition of sham advanced by the Supreme Court in *PREI* has made it difficult to squeeze misrepresentations into those standards,¹³⁰⁷ a number of scholars and the FTC itself advocate for a separate exception.¹³⁰⁸

1303 Lao, 'Reforming the Noerr Doctrine' (n 1149) 977-78.

1304 Hovenkamp, *The Antitrust Enterprise* (n 1143) 267. This, however, does not seem to be the view of the Federal Circuit, who has refused to consider *Walker Process* as a sham case and recognises that they both represent two alternative grounds of defence in patent litigation. *Nobelpharma AB v Implant Innovations Inc* 141 F 3d 1059, 1071 (Fed Cir 1998) ('*PRE* and *Walker Process* provide alternative legal grounds on which a patentee may be stripped of its immunity from the antitrust laws ...').

1305 James B Kobak Jr and Robert P Reznick, 'Antitrust Liability for Statements about Intellectual Property: Unocal, Unitherm and New Uncertainty' (2004) 19 Antitrust 87, 90. See also Filmore (n 1273) 444 (arguing that a general misrepresentation exception should be recognised but stating that *Walker Process* does not provide sufficient basis).

1306 *Union Oil Company of California (Unocal)* (FTC Docket 9305) Opinion of the Commission of 7 July 2004, 16-17 <<http://www.ftc.gov/sites/default/files/documents/cases/2004/07/040706commissionopinion.pdf>> accessed 14 February 2018.

1307 Cooper and Kovacic (n 1273) 1606.

1308 Filmore (n 1273) 443; Floyd (n 1149) 455; Lao, 'Reforming the Noerr Doctrine' (n 1149) 1022; FTC, 'Enforcement Perspectives on the Noerr-Pennington Doctrine' (n 1276) 23; Cooper and Kovacic (n 1273) 1606; Note, 'Deception as an Antitrust Violation' (2012) 125 Harv L Rev 1235, 1255. See also Elhauge, 'Making Sense of Antitrust Petitioning Immunity' (n 1226) 1247-48 (arguing that, in misrepresentation cases, *Noerr* immunity can be denied on two doctrinal grounds: (i) because petitioning is only immunised when the restraint is the result of a 'valid' governmental action, and that would not be the case if the action is procured by fraud; or (ii) because the restraint does not truly result from the governmental action when that action is tainted by fraud).

II. The General Question under EU Law

On the European side, the question has drawn fairly limited attention.¹³⁰⁹ In general terms, EU courts also recognise that approaching the government on itself does not ordinarily clash with the competition rules. This principle can already be spotted in *Hilti*, where the Court of First Instance (today General Court) tacitly suggested that petitioning the government does not raise competitive concerns, even if the result of the petitioning would in fact lead to restraints on competition.¹³¹⁰ Soon afterwards, in *French-West African Shipowners' Committees*, the Commission acknowledged in a more explicit way that approaching a public authority is not in itself an infringement of competition law.¹³¹¹

An exception to this principle was first found by the Commission and the Court of First Instance in the *ITT Promedia* case described above, in the context of petitioning the courts.¹³¹² While highlighting that it is 'only in wholly exceptional circumstances' that the bringing of legal proceedings can constitute an abuse of a dominant position, it was recognised that vexatious litigation may constitute one of those exceptional cases.¹³¹³ The question whether misrepresentations to public authorities justify a separate exception, however, remained unanswered.

That the question remained unanswered was explicitly acknowledged by the CJEU in *Compagnie Maritime Belge*, yet the court also considered that it was not necessary to solve the controversy at that point either.¹³¹⁴ In that case, a shipping conference (Cewal) had entered into an agreement

1309 Richard Wainwright and André Bouquet, 'State Intervention and Action in EC Competition Law' in Barry Hawk (ed), *International Antitrust Law & Policy: Fordham Corporate Law 2003* (Juris Publishing 2004) 560. For a thorough review of the case law, see Vossestein (n 1201).

1310 Case T-30/89 *Hilti AG v Commission* [1991] ECR II-1439, para 117 (stating that, if instead of incurring in commercial practices designed to exclude competitors Hilti had approached the government to request a ruling that restrained competition based on safety reasons, such conduct would not have raised concerns under competition law).

1311 *French-West African Shipowners' Committees* (Case IV/32.450) Commission Decision 92/262/EEC [1992] OJ L134/1, para 68 (also suggesting that there might be situations where approaching the government may not be exempted, eg when the undertakings' sole purpose is for public authorities to shield their restrictive practices).

1312 See text at nn 1197ff.

1313 *ITT Promedia* (n 1147) paras 58-61.

1314 Joined Cases C-395/96 P and C-396/96 P *Compagnie Maritime Belge Transports v Commission* [2000] ECR I-1365, para 83 ('It is therefore unnecessary to consider

with the Zairean government which provided for exclusivity for the members of the conference, although it also allowed derogations to said exclusivity subject to the agreement of the two parties. When the Zairean government later unilaterally authorised an independent shipping operation, Cewal approached the authorities of that country demanding strict observance of the agreement and of its exclusive right. In its defence, Cewal argued that its demands constituted legitimate petitioning to the government, yet the CJEU interpreted that requesting a public authority to comply with a contractual obligation cannot be compared with a mere incitement of the authority to take action.¹³¹⁵ In the view of the court, these cases cannot be treated in the same way because in the former scenario the public authority has no discretion and is bound to observe the legal rights enforced.¹³¹⁶ In that case, hence, the exclusionary effect would not flow from a governmental decision nor from the agreement itself—which allowed derogations to the exclusive right—but from the private party’s discretionary vetoing.¹³¹⁷ A somehow similar conclusion was reached by the CJEU in *CIF*, where it stated that competition law may be applied against an undertaking’s exclusionary conduct even if that conduct is facilitated or encouraged by national legislation—yet not when it is legally *required*.¹³¹⁸

Around the same time that the CJEU declined to decide on the issue in *Compagnie Maritime Belge*, the Court of First Instance seemed to insinuate in *IPS* that the submission of misleading information to a public authority cannot amount to a competition law infringement when the authority has the necessary powers to verify the information submitted and when the aggrieved party actively intervenes in the proceedings.¹³¹⁹ That case, however, was ultimately decided on different grounds and it was only in *AstraZeneca*, several years later, that the courts were finally presented with a case that involved misleading representations before a governmental agency as a core question. Although the case involved a very singular set of facts, the General Court—whose decision was later confirmed by the CJEU—attempted to draw a more general conclusion by stating that

whether, and in what circumstances, mere incitement of a government to take action may constitute abuse within the meaning of Article 86 of the Treaty.’).

1315 *ibid* para 82.

1316 *ibid*.

1317 Vossestein (n 1201) 1398.

1318 Case C-198/01 *Conorzio Industrie Fiammiferi (CIF) v AGCM* [2003] ECR I-8055, para 58.

1319 *IPS* (n 1186) paras 200-03.

the submission to the public authorities of misleading information liable to lead them into error and therefore to make possible the grant of an exclusive right to which an undertaking is not entitled, or to which it is entitled for a shorter period, constitutes a practice falling outside the scope of competition on the merits which may be particularly restrictive of competition.¹³²⁰

As the Commission explained, the special responsibility that endures on dominant firms not to impair genuine undistorted competition¹³²¹ also covers the use of public procedures or regulations.¹³²² The courts further stressed that the assessment of whether representations are misleading or not may vary according to the circumstances of each case¹³²³ and that the level of discretion of the public authorities and the extent to which they are compelled to verify the accuracy of the information provided may constitute decisive factors.¹³²⁴ In that case, for instance, the national patent offices were deemed to have exercised a rather limited degree of discretion and this factor spoke in favour of a broader antitrust accountability.¹³²⁵

III. Can a Deceptive Conduct before the Patent Office be analysed as an Illegitimate Inducement of Government Action?

From a constitutional or administrative law angle, a patent office does not essentially differ from any other governmental agency, nor does the grant of a patent from any other governmental action. In the same vein, an undertaking's application for a patent is just one of the many ways of seeking governmental action—in this case to award a patent right. Therefore, provided that both US and EU law admit that, at least under certain circumstances, the submission of false information to a public authority in order to secure a specific ruling may amount to an antitrust infringement, so should in principle a deceptive conduct during the course of a patent application.

In the US, because an application for a patent is an act of petitioning the government and petitioning is in principle immune from antitrust scruti-

1320 GC Decision in *AstraZeneca* (n 1216) para 355.

1321 See text at nn 650-652 in ch 4.

1322 Commission Decision in *AstraZeneca* (n 1183) para 747.

1323 CJEU Decision in *AstraZeneca* (n 1215) para 99.

1324 *ibid* para 105.

1325 Commission Decision in *AstraZeneca* (n 1183) para 626.

ny, antitrust liability can only arise if a separate exception to *Noerr* is recognised for misrepresentations.¹³²⁶ As explained above, such an exception has not been explicitly acknowledged by the Supreme Court but was hinted by various circuits of the US Court of Appeals and has been advocated by the FTC and a number of scholars.

As for EU law, the leading case on competition law liability for deceptively inducing governmental action dealt precisely with conducts before the patent office, yet its value for assessing cases involving regular patent applications may be limited.¹³²⁷ In that specific case, the level of discretion of the patent offices vis-à-vis SPCs was restricted and the firm was under an obligation to inform them about the relevant dates, whereas regular patent applicants' disclosure duties are usually more limited and patent offices have a more stringent responsibility to examine whether each patent application fulfils all the patentability requirements.¹³²⁸ Then again, the courts in *AstraZeneca* held that the abuse also comprised misleading statements before the courts, who do have the duty to critically assess the parties' statements. Hence, if a deceptive conduct before the courts can be considered an abuse, the same conclusion may also be valid for statements during patent prosecution.¹³²⁹

At all events, it may also be worth considering, from a more general perspective of innovation and competition policy, to what extent it is desirable for competition law to encroach on the sphere of patent applications, particularly taking into account the essential role that both patents and competition play on innovation and the very careful balance that should be kept between them. There is no doubt that deceptive conducts are socially unacceptable and lack any redeeming virtues, yet that alone does not justify antitrust intervention.¹³³⁰ Hovenkamp, for instance, argues that the conduct of patent applicants before the issuance of a patent is sufficiently regulated and supervised by the patent office and should not be subject to

1326 Lao, 'Reforming the Noerr Doctrine' (n 1149) 977.

1327 Josef Drexler, 'AstraZeneca and the EU Sector Inquiry: When do Patent Filings Violate Competition Law?' in Josef Drexler and Nari Lee (eds), *Pharmaceutical Innovation, Competition and Patent Law: A Trilateral Perspective* (Edward Elgar 2013) 319.

1328 See text at nn 322ff in ch 3.

1329 Werner Berg and Sean-Paul Brankin, 'Das AstraZeneca-Urteil des Gerichts der Europäischen Union' [2011] EuZW 91, 94.

1330 Harv L Rev note, 'Deception as an Antitrust Violation' (n 1308) 1255.

additional antitrust scrutiny.¹³³¹ Similarly, on the European side, Käseberg understands that competition agencies should be reluctant to interfere against unilateral conducts that only harm price competition when IP laws already provide a solution to reduce such harm.¹³³²

On the other hand, it is common ground that patent law and competition law, though complementary, do not share the exact same concerns.¹³³³ Even if the patent system provides for remedies aimed at reducing competitive harms, eg by providing for exceptions and limitations to patent rights, those remedies are probably incapable of addressing all the concerns that imprint the competition laws.¹³³⁴ Indeed, while patent law plays an essential role in encouraging innovation and competition by substitution, it does not seem to be apt to affirmatively punish abuses that are harmful to competition by innovation.¹³³⁵ In case of deceptive behaviour, all patent law can do is take the invalid patent away, and perhaps impose disciplinary sanctions in the most blatant cases, but that merely places the patent holders in the position they would have been in had they never engaged in deceptive practices.¹³³⁶ After all, when a conduct reaches the stage of offending the competition rules, antitrust intervention may be justified no matter what kind of remedies other areas of law may offer.¹³³⁷

1331 Herbert Hovenkamp, 'Antitrust and the Patent System: A Reexamination' (2014) U Iowa Legal Studies Research Paper 14/27, 11-12 and 40 <<http://ssrn.com/abstract=2486633>> accessed 14 February 2018 (arguing that antitrust scrutiny should be limited to post-issuance conducts, like enforcement).

1332 Thorsten Käseberg, *Intellectual property, Antitrust and Cumulative Innovation in the EU and the US* (Hart 2012) 67. In a similar vein, see Lars Kjølbye, 'Article 82 EC as Remedy to Patent System Imperfections: Fighting Fire with Fire?' (2009) 32 World Competition 163 (arguing that competition law should, in principle, avoid intervening in abusive patent strategies, although admitting that it might be justified if there is a 'plus factor'); Joseph Straus, 'Patent Application: Obstacle for Innovation and Abuse of Dominant Position under Article 102 TFEU?' (2010) 1 J Eur Comp L & Prac 189, 201 (maintaining that art 102 TFEU should come into operation against the exercise of intellectual property rights rather than against the filing of an application).

1333 See text at nn 753-758 in ch 5.

1334 David T Keeling, *Intellectual Property Rights in EU Law Vol I: Free Movement and Competition Law* (OUP 2003) 377; Floyd (n 1149) 445.

1335 Christopher R Leslie, 'Antitrust and Patent Law as Component Parts of Innovation Policy' (2009) 34 Iowa J Corp L 1259, 1269.

1336 Leslie, 'Patents of Damocles' (n 1294) 168.

1337 Steven Anderman, 'The IP and Competition Interface: New Developments' in Steven D Anderman and Ariel Ezrachi (eds), *Intellectual Property and Competition Law: New Frontiers* (OUP 2011) 24.

Notwithstanding the foregoing, it would seem advisable to take a cautious approach in the sense that antitrust intervention should not lead to imposing additional obligations upon patent applicants or have a deterrent effect on legitimate patent activities. Patent laws are probably much better equipped to regulate the whole patent application procedure and to decide on technical questions, and competition agencies should thus be careful of not becoming ‘supreme patent offices’ or ‘patent courts’ in the name of protecting competition.¹³³⁸ Under this light, it could be argued that, notwithstanding how meritorious or absurd the alleged invention may be or how audaciously or ambitiously an applicant may behave, patent applications should largely remain a patent law concern.¹³³⁹ Yet when an applicant behaves with a clear, deliberate intent to deceive, grounds against antitrust intervention seem to vanish, as punishing intentional and calculated fraud is not likely to chill legitimate patenting activity or disrupt the smooth functioning of the patent system as long as the reprehensible conduct is precisely defined and does not trespass on legitimate practices.¹³⁴⁰ The following section analyses a myriad of different elements that may be taken into account in order to adequately identify anticompetitive conducts while at the same time maintaining a proper balance and avoiding undesired interferences on the patent sphere.

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- 1338 See, in particular, Josef Drexler, “Pay-for-Delay” and Blocking Patents: Targeting Pharmaceutical Companies under European Competition Law’ (2009) 40 IIC 751, 753.
- 1339 See, eg, Simon Priddis and Simon Constantine, ‘The Pharmaceutical Sector, Intellectual Property Rights, and Competition Law in Europe’ in Steven D Anderman and Ariel Ezrachi (eds), *Intellectual Property and Competition Law: New Frontiers* (OUP 2011) 266 (arguing that, outside cases such as intentional deceitful behaviour, the application of art 102 TFEU against the acquisition of patents should be carefully circumscribed).
- 1340 See, eg, GC Decision in *AstraZeneca* (n 1216) para 367 (interpreting that a finding of abuse in these cases should not freeze patent applications but that, on the contrary, it is such misuse of the patent system that can lead to a reduction in the incentives to engage in innovation); Leslie, ‘Antitrust and Patent Law’ (n 1335) 1281 (arguing that, if proof of intent to deceive is required, the risk of creating a disincentive to engage in research and other patentable activity is largely mitigated).

B. Elements for Competition Assessment

Agreeing that private parties may be held liable from a competition law perspective for the anticompetitive effects of a patent obtained by fraud is only the first step of the antitrust enterprise, which in fact gives rise to a number of striking practical issues.¹³⁴¹ This section analyses some of the most important challenges that competition enforcers might face when addressing this problem and attempts to provide some guiding input for that quest.

I. Materiality and Causal Connection

It is generally understood that, in order to hold a private party responsible for the anticompetitive effects of a governmental act, the private party's conduct must have been material and central to the outcome of the proceeding.¹³⁴² One of the main problems that may arise in this regard refers to the difficulty of identifying the causal link,¹³⁴³ as it is often complex to deconstruct a governmental procedure and the mental process of the decision-maker.¹³⁴⁴ There may be some extreme cases (eg, when a public authority explicitly bases its entire decision on false information submitted by the applicant, or when that information is openly disregarded by the decision-maker) that do not pose major difficulties, but unfortunately the answer is not always so straight-forward.¹³⁴⁵

In the US, some courts and scholars draw a line separating political lobbying from adjudicatory proceedings and argue that no antitrust liability should attach in the former case.¹³⁴⁶ But while it is true that establishing causation in political decisions is a nearly impossible task, there does not seem to be any compelling reason to provide wider protection to false speech in the political arena.¹³⁴⁷ Therefore, the fundamental question

1341 Floyd (n 1149) 425.

1342 FTC, 'Enforcement Perspectives on the Noerr-Pennington Doctrine' (n 1276) 25; Filmore (n 1273) 452; Czapracka (n 1146) 105.

1343 Areeda and Hovenkamp, *Antitrust Law* (n 1292) para 203a.

1344 Floyd (n 1149) 435.

1345 Areeda and Hovenkamp, *Antitrust Law* (n 1292) para 203f3.

1346 McGowan and Lemley (n 1240) 382; Filmore (n 1273) 449. See also *California Motor Transport* (n 1162) 513.

1347 Lao, 'Reforming the Noerr Doctrine' (n 1149) 1023-24; Cooper and Kovacic (n 1273) 1607.

should simply be whether it is possible to establish that a particular governmental action has been directly caused by a private misrepresentation, whatever the forum.¹³⁴⁸ In any case, patent procedures before the patent office are probably closer to adjudication processes than to political discussions.¹³⁴⁹

In this context, the question arises as to how to determine whether a patent that restrains competition was granted *because* of the alleged deceptive conduct. To answer it, Lao suggests that there should be a ‘substantial likelihood that a reasonable decision-maker would consider it important in her decision.’¹³⁵⁰ Others seem to prefer a slightly stricter standard, interpreting that a misrepresentation would only be material if, absent that misrepresentation, the patent would not have been granted, or at least not with the same scope.¹³⁵¹ J Posner seems to be of the latter opinion, arguing that, if an invention is patentable, it is irrelevant from an antitrust standpoint what kind of shameful conduct the applicant may have embraced in order to obtain it.¹³⁵² Since the question very much resembles the ‘materiality’ element of inequitable conduct cases discussed above,¹³⁵³ many of the opinions expressed by the courts in those cases may also be transposed to the antitrust sphere. On the European side, the question of materiality does not seem to have been discussed in detail in *AstraZeneca*—probably because it was quite clear that the patent offices in that case had exclusively relied on the information provided by the SPC applicants.¹³⁵⁴ In any case, the fact that a patent has survived in other jurisdictions, or that it is not unanimously invalidated, may be indicative factors in this regard.

Interestingly, Floyd has suggested that, in order to make sure that the misrepresentation was indeed material and to avoid constitutional objections, the vacatur of the governmental act by the competent authorities should be an indispensable prior requirement before imposing competition law sanctions.¹³⁵⁵ In the case of patent grants this would imply that,

1348 Floyd (n 1149) 463.

1349 Areeda and Hovenkamp, *Antitrust Law* (n 1292) para 203e.

1350 Lao, ‘Reforming the Noerr Doctrine’ (n 1149) 1023 (also suggesting that it should not be indispensable to prove that, but for the misrepresentation, the government outcome would have been different).

1351 Arun Chandra, ‘Antitrust Liability for Attempting to Enforce a Fraudulent Patent’ (1999) 81 J Pat & Trademark Off Soc’y 201, 214. See also Filmore (n 1273) 452.

1352 *Brunswick Corp v Riegel Textile Corp* 752 F 2d 261, 265 (7th Cir 1984).

1353 See text at nn 230ff in ch 3.

1354 CJEU Decision in *AstraZeneca* (n 1215) para 87.

1355 Floyd (n 1149) 446.

before assessing the conduct from a competition law perspective, either the patent office itself or the competent courts should first invalidate the patent. This could certainly constitute a sensible solution to avoid undesired interference upon the patent sphere and to make sure that the patent should not have been granted, even though cases like the ones involving ‘pay-for-delay’ settlement agreements evidence that there may be situations where, even when the patent may seem unwarranted, competitors may nonetheless be discouraged to challenge its validity in court.¹³⁵⁶ In any case, even if a patent is invalidated, that sole fact does not in itself indicate that the conduct of the patent applicant was inappropriate, which leads to a second and perhaps even more problematic question: what exactly constitutes a deceptive conduct relevant from a competition law viewpoint?

II. Conceptualisation of the Misconduct

At first glance, it may be appealing to think that every patent granted by the patent office which is later invalidated by the courts necessarily involved a misleading handling from the patent applicant. It could be argued on these lines that, if the applicant declared that she had an invention but later turned out not to have one, one cannot but conclude that such declaration was untruthful. A closer look, however, reveals that this is a far cry from reality. Despite the predominantly technical nature of the issues with which it ordinarily deals, patent law is in itself no exact science. Courts, patent offices and even examiners forming part of the same Examining Division disagree every day about what may be patented and what may not and the discussions often involve extremely complex technologies. Also, patent attorneys cannot be blamed for drafting their patent applications in wide terms,¹³⁵⁷ particularly bearing in mind that the scope of patent applications, once filed, can be subsequently narrowed down but never broadened.¹³⁵⁸ Patent offices, on their turn, do not always perform

1356 *FTC v Actavis Inc* 133 S Ct 2223, 2231-2233 (2013).

1357 Robin Jacob, ‘Patent Thickets: A Paper for the European Patent Office Economic and Scientific Advisory Board Meeting’ (2013) 8 J Intell Prop L & Prac 203, 204 (‘It must be understood that any well-drafted patent application will have claims wider than those which will eventually be granted. No competent patent attorney would claim narrowly in the first instance. He goes wide to see what prior art is found and shapes his eventual widest claim around that. It would be negligent for him not to do so.’).

1358 See text at n 85 in ch 2.

flawless examinations, yet that seems to a large extent inevitable.¹³⁵⁹ The occasional invalidation of patents, hence, seems to be inherent to the patent system without that meaning that their holders behaved inadequately when they first obtained it.

Against this backdrop, the opinions of the Commission, the General Court and the Advocate General in *AstraZeneca* had raised some concerns among practitioners in the EU.¹³⁶⁰ Those opinions indeed seemed to advocate a low threshold to define misleading conducts, highlighting that it was not necessary to show that the applicant intended to mislead the patent office but should rather be analysed under objective criteria.¹³⁶¹ The CJEU, however, seems to have toned down that conclusion by imposing a higher standard.¹³⁶² The CJEU indeed stressed that, in that particular case, the firm's representations had been highly misleading and intentional¹³⁶³ and explained that sanctioning those conducts does not imply that appli-

1359 Robin Jacob, 'Patent Thickets' (n 1357) 204. See also Mark A Lemley, 'Rational Ignorance at the Patent Office' (2001) 95 Northwest U L Rev 1495 (arguing that, even if patent offices do not do a perfect job in examining patents, better examinations may be too costly and not socially desirable because of the few patents asserted in practice vis-à-vis the number of patent applications annually filed).

1360 See, eg, Sven B Völcker, 'Developments in EC Competition Law in 2005: An Overview' (2006) 43 CML Rev 1409, 1432; David Hull, 'The AstraZeneca Judgment: Implications for IP and Regulatory Strategies' (2010) 1 J Eur Comp L & Prac 500, 502; Berg and Brankin (n 1329) 94; Gavin Bushell, 'AstraZeneca v Commission: Advocate-General Mazak's Opinion of 15 May 2012' (*Kluwer Competition Blog*, 11 June 2012) <<http://kluwercompetitionlawblog.com/2012/06/11/astrazeneca-v-commission-advocate-general-mazaks-opinion-of-15-may-2012>> accessed 14 February 2018.

1361 See, eg, GC Decision in *AstraZeneca* (n 1216) para 356 ('It follows from the objective nature of the concept of abuse that the misleading nature of representations made to public authorities must be assessed on the basis of objective factors and that proof of the deliberate nature of the conduct and of the bad faith of the undertaking in a dominant position is not required for the purposes of identifying an abuse of a dominant position.') (citations omitted).

1362 Bill Batchelor and Melissa Healy, 'CJEU AstraZeneca Judgment: Groping Towards a Test for Patent Office Dealings; (2013) 34 Eur Comp L Rev 171, 171-72; Van Malleghem and Devroe (n 1107). Cf Adrian Spillmann, 'Transparency Obligation for Holders of EU IP Assets in the Pharmaceutical Industry' (2014) 9 J Intell Prop L & Prac 125, 129 (arguing that the CJEU's threshold is still too low, as it is not sufficiently clear in requiring intent).

1363 CJEU Decision in *AstraZeneca* (n 1215) para 98.

cants need to be infallible when dealing with the patent offices.¹³⁶⁴ Ultimately, the assessment of whether representations are misleading or not must be made *in concreto* and may vary according to the specific circumstances of each case.¹³⁶⁵

On the US side, the Supreme Court defined the reprehensible conduct by employing the concept of ‘intentional fraud’.¹³⁶⁶ In this light, the Federal Circuit has interpreted that, to qualify as fraud, the conduct should include all the elements of common law fraud, including the falsity of the representation and the intent to deceive or, at least, ‘a state of mind so reckless as to the consequences that it is held to be the equivalent of intent’.¹³⁶⁷ Similarly, the FTC understands that a misrepresentation relevant from an antitrust perspective must be both deliberate and factually verifiable.¹³⁶⁸

Both jurisdictions, hence, seem to pay particular attention to the undertakings’ specific intent. As it may be recalled, competition agencies both in the US and the EU ordinarily attempt to approach unilateral conducts under objective parameters, avoiding as much as possible the assessment of the undertakings’ subjective intent.¹³⁶⁹ The case of misrepresentations before public authorities, thus, may embody one of those exceptional circumstances where intent can be not only a useful factor but also a quite decisive one. Despite of that, considering that in practice it may be difficult

1364 *ibid* para 99 (concluding that it ‘cannot be inferred from that judgment that any patent application made by such an undertaking which is rejected on the ground that it does not satisfy the patentability criteria automatically gives rise to liability under Article 82 EC.’).

1365 *ibid*.

1366 *Walker Process* (n 1302) 176. See also Concurring Opinion by Justice Harlan. *Ibid* 179 (explaining that fraud cannot be found by merely showing the invalidity of the patent arising, eg, from obviousness or other factors ordinarily referred to as ‘technical fraud’).

1367 *Nobelpharma* (n 1304) 1069-70. The Federal Circuit had also emphasised that the intent element in antitrust cases might be different from that of inequitable conduct cases. *Dippin’ Dots Inc v Mosey* 476 F 3d 1337, 1347 (Fed Cir 2007). However, after *Therasense* heightened the inequitable conduct standards, that conclusion was very likely overruled. Herbert J Hovenkamp, ‘Patent Exclusions and Antitrust after *Therasense*’ (2011) U Iowa Legal Studies Research Paper 11/39, 34 <<http://ssrn.com/abstract=1916074>> accessed 14 February 2018.

1368 FTC, ‘Enforcement Perspectives on the Noerr-Pennington Doctrine’ (n 1276) 25. See also *Filmore* (n 1273) 453 (stating that the misrepresentation should be substantially false and the person must have known that the representation was false).

1369 See text at nn 690-700 in ch 4.

to prove subjective knowledge, courts could eventually draw upon objective tools, eg establishing that a representation is false when a reasonable person in the applicant's position would have known of its falsity.¹³⁷⁰

The final question that arises at this point refers to the categories of conducts that can be classified, in practice, as deceptive. As a general principle, there is little doubt that an undertaking can engage in misleading behaviour via positive misrepresentations, but the Federal Circuit has clarified that a fraudulent conduct before the patent office can also be premised on an intentional omission.¹³⁷¹ In the EU, the CJEU also highlighted in *AstraZeneca* that omissions could be relevant, particularly when the undertaking has a duty to disclose information.¹³⁷² In spite of this, and considering that ordinary patent applicants in Europe do not have the same duties as those in the US,¹³⁷³ it seems difficult for an omission to make for a misconduct under EU competition law. A case could however arise, for instance, if an undertaking files a patent application while fully aware that it is not new,¹³⁷⁴ eg because it has itself been selling the invention for many years. In any case, as the CJEU explained in *AstraZeneca*, what is misleading and what is not is a question that very much depends on the specific circumstances of each case.¹³⁷⁵

All things considered, it seems advisable to underscore that, when assessing what transpires before the patent office, antitrust should be wary of undermining the integrity of the patenting procedure and the decision-making functions of the patent offices.¹³⁷⁶ This would involve, in the first place, that competition agencies should not concentrate on patents which are merely weak, or whose claims are broad, or on patent applicants who apply for patents even when they are not fully convinced of their strength.¹³⁷⁷ Also, they should avoid imposing additional requirements through the back door,¹³⁷⁸ eg by imposing new disclosure requirements or modifying their drafting practices. Patent laws and patent offices are probably much better equipped to regulate on these technical questions.

1370 Areeda and Hovenkamp, *Antitrust Law* (n 1292) para 705h1.

1371 *Nobelpharma* (n 1304) 1070.

1372 CJEU Decision in *AstraZeneca* (n 1215) para 95.

1373 See text at nn 322ff in ch 3.

1374 Drexel, 'When do Patent Filings Violate Competition Law?' (n 1327) 320.

1375 CJEU Decision in *AstraZeneca* (n 1215) para 99.

1376 *Unocal* FTC Opinion (n 1306) 48.

1377 Drexel, 'When do Patent Filings Violate Competition Law?' (n 1327) 319.

1378 David Hull, 'The Application of EU Competition Law in the Pharmaceutical Sector' (2012) 3 J Eur Comp Law & Prac 473, 477.

III. Ministerial Acts and Discretion of the Patent Office

When assessing issues of antitrust liability for the anticompetitive effects of public actions, both EU and US courts have paid particular attention to the margin of discretion enjoyed by the issuing government authority and regarded it as an essential factor. This issue might become extremely important in cases where the patent office performs only limited or formal examinations, as is the case in Germany with utility models or in several other national patent offices with patents.¹³⁷⁹

In the US, one of the leading cases on this question is *Litton*,¹³⁸⁰ which referred to tariff filings made by AT&T before the Federal Communications Commission. Because the public authority in that case had very limited discretion and the decision on the tariff had been in fact made by AT&T on its own, the court considered that its filing could not be compared to an act of petitioning and hence did not merit *Noerr* immunity.¹³⁸¹ Similarly, in the Orange Book cases described above, the courts interpreted that the listings of patents before the FDA in the framework of the Hatch-Waxman Act could not be considered an act of petitioning because they only sought a ministerial response and the FDA had practically no margin of discretion.¹³⁸² On this basis, it has been argued that, when an undertaking makes a submission to the government which does not call for a discretionary act, *Noerr* immunity is not even part of the equation and antitrust laws can be readily applied.¹³⁸³

By the same token, courts in the EU have also drawn the attention to the public authority's room for manoeuvre and regarded it as a decisive element in their decisions. Firstly, in *Compagnie Maritime Belge*, the CJEU stated that situations in which the public authority has no discretion and is bound to observe what the private party requests cannot be treated in the same way as regular incitements to take action.¹³⁸⁴ Later, in *AstraZeneca*, it confirmed that 'the limited discretion of public authorities or the absence

1379 Berg and Brankin (n 1329) 94.

1380 *Litton Systems Inc v American Telephone & Telegraph Co* 700 F 2d 785 (2nd Cir 1983).

1381 *ibid* 807.

1382 See text at n 963 in ch 5.

1383 FTC, 'Enforcement Perspectives on the Noerr-Pennington Doctrine' (n 1276) 22; Lao, 'Reforming the Noerr Doctrine' (n 1149) 1005.

1384 *Compagnie Maritime Belge* (n 1314) paras 82-83. See text at n 1315.

of any obligation on their part to verify the accuracy or veracity of the information provided' can constitute relevant factors.¹³⁸⁵

These conclusions can be explained by the fact that, when the patent office—or any other public authority—has ample discretion vis-à-vis an undertakings' request, the latter can only obtain the anticompetitive effects after convincing the former.¹³⁸⁶ Conversely, when the government has no discretion, the resulting public act is less likely to embrace public policy concerns and its potential anticompetitive effects flow directly from the undertakings' own judgment.¹³⁸⁷

Nevertheless, it should be noted that the mere fact that government discretion is limited does not automatically render a private approach anti-competitive. Patent holders in the US, for instance, are evidently entitled to list on the Orange Book the patents that could be infringed by generic applicants;¹³⁸⁸ patent holders in the EU are equally entitled to request SPCs in case of delays in the administrative procedures. The crucial question is, hence, where to draw the line of acceptable conducts. In the Orange Book cases, for example, the Hatch-Waxman Act does provide some guidance by stating that patents can be listed as long as 'a claim of patent infringement could reasonably be asserted'.¹³⁸⁹ Other cases are much less clear. In *AstraZeneca*, for instance, the CJEU stated that, because of the limited duties of the patent offices to verify the accuracy of the submissions, even if an undertaking sincerely believes that she has a legitimate claim, she must clearly communicate her novel interpretation to the patent office when it goes out of the ordinary.¹³⁹⁰ Ultimately, it seems clear that, as a general rule, the undertakings' duty of transparency becomes stricter in inverse proportion to the government office's margin of discretion and will vary depending on the factual circumstances of each case.

To conclude, it should also be borne in mind that, even though their exposure to antitrust scrutiny may be larger, public acts that result from non-discretionary procedures may nonetheless have a lesser impact on competition than those emanating from a discretionary governmental decision. German utility models, for instance, clearly do not have the same deterring effect as patents, which are granted after a fully-fledged examination proce-

1385 CJEU Decision in *AstraZeneca* (n 1215) para 105.

1386 FTC, 'Enforcement Perspectives on the Noerr-Pennington Doctrine' (n 1276) 22.

1387 Vossestein (n 1201) 1397-98.

1388 See, in this regard, text at n 967 in ch 5.

1389 21 USC § 355(j)(2)(A)(vii).

1390 CJEU Decision in *AstraZeneca* (n 1215) para 95.

ture, and are not perceived in the same way by the market or by the courts themselves. The following paragraphs analyse the public acts' effects on competition in further detail.

IV. Effects on Competition

Even if proven that a patent applicant indeed deceived the patent office and that such behaviour directly led to the issuance of an exclusive right, these facts alone do not necessarily render the behaviour anticompetitive: evidence that the public act—in this case the patent—has an exclusionary effect in the market is also required.¹³⁹¹

a. Exclusionary Effects of Improperly Granted Patents

From an economic perspective, there is little doubt that patents are capable of imposing restraints on competition.¹³⁹² But whereas these restraints are entirely justified and desirable for the grant of valid patents, those which are obtained through misleading means and do not truly protect inventive ideas do not have any redeeming virtues and do not seem worthy of the same deference.¹³⁹³ How exactly those patents may impact the market, however, has been interpreted somehow differently by US and EU courts.

As it may be recalled, the US Supreme Court's first decision on the issue had concluded that 'the enforcement of a patent procured by fraud on the Patent Office may be violative of § 2 of the Sherman Act provided the other elements necessary to a § 2 case are present.'¹³⁹⁴ The emphasis on enforcement may be partly explained by historical reasons: since the patent invalidity action was at that time barred for the antitrust plaintiff, the

1391 *Walker Process* (n 1302) 174; CJEU Decision in *AstraZeneca* (n 1215) para 106. Cf Martin J Adelman, 'The Relevant Market Paradox: Attempted and Completed Patent Fraud Monopolization' (1977) 38 Ohio St L J 289 (arguing that fraud to the patent office should be considered a *per se* violation of antitrust law).

1392 Drexl, 'When do Patent Filings Violate Competition Law?' (n 1327) 296.

1393 William M Landes and Richard A Posner, *The Economic Structure of Intellectual Property Law* (Harvard Univ Press 2003) 20-24; Leslie, 'Antitrust and Patent Law' (n 1335) 1269. See also Drexl, 'When do Patent Filings Violate Competition Law?' (n 1327) 319.

1394 *Walker Process* (n 1302) 174.

court attempted to disconnect the validity claim from the antitrust action to the maximum possible extent.¹³⁹⁵ In spite of that, lower courts held that, in order to prevail in an antitrust claim, the claimant must show that the patentee attempted to *enforce* the fraudulently-obtained patent,¹³⁹⁶ as the sole grant of the patent would not be sufficient to trigger antitrust liability.¹³⁹⁷ The Federal Circuit reasoned in this regard that the minimum level of enforcement should be the same as that which determines jurisdiction in a declaratory judgment action for patent invalidity.¹³⁹⁸ Along the same lines, Areeda and Hovenkamp have stressed that merely obtaining a patent by fraud rarely has anticompetitive effects,¹³⁹⁹ although they added that antitrust liability may be prompted not only by the patentee's bringing of infringement actions or threats, but also by refusing to license or by licensing a patent while knowing that it is invalid.¹⁴⁰⁰

EU courts seem to have chosen a different route,¹⁴⁰¹ as they acknowledged in *AstraZeneca* that the grant of exclusive rights by the patent office

1395 See Ned L Conley, 'Considerations in Patent Litigation Brought About by Walker Process Equipment, Inc v Food Machinery & Chemical Corp' (1966) 9 S Tex L J 9, 10.

1396 *Struthers Scientific and Int'l Corp v General Foods Corp* 334 F Supp 1329, 1331 (D Del 1971); *Unitherm Food Systems Inc v Swift-Eckrich Inc* 375 F 3d 1341, 1355 (Fed Cir 2004), revd on other grounds 546 US 394 (2006).

1397 *Struthers* (n 1396) 1332 ('It is not the mere obtaining of a fraudulent patent which brings antitrust liability to its owner; it is the assertion or enforcement of the issued patent acquired by fraud which creates antitrust liability.');

California Eastern Laboratories Inc v Gould 896 F 2d 400, 403 (9th Cir 1990) ('Without some effort at enforcement, the patent cannot serve as the foundation of a monopolization case.').

1398 *Unitherm* (n 1396) 1357. See also, however, *Ritz Camera & Image LLC v SanDisk Corp* 700 F 3d 503, 508 (Fed Cir 2012) (clarifying that direct purchasers may have standing to sue in *Walker Process* claims even if they do not have standing to sue for patent invalidity).

1399 Areeda and Hovenkamp, *Antitrust Law* (n 1292) para 705a. See also Herbert Hovenkamp, 'The Walker Process Doctrine: Infringement Lawsuits as Antitrust Violations' (2008) U Iowa Legal Studies Research Paper 08/36, 10 <<http://ssrn.com/abstract=1259877>> accessed 14 February 2018 ('simply obtaining a patent fraudulently with no subsequent enforcement activity does not violate the Sherman Act, although it may violate the FTC Act.').

1400 Areeda and Hovenkamp, *Antitrust Law* (n 1292) para 705a. As already mentioned above, Hovenkamp has also stated that, because the deciding element is the enforcement, the fraud element in *Walker Process* is overestimated and the latter decision does not differ much from any other sham case. Hovenkamp, *The Antitrust Enterprise* (n 1143) 267.

1401 See, however, Maggolino (n 1143) 104 (arguing that the courts in *AstraZeneca* arrived to a conclusion similar to *Walker Process*, because applying for an SPC

may itself have exclusionary effects¹⁴⁰² and expressly rejected the idea that a finding of abuse of a dominant position requires the enforcement of the patent.¹⁴⁰³ In the same vein, a number of scholars have disputed the interpretation that US lower courts have made of *Walker Process* and argued against the enforcement requirement.¹⁴⁰⁴ Particularly noteworthy in this regard is the work of Leslie, who has dedicated a couple of extensive articles to this particular enterprise and comprehensively described the different kinds of anticompetitive effects that may stem from the sole procurement of a patent through improper means.¹⁴⁰⁵

The most evident anticompetitive effect induced by the sole grant of fraudulently-obtained patents is connected to the general duty that rests upon every citizen to abide by patents. It should be borne in mind that, once a patent is granted, patent laws provide as a rule that nobody can make use of it without the authorisation of the patent holder.¹⁴⁰⁶ In fact, patents can be assimilated to a governmental order that bars competitors from performing a particular activity. For this reason, a patent grant sends a clear signal to the market that is likely to deter actual or potential competitors from marketing or using that particular product or process, aware as they are that they are bound by law to respect the exclusive right.¹⁴⁰⁷ In connection with the latter, EU courts have highlighted in *AstraZeneca* that intellectual property rights, when granted by a public authority, are ‘normally assumed to be valid.’¹⁴⁰⁸ UK courts, in their turn, understand that, in patent infringement actions, claimants benefit from a presumption that

would be comparable to an abusive enforcement). Cf Sven Gallasch, ‘*AstraZeneca v the Walker Process – A Real EU-US Divergence or Just an Attempt to Compare Apples to Oranges?*’ (2011) 7 Eur Comp J 505 (arguing that *AstraZeneca* and *Walker Process* are not comparable).

1402 CJEU Decision in *AstraZeneca* (n 1215) para 108.

1403 GC Decision in *AstraZeneca* (n 1216) para 362.

1404 See, eg, Neil A Smith, ‘Fraud upon the Patent Office as a Violation of the Sherman Antitrust Law’ (1970) 14 Pat Trademark & Copyright J Res & Educ 507, 546; Floyd (n 1149) 424; Leslie, ‘The Anticompetitive Effects of Unenforced Invalid Patents’ (n 1272). See also Leslie, ‘Patents of Damocles’ (n 1294) 133 (‘weapons need not actually be fired in order to have a deterrent effect on one’s enemies.’). See also *Brunswick* (n 1352) 265 (enforcement actions are not a *sine qua non* of monopolizing by patent fraud.’).

1405 Leslie, ‘The Anticompetitive Effects of Unenforced Invalid Patents’ (n 1272); Leslie, ‘Patents of Damocles’ (n 1294).

1406 § 271 US Patent Act; § 9 PatG; UK Patents Act, s 60.

1407 GC Decision in *AstraZeneca* (n 1216) para 362, confirmed by CJEU Decision in *AstraZeneca* (n 1215) para 108.

1408 *ibid.*

their patent is valid.¹⁴⁰⁹ In Germany, because of the bifurcation system that separates infringement from invalidity proceedings, patentees also get a running start when pursuing infringement actions.¹⁴¹⁰ In the case of the US, the presumption of validity is explicitly recognised by the patent act.¹⁴¹¹ The Supreme Court has interpreted this provision to entail that, if a patent is challenged, the petitioner must prove its invalidity by ‘clear-and-convincing’ evidence and that a mere preponderance standard does not suffice.¹⁴¹²

Additionally, the existence in the market of invalid patents obtained through deceptive means may lead to increased costs of market entry¹⁴¹³ or intimidate third parties who would otherwise be interested in doing business with competitors.¹⁴¹⁴ The existence of a fraudulently-obtained patent could, eg, leave competitors at a serious disadvantage in public and private tenders or deter their customers, partners or investors. In certain scenarios, such as Orange Book patent listings before the FDA, a misrepresentation can prompt even more immediate consequences, as the petitioning can automatically block competitors from obtaining market authorisations during a period of 30 months.¹⁴¹⁵

Along with the restraints upon static competition described above, invalid patents obtained by misleading representations may be capable, in some instances, of hampering dynamic competition as well. Competitors could indeed refuse to engage in R&D activities in technical areas tainted by invalid patents, particularly if they are unaware of the invalidity, which

1409 *Hormel Foods Corp v Antilles Landscape Investments NV* [2005] EWHC 13 (Ch), [2005] RPC 28 [73]. See also Richard Miller and others, *Terrell on the Law of Patents* (17th edn, Sweet & Maxwell 2011) para 18.194.

1410 See Katrin Cremers and others, ‘Invalid But Infringed? An Analysis of Germany’s Bifurcated Patent Litigation System’ (2014) Max Planck Institute for Innovation & Competition Research Paper 14/14, 2 <<http://ssrn.com/abstract=2504507>> accessed 14 February 2018.

1411 § 282(a) US Patent Act.

1412 *Microsoft Corp v i4i Ltd Partnership* 131 S Ct 2238, 2252 (2011).

1413 Leslie, ‘The Anticompetitive Effects of Unenforced Invalid Patents’ (n 1272) 119-22 (citing as examples the necessary investigations on patent scope and validity and the hypothetical entering into a license agreement with the patent holder).

1414 *ibid* 125-27 (explaining that invalid patents scare away competitors’ customers or venture capital).

1415 See text at n 959 in ch 5.

would result in an overall slowing-down of technological development.¹⁴¹⁶ The situation could be even more serious in the US, where the experimental use exception has been interpreted in narrow terms.¹⁴¹⁷ In any case, both US and EU competition agencies have acknowledged the risks that improperly obtained patents may represent on innovation. The FTC, on the one hand, has stated that a questionable patent ‘may lead its competitor to forgo R&D in the areas that the patent improperly covers.’¹⁴¹⁸ On the other hand, Neelie Kroes, the EU Competition Commissioner at the time *AstraZeneca* was decided, also highlighted that misleading the patent office can act as a disincentive to innovate.¹⁴¹⁹

As a final point, a question regarding competitors’ awareness should be considered. J Posner has argued in this respect that, in order for a fraudulently obtained patent to constitute an antitrust violation, an additional requirement should be met, namely that the patent should also have ‘some colorable validity’.¹⁴²⁰ Although it is true that such feature would be required in order to discourage actual or potential competitors from making the patented product, the myriad of anticompetitive effects described above evidence that invalid patents may still have a negative impact on competition even if competitors are aware of such invalidity.¹⁴²¹ On the one hand, the invalid patent may still act as a deterrent element for third parties dealing with competitors. On the other hand, the competitor herself could nonetheless be dissuaded from entering the market in view of the general presumption of validity of the patent and the high costs that the invalidity proceedings could entail.

1416 Leslie, ‘The Anticompetitive Effects of Unenforced Invalid Patents’ (n 1272) 127-28 (arguing that ‘competitors fearful of infringement litigation may decline to invest in research and development (R&D) in areas tainted by invalid (but unexposed) patents.’).

1417 *Madey v Duke University* 307 F 3d 1351, 1362 (Fed Cir 2002) (concluding that the experimental use defence is ‘very narrow and limited to actions performed for amusement, to satisfy idle curiosity, or for strictly philosophical inquiry.’) (citations omitted). For a general overview of the experimental use exception in the US, see Katherine J Strandburg, ‘What Does the Public Get: Experimental Use and the Patent Bargain’ [2004] *Wis L Rev* 81.

1418 FTC, ‘To Promote Innovation: The Proper Balance of Competition and Patent Law and Policy’ (2003) Executive Summary, 5.

1419 Commission Press Release IP/05/737, ‘Competition: Commission fines AstraZeneca €60 million for misusing patent system to delay market entry of competing generic drugs’ (15 June 2005).

1420 *Brunswick* (n 1352) 265.

1421 Leslie, ‘The Anticompetitive Effects of Unenforced Invalid Patents’ (n 1272) 132.

b. Scope of and Entitlement to the Patent

When assessing the effects that a patent may have on competition, particular attention should also be paid to the scope of its claims. The deceptively obtained patent could, for instance, refer to an exceptionally popular product or incorporate far-reaching claims. But the patent could also refer to trivial products or processes, contain narrow claims or refer to only one of many equally valuable alternatives available in the relevant market. In the former case, the impact of the patent on competition is likely to be more meaningful, as the patent would act as a significant entry barrier. Conversely, the exclusionary effects in the latter case may be less considerable if competitors' activities are not substantially affected or if they have at their disposal further alternatives that do not infringe the patent and whose use does not entail additional costs. When analysing the anticompetitive effects of a patent obtained by fraud, hence, it is advisable to first define the relevant market and then weigh it against the scope of the patent claims.¹⁴²²

A final relevant factor to consider refers to the materiality of the deceptive behaviour vis-à-vis the justification of the issuance of the patent as such. J Posner has suggested in this regard that deceptive conducts leading the patent office to grant a non-patentable invention should be clearly distinguished from those conducts that concern patents that would have been granted anyhow, though to a different person.¹⁴²³ In the latter case, argues Posner, the effects that the patent has on competition are exactly the same as the effects that would have been observed had the patent been granted to the legitimate inventor.¹⁴²⁴ Hence, even when the applicant's conduct was material in the sense that it directly led to the grant of the patent on her name, it would not be material with regard to the existence of the patent as such and would hence render it irrelevant from an antitrust standpoint. By the same token, it could be argued that, when an applicant applies for a patent that meets all patentability requirements but nonetheless submits false information to the patent office, eg to meet a deadline or to amend an accidental mistake, such behaviour should not be considered anticompetitive either—even if, formally speaking, it was material for the

1422 *Delano Farms Co v The California Table Grape Commission* 655 F 3d 1337, 1351 (Fed Cir 2011).

1423 *Brunswick* (n 1352) 265.

1424 *ibid.* Cf Kobak, 'PREI and the Future of Patent-Antitrust Litigation' (n 1181) 198 (contending that the identity of the party holding the patent could have competitive and antitrust significance).

procurement of the patent. Indeed, although the conduct is certainly worthy of sanctions under other areas of law, this type of misrepresentations do not seem to affect in any way the patents-competition equation, as the latter is not opposed to the grant of patents on valuable inventions. Competition law is probably too cumbersome an instrument to be used to monitor unscrupulous applicants who, despite of that, make beneficial contributions to innovation.

c. Consumer Harm and Objective Justifications

As it may be recalled, the CJEU held in *AstraZeneca* that the fact that misleading representations do not ultimately lead to the grant of an exclusive right—or that, if granted, the exclusive right is subsequently revoked—does not necessarily exempt the undertaking from antitrust liability. In the view of the court, those conducts can still constitute a violation of competition law if they ‘were very likely to result’ in the issuance of the exclusive right.¹⁴²⁵ In a similar vein, the court also highlighted that the anticompetitive effects of the conduct do not need to be concrete to find an abuse, as it would be sufficient to show that those effects are at least potential.¹⁴²⁶

If US courts were confronted with a similar question, their answer would probably be quite different, as no antitrust case can even be made in that jurisdiction unless the undertaking both obtains the patent and attempts to enforce it.¹⁴²⁷ As already noted, this enforcement requirement has been a subject of debate among several scholars on the grounds that the mere existence of patents is already capable of affecting the market. In fact, by waiting until the patentee enforces the patent, US courts appear to show more concern for the protection of specific competitors—those against whom the patent is enforced—than the competitive process as a whole.¹⁴²⁸

Be that as it may, the alternative position adopted by EU courts in *AstraZeneca*, though on its face more appealing, has been target for criticism

1425 CJEU Decision in *AstraZeneca* (n 1215) para 111.

1426 *ibid* para 112.

1427 See text at nn 1396-1400.

1428 For the distinction between protecting competitors and protecting competition, see text at nn 492ff in ch 4.

as well.¹⁴²⁹ Most significantly, it has been pointed out that the CJEU's malleable stance towards the necessary evidence on anticompetitive effects shows that the court continues to perceive modern economic theory and the more economic approach to competition with excessive scepticism.¹⁴³⁰ Even granting that, under common European competition practice, consumer harm is not considered a *conditio sine qua non* in order to find anticompetitive effects and that evidence of market foreclosure may be sufficient to that end,¹⁴³¹ the scarce references in *AstraZeneca* to the specific effects of the behaviour on competition seem to make for an unsound economic basis.¹⁴³² Admittedly, the General Court and the CJEU did allude to alterations in the market structure, effects on potential competition and even the possible deterring effects on innovation, yet the high level of abstraction in their language makes these conducts appear almost like *per se* abuses.

Equally arguable seems to be the absolute disdain that the courts in *AstraZeneca* have demonstrated towards remedies offered by other areas of law and their ability to forestall competitive harm.¹⁴³³ If interpreted broadly, the conclusions of the courts could lead to a situation of daunting legal uncertainty among patent applicants, as even refused patent applications with no perceivable effects on the market could fall under the competition law radar as long as those effects are 'potential' and the behaviour 'likely' to lead to the grant of a patent—two criteria tainted with a high level of ambiguity. Also in this regard, the CJEU's return to the vague standard of 'competition on the merits' does not make the task of patent applicants any easier,¹⁴³⁴ in particular taking into account that patents are, in their very essence, meant to impose some limitations on competition.

This being said, it could also be argued that the conclusions of the courts in *AstraZeneca* are not automatically transplantable to scenarios involving regular patents. Indeed, while the courts in that case interpreted

1429 Czapracka (n 1146) 105; Rupprecht Podszun, 'Can Competition Law Repair Patent Law and Administrative Procedures? *AstraZeneca*' (2014) 51 CML Rev 281, 292-94.

1430 Claudia Seitz, 'Klare Grenzlinie und Minenfeld: Die Marktmissbrauchskontrolle im Arzneimittelsektor nach dem *AstraZeneca*-Urteil des EuGH' [2013] EuZW 377, 380; Podszun (n 1429) 292.

1431 Josef Drexler, 'Real Knowledge is to Know the Extent of One's Own Ignorance: On the Consumer Harm Approach in Innovation-Related Competition Cases' (2010) 76 Antitrust L J 677, 683-88.

1432 Podszun (n 1429) 293.

1433 Czapracka (n 1146) 105.

1434 Podszun (n 1429) 293.

that SPCs can produce anticompetitive effects even before coming into effect, it should be borne in mind that, under that specific regime, there is a large time span between the grant of the exclusive right and its entering into force. AstraZeneca's SPCs, eg, had been majorly granted around 1993-1994, yet they were expected to enter into force only in 1999.¹⁴³⁵ Conversely, regular patents enter into force immediately after being granted. Before that, patent applications are still under examination and the fact whether they will be granted or not remains uncertain, hence yielding a different impact on the market.

Also worth mentioning is the efficiency defence or objective justification that patent applicants may have and which could exonerate their behaviour from antitrust liability. In the US, courts have acknowledged that, even if a certain conduct is proven to have anticompetitive effects, the concerned undertaking may be vindicated if 'valid business reasons' or a 'pro-competitive justification' are shown.¹⁴³⁶ Similarly, the CJEU has also accepted an efficiency defence for art 102 TFEU cases provided that the exclusionary effects are 'counterbalanced, or outweighed, by advantages in terms of efficiency which also benefit the consumer.'¹⁴³⁷ That notwithstanding, neither US nor EU courts have paid particular attention to this question when gauging misrepresentations before public authorities.

In particular, the Commission and the EU courts in *AstraZeneca* did not ponder the pro-competitive elements that the grant of the SPC could have had, eg in terms of dynamic competition.¹⁴³⁸ To that end, they could have analysed whether the grant of the SPC would have created additional incentives to innovate or aided the concerned undertaking to recoup prior expenditures on R&D, and could have subsequently balanced those pro-competitive effects against the restrictions that the SPC would impose on

1435 See text at n 1058 in ch 5.

1436 *Eastman Kodak Co v Image Technical Services Inc* 504 US 451, 483 (1992); *United States v Microsoft Corp* 253 F 3d 34, 59 (DC Cir 2001).

1437 Case C-95/04 P *British Airways v Commission* [2007] ECR I-2331, para 86. This defence, however, differs from the US standard in that it requires that the efficiencies should also benefit consumers. Josef Drexl, 'Deceptive Conduct in the Patent World: A Case for US Antitrust and EU Competition Law?' in Wolrad Prinz zu Waldeck und Pyrmont and others (eds), *Patents and Technological Progress in a Globalized World: Liber Amicorum for Joseph Straus* (Springer 2009) 150.

1438 Drexl, 'Deceptive Conduct in the Patent World' (n 1437) 152; Podszun (n 1429) 293.

competition.¹⁴³⁹ In this last regard, the EU courts do not seem to have considered the rather arbitrary transitional provisions of the SPC Regulation, which not only offered protection for new pharmaceutical products but also retroactively extended it in favour of already launched products, although with outwardly capricious date limitations.¹⁴⁴⁰ The regulation justified the retroactive effect on the European companies' need to 'catch up with its main competitors'.¹⁴⁴¹ On this basis, AstraZeneca could have argued that it was as much entitled to catch up with its main competitors as other companies who had launched their products only a couple of months after Losec. Furthermore, it could have argued that the SPC would have acted as an incentive to invest more in R&D in the future.¹⁴⁴² Be that as it may, it would seem advisable for competition enforcers, as a rule, to avoid questioning a specific regulation's assessment on its effects on innovation and accept the legislator's judgment.¹⁴⁴³

On the US side, courts and antitrust enforcers do not seem to have addressed the question of efficiency defences in the context of *Walker Process* claims, though they did acknowledge that it may be a valid justification in cases involving other kinds of deceptive conducts.¹⁴⁴⁴ In any case, it should be noted that acknowledging that efficiency defences may constitute a

1439 Drexler, 'Deceptive Conduct in the Patent World' (n 1437) 151. See also Podszun (n 1429) 293.

1440 Drexler, 'Deceptive Conduct in the Patent World' (n 1437) 155.

1441 Council Regulation (EEC) 1768/92 of 18 June 1992 concerning the creation of a supplementary protection certificate for medicinal products [1992] OJ L182/1, recital 10 (Old SPC Regulation, subsequently amended by Regulation (EC) 469/2009).

1442 Drexler, 'Deceptive Conduct in the Patent World' (n 1437) 155. An analogous question arose in a case concerning restrictions on parallel trade. Advocate General Jacobs understood that certain limitations on parallel trade by a pharmaceutical company could have pro-competitive effects and incentivise the company to invest in further R&D. Case C-53/03 *Synetairismos Farmakopoion Aitolias & Akarnanias (Syfait) v GlaxoSmithKline plc* [2005] ECR I-4609, Opinion of AG Jacobs, paras 91-95. That conclusion, however, was disputed by AG Ruiz-Jarabo Colomer, who contended that there is no causal link between the companies' losses due to parallel trade and a hypothetical decrease in R&D. Joined Cases C-468/06 to C-478/06 *Sot Lélos kai Sia EE v GlaxoSmithKline* [2008] ECR I-7139, Opinion of AG Ruiz-Jarabo Colomer, para 109. The CJEU ultimately refused to provide a final answer on this question. Joined Cases C-468/06 to C-478/06 *Sot Lélos kai Sia EE v GlaxoSmithKline* [2008] ECR I-7139, para 70.

1443 Drexler, 'Deceptive Conduct in the Patent World' (n 1437) 155.

1444 *US v Microsoft* (n 1436) 77 (involving deceptive representations to software developers); *Rambus* (FTC Docket 9302) Opinion of the Commission of 2 August

valid justification for deceptive strategies by no means implies a full-fledged absolution for the concerned undertaking, who may still have to face liability under other areas of law.

V. Market Power

As explained in the opening of the second part of this work, proof of an anticompetitive conduct alone is not sufficient for a finding of antitrust liability neither under § 2 Sherman Act nor under art 102 TFEU: in both cases, an element of market power must also be shown.¹⁴⁴⁵ Although questions concerning the definition of the relevant market and the assessment of market power are beyond the scope of this work, it is important to bear in mind that this element may acquire a special significance in the cases at hand. Undertakings may, in this regard, hold negligible market power by the time they make a deceptive representation before the patent office, yet they may achieve a strong position in the market precisely due to the wrongful behaviour, once the patent is granted.

Considering that the treatment of this issue by US courts somehow differs from EU law, the following paragraphs separately review in a succinct manner the main questions and problems that arise in each of these jurisdictions.

a. The Case under § 2 Sherman Act. Monopolisation and Attempt to Monopolise

As mentioned earlier, situations involving a deceptive behaviour before the patent office may pose significant hurdles in this respect. Admittedly, a patent applicant could already hold some market power at the time of the patent procurement, eg when the application refers to further developments of products or processes already established on the market. But the application could also refer to technologies which are still under develop-

2006, para 68-69 <www.ftc.gov/os/adjpro/d9302/060802commissionopinion.pdf> accessed 14 February 2018 (involving a deceptive strategy before a standard-setting organisation, although the FTC also highlighted in this case that deceptive conducts are ‘extraordinarily difficult to justify.’).

1445 See text at nn 522ff in ch 4.

ment and which do not even exist on the market at that point, in which case the applicant would not have any market power at all.

Under US antitrust law, this factor does not necessarily raise enforcement problems, as § 2 Sherman Act, with the figures of monopolisation and attempt to monopolise, enables antitrust enforcers to capture abusive conducts even if the firm does not enjoy monopoly power at that point—and even if it does not subsequently acquire it.

In order to qualify as an attempt to monopolise, however, additional elements should also be shown.¹⁴⁴⁶ On the one hand, there should be a dangerous probability that the monopoly power will be achieved, which would require ‘inquiry into the relevant product and geographic market and the defendant's economic power in that market.’¹⁴⁴⁷ Although determining whether such probability exists or not appears to be a challenging enterprise, it is at least conceivable that it could occur in the cases under review. Indeed, the grant of a patent could render the patent holder the exclusive supplier of the product, particularly if the fraud and the cause of invalidity remain unknown to other market participants and to potential competitors.

On the other hand, attempt to monopolise cases require evidence of a specific intent,¹⁴⁴⁸ which goes beyond the mere intent to perform the act¹⁴⁴⁹ and has been interpreted as a purport ‘to destroy competition or build monopoly’.¹⁴⁵⁰ In some cases, this intent may be readily inferred from the evidence of the patent applicant's deliberate deceit. As a matter of fact, because of the very nature of patents, every patent applicant can be presumed to have the purpose of imposing at least some restraints on competition. The latter, however, may not necessarily denote an intent to build a monopoly or destroy competition, though the distinction may be at times quite subtle.¹⁴⁵¹

In any event, at least from a theoretical perspective, US antitrust laws seem to be capable of reaching deceptive behaviours before the patent office under § 2 Sherman Act even if the patent applicant does not hold substantial market power at that specific point in time or is ultimately not able to attain it. Paradoxically, however, US courts in practice do not con-

1446 *Spectrum Sports Inc v McQuillan* 506 US 447, 456 (1993). See text at n 516 in ch 4.

1447 *ibid* 459.

1448 *ibid* 456.

1449 *Aspen Skiing Co v Aspen Highlands Skiing Corp* 472 US 585, 602 (1985).

1450 *Times-Picayune Publishing Co v United States* 345 US 594, 626 (1953).

1451 See Smith (n 1404) 543-44.

demn these conducts on their own as antitrust violations and interpret that antitrust law only becomes applicable when the patentee obtains the patent and makes at least some effort to enforce it.

As a final point, one could ask whether the deceptive behaviour before the patent office may also be assessed under § 5 FTC Act. In fact, there is at least one case where a Court of Appeals interpreted that deliberate fraud before the patent office can constitute an unfair method of competition under the FTC Act.¹⁴⁵² However, as the current interpretation of § 5 FTC Act advocated by the FTC itself tends to subsume the boundaries of this provision within the general economic principles of antitrust law, the considerations made in this work with regard to § 2 Sherman Act became equally applicable to § 5 FTC Act and render a separate analysis of the latter superfluous.¹⁴⁵³

b. The Case under art 102 TFEU. Market Dominance as a Pre-requisite

The panorama looks quite different under European competition law, where the focus of art 102 TFEU is set not so much on anticompetitive conducts that lead to a dominant position but rather on what undertakings do once that position has been attained.¹⁴⁵⁴ In fact, as a result of the language of this provision, anticompetitive abuses can only be sanctioned if the undertaking already holds a dominant position by the time of the abuse. Because the provision does not include an offence equivalent to US' attempt to monopolise, market dominance constitutes an inescapable precondition for the application of competition law against any kind of unilateral conducts. In this light, EU competition law seems perfectly suited to counter those abusive behaviours which are designed to *extend* market dominance, eg by filing patent applications associated with technologies already established on the market, yet it seems to become toothless against patent applicants who are not yet dominant—even if, after obtaining the patent, they do acquire a strong position on the market.

1452 *American Cyanamid Company v FTC* 363 F 2d 757, 771 (6th Cir 1966).

1453 See text at nn 701-710 in ch 4.

1454 Case 322/81 *Nederlandsche Banden-Industrie-Michelin v Commission* [1983] ECR 3461, para 57. See also Franklin M Fisher, 'Monopolization versus Abuse of Dominant Position: An Economist's View' in Barry Hawk (ed), *International Antitrust Law & Policy: Fordham Corporate Law 2003* (Juris Publishing 2004) 159.

Against this background, it has been suggested that, at least in some cases, a narrow definition of the relevant market may help to enable the applicability of art 102 TFEU, as it would evidently make it easier to ascertain dominance.¹⁴⁵⁵ In fact, narrow market definitions may be particularly appealing when dealing with innovative products and the Commission and the EU courts in *AstraZeneca* seem to have opted for a rather narrow market definition themselves when assessing the relevant market for Losec.¹⁴⁵⁶ That notwithstanding, caution is strongly advised in this regard, as too narrow market definitions may lead to unreasonable assessments that could bring every single new product within the scope of art 102 TFEU and, in so doing, backfire as a disincentive for innovation.¹⁴⁵⁷

In addition, even if narrow market definitions were to be favoured, there may nevertheless be circumstances in which, by the time the applicant applies for a patent at the patent office, a market does not yet even exist for the products involved in the application. In those cases, regardless of how narrowly markets are defined, it would still seem quite challenging to capture the conduct under art 102 TFEU. One alternative to that conundrum could be provided by the adoption of the concept of ‘innovation markets’, although—as earlier explained—the concept is highly controversial today and increasingly neglected by competition enforcers.¹⁴⁵⁸

Alternatively, it could be argued that, based on European case law, it is not necessary for a firm to be dominant in the market where the anticompetitive effects take place, provided that the firm is dominant in a neighbouring market.¹⁴⁵⁹ The CJEU, however, clarified that such finding should be reserved for very particular circumstances.¹⁴⁶⁰ In any case, that construction seems to be better suited for predatory strategies, such as predatory

1455 See, eg, Steven Anderman, ‘The Strategic Use of Patent Enforcement and Acquisition Methods and Competition Law’ in Inge Govaere and Hans Ullrich (eds), *Intellectual Property, Market Power and the Public Interest* (Peter Lang 2008) 181.

1456 Drexler, ‘Deceptive Conduct in the Patent World’ (n 1437) 147; Steven Anderman, ‘New Developments’ (n 1337) 10–11.

1457 Jacob Westin, ‘Defining Relevant Market in the Pharmaceutical Sector in the Light of the Losec-Case: Just How Different is the Pharmaceutical Market?’ (2011) 32 *Eur Comp L Rev* 57, 60; Spillmann (n 1362) 128.

1458 Drexler, ‘When do Patent Filings Violate Competition Law?’ (n 1327) 317. For a concise description of the concept of ‘innovation markets’ and the challenges it poses, see text at nn 571–595 in ch 4.

1459 See, eg, Case C-333/94 P *Tetra Pak International SA v Commission* [1996] ECR I-5951, para 27 (*Tetra Pak II*).

1460 *ibid*.

pricing or sham litigation, where the market power—even if on a different, connected market—does play an important role in the overall assessment. In cases like the ones at hand, it could put large firms at a disadvantage, as in practice the gravity of the anticompetitive harm derived from a deceptive behaviour does not seem to be affected in any way by the size and power of the applicant on other markets.¹⁴⁶¹

Ultimately, the case of deceptive conducts before the patent office appears to constitute just another example of the limitations of art 102 TFEU for capturing abuses that relate to the acquisition of market power—limitations which have already been vigorously highlighted by the scholarship, particularly in scenarios involving collective standard settings and patent ambush.¹⁴⁶² Indeed, because the provision is essentially aimed at preventing dominant undertakings from abusing the strong position they already enjoy on the market, the question on *how* such position is attained seems to linger as a neglected spot in the overall operation of art 102 TFEU and may justify an amendment in the language of the provision.¹⁴⁶³

In spite of that, and considering that an improperly obtained patent which remains in force may have a continued impact on the market and that the patent holder may engage in subsequent behaviours that help endure or strengthen the anticompetitive effects of the patent on competition, it is worth considering whether the ownership or enforcement of a patent so obtained may also warrant competition law intervention. The final section of this work is devoted to this endeavour by introducing the essential challenges that are likely to emerge and laying the groundwork for further exploration.

1461 Under the different modalities of causation identified by Vogelenzang, this would seem to belong to the third one, where the act and the dominant position have no connection whatsoever. See text at nn 676-689 in ch 4.

1462 Inge Govaere, 'In Pursuit of an Innovation Policy Rationale: Stakes and Limits under Article 82 TEC' (2008) 31 World Competition 541, 549; Drexl, 'Deceptive Conduct in the Patent World' (n 1437) 146; Peter Picht, *Strategisches Verhalten bei der Nutzung von Patenten in Standardisierungsverfahren aus der Sicht des Europäischen Kartellrechts* (Springer 2013) 164. See also Josef Drexl, 'Anticompetitive Stumbling Stones on the Way to a Cleaner World: Protecting Competition in Innovation Without a Market' (2012) 8 J Comp L & Econ 507, 540 (highlighting the limitations of art 102 TFEU vis-à-vis defensive patent strategies).

1463 See, eg, Govaere, 'In Pursuit of an Innovation Policy Rationale' (n 1462) 554; Drexl, 'Anticompetitive Stumbling Stones' (n 1462) 542.

C. Ownership or Enforcement of an Improperly Obtained Patent as an Antitrust Concern

Regardless of how competition laws apply to deceptive conducts during patent prosecution, once the patent is granted the question inevitably arises as to whether the continuing existence of the patent and its exploitation or enforcement by the patent holder may also constitute relevant conducts under an antitrust law standpoint. The existing differences between US and EU law, both in terms of the language of the applicable provisions and the paths taken by the existing case law, again call for an individual analysis for each jurisdiction.

I. The Case under US Law and Walker Process' Enforcement Requirement

Taking into account the existing case law, there is little doubt that, under US antitrust law, the enforcement of a patent obtained by deceptive means can configure a case of monopolisation or attempt to monopolise. In fact, although the language of § 2 Sherman Act seems to be sufficiently flexible to also capture what transpires during patent prosecution, US courts have consistently interpreted that it is only the enforcement of those patents that merits antitrust intervention, as the obtaining of a patent by fraud alone would not generate sufficient competitive concerns.¹⁴⁶⁴ What is more, courts have defined the concept of enforcement in considerably narrow terms. As referred above, the Federal Circuit understands that, as a rule, the minimum degree of enforcement necessary to trigger antitrust liability should be defined on the basis of the standards for admitting locus standi in declaratory judgment actions for patent invalidity.¹⁴⁶⁵ The concept therefore encompasses the patent holder's bringing of infringement suits as well as the explicit threats to sue, either against competitors or their customers,¹⁴⁶⁶ but probably not much more.¹⁴⁶⁷ Any conduct by the

¹⁴⁶⁴ See text at nn 1396-1400.

¹⁴⁶⁵ *Unitherm* (n 1396) 1357. More recently, it stressed that parties not having standing to start a declaratory judgment action may still have standing to start an antitrust claim, yet this conclusion does not seem to modify the fact that a minimum enforcement of the patent will have to be shown in order to succeed. See *Ritz Camera* (n 1398) 508.

¹⁴⁶⁶ *HydriL Co LP v Grant Prideco LP* 474 F 3d 1344, 1350 (Fed Cir 2007).

¹⁴⁶⁷ See Leslie, 'Patents of Damocles' (n 1294) 141-42.

patent holder falling short of enforcement would seem to take the deceptively obtained patent away from the radar of the Sherman Act.

In addition to showing that the patent has been enforced, *Walker Process* claims logically also require evidence that the patent was obtained by fraud.¹⁴⁶⁸ To this end, it is sufficient to reproduce here the considerations set out above when analysing whether the deceptive conduct alone could be regarded as anticompetitive.¹⁴⁶⁹ Accordingly, in order to regard a patent as fraudulently obtained, the representations of the patent applicant before the patent office should have been unmistakably false, material for the grant of the patent and made with a deliberate intent to deceive, and particular attention should be paid to the scope of the patent vis-à-vis the relevant market. Furthermore, *Walker Process* also requires all other elements necessary to a § 2 Sherman Act case to be present.¹⁴⁷⁰ By and large, all the conclusions exposed above are equally applicable to the cases at hand, with the fundamental difference that the deceptive behaviour here will need to be accompanied by a subsequent enforcement.

It is precisely the addition of that enforcement element, however, that may bring about a number of particularities that are worth considering. In the first place, it insinuates that, for a *Walker Process* claim to succeed, two separate conducts need to be proven: the enforcement and the fraud. For this reason, it is certainly possible to envisage cases where those conducts are performed by different undertakings, eg when a firm obtains a patent by fraud and assigns it to a third party who later decides to enforce it. In such cases, Justice Harlan's concurring opinion in *Walker Process* clarified that it would be sufficient to show that the patent holder enforced the patent 'with knowledge of the fraudulent manner in which it was obtained'.¹⁴⁷¹

On the other hand, the anticompetitive effects are not particularly easy to identify. By looking into the patent applicant's fraudulent conduct before the patent office, courts certainly seem to ponder all the concerns associated with such conducts which were described earlier in this chapter. Yet by making the enforcement of the patent an indispensable part of the *Walker Process* claim, they seem to ignore the anticompetitive effects that may already derive from the grant and sole existence of that patent. In any case, the enforcement may admittedly contribute to its anticompetitive ef-

1468 *Walker Process* (n 1302) 179.

1469 See text at nn 1341ff.

1470 *Walker Process* (n 1302) 174.

1471 *ibid* 179. In the same vein, see *Tyco Healthcare Group LP v Mutual Pharmaceutical Co Inc* 762 F 3d 1338, 1349 (Fed Cir 2014).

fects, as it would amount to a corroboration of the exclusionary nature of this right and could further deter competitors or their customers.

If viewed under this perspective, it may not be erroneous to state that the relevance of the fraud element in *Walker Process* claims is overstated.¹⁴⁷² Indeed, if the essential element of the misconduct is the enforcement, fraud seems to be just one of the many ways to prove that the patent holder is aware of the invalidity of the patent. Exactly the same anticompetitive restraints may be envisaged if an undertaking, even after an impeccable conduct before the patent office, later finds out that the patent is unequivocally invalid and nonetheless decides to enforce it.

In addition, the anticompetitive effects stemming from the fraudulently obtained patent at an enforcement stage seem to be harder to tell apart from the anticompetitive harm that derives from sham litigation. When a plaintiff enforces a patent which she knows has been obtained by fraud, she may do so in order to obtain a favourable judgment from the court, hoping that the cause of invalidity remains unnoticed, but she may also aim at raising rivals' costs and deterring potential competitors regardless of the final judgment. In fact, as stated above, those two purposes may very well overlap and the *Handgards* case described in the previous chapter is a perfect example in this regard.¹⁴⁷³ Although this case was originally conceived as a natural consequence of *Walker Process*, in *Handgards* it was irrelevant whether the patent had been obtained by fraud, or even whether the patent was valid or not: what mattered was whether an undertaking had pursued legal actions with absolute indifference towards their outcome, with the purpose of raising rivals costs and deterring other competitors. Hence, even if the patent was valid, the enforcement could still configure an anticompetitive sham strategy if the plaintiff was aware that there was no infringement.

On a different note, as a final and perhaps more complex point, it may be interesting to consider whether the antitrust laws may be applied against the sole ownership, ie in situations where the patentee has not yet enforced the patent she knows is invalid. As explained above, US courts do not endorse such a view, yet those invalid and unenforced patents can certainly have an anticompetitive impact. For this reason, Leslie argues that firms having monopoly power should have a duty to disavow patents 'that they know to be invalid and that are used to maintain their monopoly

1472 Hovenkamp, *The Antitrust Enterprise* (n 1143) 267.

1473 See text at nn 945-953.

power.’¹⁴⁷⁴ In his opinion, *Walker Process*’ enforcement requirement should be eliminated and the relevant conduct should become the ‘knowing maintenance of invalid patents’.¹⁴⁷⁵ The proposal certainly deserves serious consideration, although the idea of a unilateral conduct consisting of not doing anything (except, perhaps, for the annual payment of patent renewal fees) does seem to make for a rather vague and daunting duty, particularly in the case of patents which were not obtained through deceptive means, as the relevant conduct would merely be an alteration in the state of mind of the owner. In the case of patents obtained by fraud, on the other hand, the anticompetitive effects seem hard to tell apart from those stemming from its grant, which US antitrust rules are already enabled to tackle. In any case, if such an approach were accepted, it would be imperative to have the standard carefully demarcated, as imposing this sort of duties upon patent holders bears the serious risk of deterring many patent applications and valuable inventive activity.¹⁴⁷⁶ As patents involve extremely complex technologies and patentability requirements are a question of eternal debate, the fact that a patent is weak or that the patent holder is not entirely certain about its validity should not be sufficient to deem its ownership anticompetitive—a strict ‘bad faith’ standard would probably be advisable.

II. The Case under EU Law

As stated earlier, art 102 TFEU is more concerned with how firms behave when they hold a dominant position in the market than with the way in which such position is attained. Hence, the question whether the ownership or enforcement of a patent obtained through deceptive means may configure an abusive behaviour seems to be particularly pertinent in this jurisdiction.

In the leading case on deceptive conducts before the patent office, however, the courts unfortunately did not deal with this specific issue. Because in that case *AstraZeneca* happened to already enjoy a dominant position by the time it applied for the SPCs, courts were able to tackle the acquisition of the IPR on itself and did not need to consider subsequent events.

1474 Leslie, ‘The Anticompetitive Effects of Unenforced Invalid Patents’ (n 1272) 161.

1475 *ibid* 155.

1476 See Robert P Merges, ‘As Many as Six Impossible Patents before Breakfast: Property Rights for Business Concepts and Patent System Reform’ (1999) 14 *Berkeley Tech L J* 577, 599.

Despite of that, in practice there may certainly be cases where the undertaking attains market power only after having deceived the patent office, precisely as a result of the improperly obtained patent. In such a case, it is worth asking whether art 102 TFEU may enter into play against any of the subsequent conducts that the patent holder may perform.

a. A case for Article 102(a) TFEU or duty to license?

In the first place, it would be interesting to analyse whether solutions presented in other areas under analogous circumstances may be borrowed and transplanted to the cases at hand. In fact, the interpretation insinuated by the Commission in the framework of ‘patent ambushing’ or ‘patent hold-up’ cases may be of particular interest in this regard.

Patent ambush is a concept that arose in the context of private standard-setting organisations (SSOs) and essentially refers to a complex strategy that comprises two basic steps. In the first place, the holder of a patent (or patent application) takes part in a standard-setting procedure without disclosing the existence of her IPRs, often actively participating in the discussions and striving to have the SSO embrace a standard that would infringe those IPRs. Subsequently, and provided that this standard is ultimately adopted by the SSO and implemented by the industry, the undertaking puts those IPRs to use by suing those firms who implement the standard or by demanding from them royalty fees that probably would not have been able to ask for had those IPRs been disclosed earlier—either because the SSO would have chosen a different standard or because the undertaking would have had to commit to license those IPRs on FRAND terms.¹⁴⁷⁷ As it may be noticed, this scenario bears some resemblance to the cases that constitute the target of this work, as they both involve deceptive conducts stemming from a firm which may not hold a dominant position at that exact point in time but which may later attain it for the very reason of the deceitful behaviour. In other words, they both deal with problems in the *acquisition* of market power rather than on its subsequent use or abuse.

The most significant case with which the Commission has dealt on the particular question of patent ambush is *Rambus*.¹⁴⁷⁸ In this case, an SSO

1477 See Andreas Fuchs, ‘Patent Ambush Strategies and Article 102 TFEU’ in Josef Drexler and others (eds), *More Common Ground for International Competition Law* (Edward Elgar 2011) 177-180.

1478 *Rambus* (Case COMP/38.636) Commission Decision 2010/C 30/09 [2010] OJ C30/17.

had adopted a particular standard on ‘Dynamic Random Access Memory’ (DRAM) chips that embodied, among others, a technology covered by Rambus’ patents. During the discussions at the SSO that led to the adoption of the standard, Rambus had deliberately concealed the existence of those patents (by then patent applications), despite the fact that the SSO patent policy urged their disclosure and that Rambus had actively taken part in those discussions.¹⁴⁷⁹ In fact, Rambus was even accused of tailoring its pending patent applications on the basis of the SSO discussions so as to ensure that the claims would comprise the adopted standard.¹⁴⁸⁰

While Rambus’ behaviour indubitably raised the Commission’s concern, the case presented a particular obstacle under the light of art 102 TFEU, namely that the undertaking did not hold a dominant position by the time it concealed its patent portfolio. By the time it started asserting its patents, however, Rambus had already acquired a substantial level of market power, which led the Commission to implement a quite creative approach by grounding its accusation on excessive pricing. In the view of the Commission, Rambus seemed to have abused its dominant position ‘by claiming royalties ... at a level which, absent its allegedly intentional deceptive conduct, it would not have been able to charge.’¹⁴⁸¹ In other words, the Commission analysed the case, on its face, as an exploitative abuse, yet it seemed to employ it purely as a back door to bring to the spotlight the conduct in which it was really interested: the concealment of the patent portfolio at the standard-setting procedure—which, on its own, could not have been reached by the language of art 102 TFEU.¹⁴⁸² Ultimately, the case did not end with the finding of an antitrust violation be-

1479 *ibid* 42.

1480 *ibid* 40.

1481 *ibid* 28.

1482 Interestingly, the exact same case was also considered by US courts and they concluded that Rambus’ conduct did not violate § 2 Sherman Act. Even though this provision allows antitrust enforcers to directly tackle the deceptive behaviour before the SSO, the Court of Appeals for the District of Columbia reversed the decision of the FTC and considered that there was not sufficient evidence that the SSO would have adopted a different standard and that the mere possibility to charge higher prices does not harm competition. *Rambus Inc v FTC* 522 F.3d 456, 463-64 (DC Cir 2008). For a critical analysis of this decision, see Drexel, ‘Deceptive Conduct in the Patent World’ (n 1437) 139ff; Joel M Wallace, ‘Rambus v FTC in the Context of Standard-Setting Organizations, Antitrust, and the Patent Hold-Up Problem’ (2009) 24 Berkeley Tech L J 661, 683 ff.

cause the Commission accepted the commitments offered by Rambus.¹⁴⁸³ The approach implied by the Commission, nevertheless, does offer some insight into the alternatives that EU competition enforcers may have at their disposal for coping with the practical limitations imposed by the language of art 102 TFEU.

In the light of the particular approach adopted in *Rambus*, the Commission could argue that the same logic would be equally applicable to scenarios involving a deceptive behaviour before the patent office, where that conduct leads to the attainment of market power. Indeed, if a firm is granted an unwarranted patent as a result of it employing dishonest means and later is able to secure a dominant position on the market, the Commission could contend that the prices charged by the patent holder become excessive ‘in light of the specific circumstances of the case’. Those excessive prices could be either in the form of licencing royalties or those paid by end consumers for the final products; the special circumstances, on the other hand, would be given by the way in which the patent has been obtained. In this way, the Commission would be enabled in practice to analyse the specific behaviour of the patent holder at the patent office, even if it took place at a time when she was not yet dominant on the market.

As explained above, EU competition authorities ordinarily avoid prosecuting exploitative abuses and there are a number of reasons why this is a sensible policy.¹⁴⁸⁴ In fact, exploitative abuses like the ones observed in these cases appear to be a symptom of something that went wrong at a prior instance—and may thus suggest that competition law should ideally tackle that original source of competitive concerns rather than its effects. Yet considering the constraints of art 102 TFEU to face those concerns, it has been argued that the figure of exploitative abuses constitutes a legitimate alternative for EU competition enforcers in order to close ‘enforcement gaps’.¹⁴⁸⁵ And in the specific case of patent ambush, it can be employed as a tool for bringing to the table not only questions on price competition but also on competition in innovation, as antitrust intervention would also be able to protect the pro-competitive and pro-innovation features of standard-setting processes.¹⁴⁸⁶

1483 *ibid* 76.

1484 See text at nn 654-669 in ch 4.

1485 Lars-Hendrik Röller, ‘Exploitative Abuses’ in Claus-Dieter Ehlermann and Mel Marquis (eds), *European Competition Law Annual 2007: A Reformed Approach to Article 82 EC* (Hart 2008) 528-29.

1486 Drexler, ‘Anticompetitive Stumbling Stones’ (n 1462) 533-34.

Be that as it may, the fact must not be overlooked that the application of art 102(a) TFEU as an oblique scheme for tackling prior exclusionary conducts may also pose a number of challenges. For starters, because determining when a price is excessively high is often complex¹⁴⁸⁷ and may be particularly burdensome for competition agencies, which cannot be expected to possess pricing expertise on every singular market. Furthermore, if the prices imposed by the patent holder are ultimately found not to be excessive (or ‘unfair’, in the terms of art 102(a) TFEU), the prior deceptive behaviour would remain unpunished.¹⁴⁸⁸ Perhaps more importantly, additional hurdles may arise if it becomes necessary to scrutinise the price of a final product instead of licensing royalties, as there may be innumerable factors (including or not the fraudulently obtained patent) that allow a firm to charge the prices that it charges.

Additionally, as explained above in the context of *Walker Process*,¹⁴⁸⁹ having competition law focus not on one but on two different conducts (in this case the deceptive conduct and the excessive pricing) can also become problematic, as it is perfectly conceivable that those conducts are performed by two different undertakings. If that were the case, it would probably be necessary to look into the current patent holder’s awareness about how that patent was obtained.

Finally, if antitrust intervention against exploitative abuses were to be justified only in those situations where competition in innovation is at stake,¹⁴⁹⁰ intervention against deceptive conducts before a patent office would make for a more debatable case, as this conduct essentially represents a restraint against price competition rather than on dynamic competition.¹⁴⁹¹

Regardless of the above, it should be noted that in *Rambus* and other patent ambush scenarios the patent holders are not ordinarily interested in excluding competitors but instead are ready to license their patent rights to third parties—only that they want to license them at high royalty rates. In the case of improperly obtained patents, however, it is very likely that the

1487 Urška Petrovčič, ‘Patent Hold-Up and the Limits of Competition Law: A Trans-Atlantic Perspective’ (2013) 50 CML Rev 1363, 1371-1373.

1488 See Picht (n 1462) 573-74. See however, Fuchs (n 1477) 194 (arguing that, if a patent holder did not act bona fide during the standardisation procedure, there should be a presumption that the subsequent royalties are excessive).

1489 See text at n 1471.

1490 See Drexler, ‘Anticompetitive Stumbling Stones’ (n 1462) 535.

1491 See text at nn 1406-1421.

patent holders have no intention of licensing their rights but only of reserving the market for their own and refuse to grant any license.

In view of this significant difference, it may be worth considering whether the EU ‘refusal to license’ case law¹⁴⁹² could offer an alternative course of action by providing a duty to license.¹⁴⁹³ This could be particularly relevant in view of the criteria of the CJEU in *Huawei* which somehow showed a more flexible approach towards the ‘exceptional circumstances’ that may warrant the application of competition rules.¹⁴⁹⁴

Although an objective justification would hardly be recognized in a case where a patent holder refuses to license an improperly obtained right, other factors and requirements ordinarily contemplated in ‘refusal to license’ cases, such as the indispensable nature of the right or exclusion of any effective competition, may pose significant challenges for the application of competition law. Perhaps more importantly, the grant of a compulsory license would appear as a rather abnormal remedy when considering that the question of competition law will likely arise, as a rule, after the patent has been declared invalid. The prior invalidation of the patent would render any subsequent licensing uncalled for.

b. ‘Single and Continuous’ Abuses

Alternatively, it could be argued that the subsequent ownership and hypothetical enforcement of the patent actually constitute, together with the deceiving representations at the patent office, a ‘single and continuous’ abuse. In *AstraZeneca*, for instance, the Commission interpreted that the whole ensemble of misrepresentations before the different patent offices and courts constituted an abuse of a single and continuous nature.¹⁴⁹⁵ In

1492 For a detailed review of the EU case law on refusal to license see Beatriz Conde Gallego, ‘Unilateral Refusal to License Indispensable Intellectual Property Rights – US and EU Approaches’ in Josef Drexel (ed), *Research Handbook on Intellectual Property and Competition Law* (Edward Elgar 2008) 215-38.

1493 In fact, when the *AstraZeneca* case emerged, some scholars wondered whether the criteria that had been developed in the context of refusal to license cases should also be applicable to that case. Jacques-Philippe Gunther and Charlotte Breuvert, ‘Misuse of Patent and Drug Regulatory Approval Systems in the Pharmaceutical Industry: An Analysis of US And EU Converging Approaches’ (2005) 26 Eur Comp L Rev 669, 680.

1494 *Huawei* (n 1187) para 59.

1495 Commission Decision in *AstraZeneca* (n 1183) paras 774-76.

Rambus, the opinion of the Commission was not as explicit, but it is one of its possible readings.¹⁴⁹⁶

The theory of ‘single and continuous’ anticompetitive behaviour is certainly not new under EU law. Courts have consistently admitted, when analysing cases under art 101 TFEU, that anticompetitive agreements or concerted practices may result not only from an isolated act but also from a series of associated acts,¹⁴⁹⁷ and the doctrine was developed in order to capture the whole dynamic of an agreement over its lifetime.¹⁴⁹⁸ Whether the same doctrine may be transplanted to art 102 TFEU cases, however, is still highly debatable.¹⁴⁹⁹ On the one hand, it may imply in practice imposing a ‘special responsibility’ upon firms who were not dominant when the conduct began.¹⁵⁰⁰ On the other hand, it may be used as a mere pretext to stretch the scope of art 102 TFEU to reach conducts that the provision is not really designed to reach. If the relevant conduct took place before the patent office, it appears somehow arbitrary to claim that the same conduct lingers over time without clear boundaries and may become a source of legal uncertainty.

c. Ownership or Enforcement as Separate Exclusionary Abuses?

In the light of the foregoing, it would be important to analyse whether, under EU law, the ownership or enforcement of patents obtained by deceptive means may be considered as separate, individual exclusionary abuses. As already hinted when analysing the situation under US law, conducts

1496 See Drexl, ‘Anticompetitive Stumbling Stones’ (n 1462) 532 (eventually tipping against said interpretation).

1497 See, eg, Joined Cases C-204/00 P, C-205/00 P, C-211/00 P, C-213/00 P, C-217/00 P and C-219/00 P *Aalborg Portland A/S v Commission* [2004] ECR I-123, para 258 (‘An infringement of Article 85(1) of the Treaty may result not only from an isolated act but also from a series of acts or from continuous conduct.’).

1498 Julian Joshua, ‘Single Continuous Infringement of Article 81 EC: Has the Commission Stretched the Concept beyond the Limit of its Logic?’ (2009) 5 *Eur Comp J* 451, 452.

1499 See Fuchs (n 1477) 191; Drexl, ‘Anticompetitive Stumbling Stones’ (n 1462) 532.

1500 Fuchs (n 1477) 191-92. Although this may not particularly come out as undesirable in the case of deceptive behaviours before the patent office, it may generate legal uncertainty under different scenarios where conducts are perfectly admissible for non-dominant firms and only banned for those undertakings holding a dominant position in the market. See text at nn 650-652 in ch 4.

taking place once a patent has been granted such as its public disclosure, licensing or hypothetical enforcement—and maybe even its mere holding over time—may help to reinforce its exclusionary effects, as they would either alert or remind actual or potential competitors of the existence of the exclusive right. As opposed to the situation under US case law, however, EU competition enforcers have not particularly analysed whether those conducts can raise competitive concerns. In fact, the question has been incidentally raised,¹⁵⁰¹ but it does not seem to have attracted much attention from scholars or antitrust enforcers yet.

As referred above, the application of competition laws against the mere ownership of a right is a question certainly worth asking, though special attention should be devoted to the potential negative effects that such a duty might entail for patenting activity. In practice, such a burden would imply for patent holders a positive obligation to renounce to patents provided that they are connected to markets in which they hold a dominant position.¹⁵⁰² The considerations made when analysing this hypothesis under US antitrust law seem to be equally applicable here.

On the whole, the question whether the holding or assessment of knowingly invalid patents merits competition law intervention exceeds the question of deceptive behaviour (and hence the scope of this work), as it encompasses all invalid patents, no matter how they have been obtained. The question is certainly worth considering and deserves further research, though for the very reason of its wide reach, no additional duties should be imposed upon patent holders without meticulous consideration of their potential implications.

1501 See, eg, Robin Jacob, 'Patents and Pharmaceuticals: A Paper given on 29th November at the Presentation of the Directorate-General of Competition's Preliminary Report of the Pharma-Sector Inquiry' in Hugh C Hansen (ed), *Intellectual Property Law and Policy: Volume 12* (Hart 2013) 655.

1502 Leslie, 'The Anticompetitive Effects of Unenforced Invalid Patents' (n 1272) 161.

