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MARKET DEFINITION IN INTELLECTUAL PROPERTY LAW: SHOULD INTELLECTUAL PROPERTY COURTS USE AN ANTITRUST APPROACH TO MARKET DEFINITION?

ANNA F. KINGSBURY*

I. INTRODUCTION

This Article compares judicial approaches to market concepts and market definition in intellectual property and antitrust cases in the United States. Antitrust law uses a relatively developed economic approach to market definition. This approach is generally not used by courts in defining markets in intellectual property law cases, although it is used in applying antitrust law to intellectual property. This Article asks why this difference exists and whether an antitrust analysis could be usefully applied to intellectual property law.

The Article first summarizes the antitrust approach to market definition, and then considers judicial approaches to market definition in three areas of intellectual property law: patents, trademarks, and copyrights. It will also consider rationales for the differences in market definition between antitrust and intellectual property law. The Article concludes that the concept of a “market” is used for a variety of purposes in intellectual property law, and that it carries different meanings in different contexts. For some purposes, particularly in trademark law and also in patent misuse, antitrust market definition

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could be usefully applied to produce a more empirically justified result without changing the underlying rationales of the existing law. For other purposes, such as in patent damages and copyright fair use, importing antitrust principles would involve a significant change in existing law and policy, having the effect of reducing the level of protection to the right-holder. In relation to copyright fair use, it is argued that importing antitrust principles is a potentially desirable change that would permit a broader interpretation of the fair use doctrine. In patent damages cases, use of antitrust market definition would likely reduce damages awards in cases where the patent claims do not define the market in an antitrust sense and where substitutes are available. This would involve a change in patent policy, but would arguably be a desirable change, because the scale of lost profits awards should vary with the nature of the patent. If a patented product has economic substitutes, then it is appropriate that the rewards for that patent be lower than in cases where the patented product is unique.

II. ANTITRUST MARKET DEFINITION

Antitrust law has as its central concern the promotion of competition; competition takes place, if at all, in markets. An initial step in assessing competition and market power is to define the relevant market. “[A] market is the arena within which significant substitution in consumption or production occurs. That arena tends to exhibit uniform prices throughout.”¹ Antitrust markets have product and geographic dimensions.² In relation to product dimensions, courts include in the market “commodities reasonably interchangeable by consumers for the same purposes”;³ that is, by reference to cross-price elasticities. Courts also consider supply-side substitution.⁴ The geographic dimension depends upon “the ability of the firms to sell beyond their immediate locations.”⁵ “[T]he area of effective competition in the known line of commerce must be charted by careful selection of the market area in which the seller operates, and to which the purchaser can practicably

1. Phillip E. Areeda et al., *Antitrust Law: An Analysis of Antitrust Principles and Their Application* ¶ 530a, at 180 (2d ed. 2002) (internal quotations omitted).

2. In relation to monopolization, *see* Sherman Antitrust Act § 2, 15 U.S.C. § 2 (2002) (“any part of . . . trade or commerce”). For mergers, *see* Clayton Act § 7, 15 U.S.C. § 18 (2002) (“in any line of commerce . . . in any section of the country”).

3. *United States v. E. I. Du Pont De Nemours & Co.*, 351 U.S. 377, 395 (1956).

4. *Telex Corp. v. IBM Corp.*, 510 F.2d 894, 184 U.S.P.Q. (BNA) 521 (10th Cir. 1975).

5. AREEDA ET AL., *supra* note 1, ¶ 550, at 247.

turn for supplies.”⁶

“[A] market can [also] be seen as the array of producers of substitute products that could control price if united in a hypothetical cartel or as a hypothetical monopoly.”⁷ This is the approach embodied in the 1992 Department of Justice and Federal Trade Commission Horizontal Merger Guidelines.⁸ The Guidelines identify a product market as the smallest group of products over which a hypothetical monopolist could profitably “impose at least a ‘small but significant and nontransitory’ increase in price.”⁹ Geographic market definition takes a similar approach over a group of locations.¹⁰

Antitrust courts define markets to assess market structure and market shares, from which the courts can then assess market power.¹¹ Market definition is, therefore, an instrumental concept. To be a useful instrument, the market defined has to be the market relevant to the alleged antitrust violation at issue, and different markets within the same industry may be present for different antitrust purposes.¹² Antitrust market definition is, therefore, a flexible concept that draws on economic principles to produce a tool for assessment of antitrust violations.

III. MARKETS AND MARKET DEFINITION IN INTELLECTUAL PROPERTY LAW

Courts in intellectual property cases generally do not use antitrust market analysis, although there are a number of explicit and implicit references to market concepts in intellectual property law. This section of the Article considers the use of market concepts in three areas of intellectual property law: trademarks, patents, and copyrights. This section then reviews intellectual property law approaches to market definition. Section IV explores possible explanations for the differing approaches to market definition taken in antitrust and intellectual property law.¹³ Possible explanations include the following: (1)

6. *Tampa Elec. Co. v. Nashville Coal Co.*, 365 U.S. 320, 327 (1961).

7. AREEDA ET AL., *supra* note 1, ¶ 530a, at 181.

8. U.S. DEP’T OF JUSTICE & F.T.C., HORIZONTAL MERGER GUIDELINES (1992).

9. *Id.* § 1.11.

10. *Id.* § 1.21.

11. AREEDA ET AL., *supra* note 1, ¶¶ 531e & 532a, at 190.

12. *Id.* ¶ 553, at 202-03.

13. Antitrust law is also directly applicable to conduct in relation to intellectual property rights, and in an antitrust case a court would apply antitrust market definition to the intellectual property case. See U.S. DEP’T OF JUSTICE & F.T.C., ANTITRUST GUIDELINES

intellectual property cases are commonly about new products not yet on the market, so there is a lack of empirical data about customer preferences; (2) a desire to preserve judicial freedom of movement in weighing the equities in any particular case; (3) a reluctance to import antitrust doctrine with the accompanying costs involved in using economic evidence and the risk of unanticipated results; (4) the traditional approach of lawyers in bringing cases; and (5) that “market” and market concepts carry different meanings in antitrust and intellectual property law contexts, appropriate to the objectives of the different areas of law.

A. Trademarks and Unfair Competition

The traditional purpose of trademark law is to protect consumers from confusion and to reduce consumer search costs in the marketplace. Producers use trademarks to distinguish their goods and services from the goods and services of their competitors. Trademark protection provides incentives to producers to invest in consistency and quality, which benefit consumers.¹⁴ Facilitating competition is, therefore, a fundamental, underlying principle of trademark law, and because competition only takes place in markets, facilitating competition must also involve some more or less explicit exercise in market definition. In practice, courts in trademark cases are regularly required to consider competition and competitors, but they do not use antitrust market analysis for this purpose. The law of trademark functionality and the law of trademark infringement provide useful examples.

1. Functionality

Section 2(e)(5) of the Lanham Act provides that: “No trademark by which the goods of the applicant may be distinguished from the goods of others shall be refused registration on the principal register on account of its nature unless it . . . consists of a mark which . . . comprises any matter that, as a whole, is functional.”¹⁵ Thus, registration is not available for functional trademarks. Functionality is most commonly an

FOR THE LICENSING OF INTELLECTUAL PROPERTY (1995) §§ 1.0-2.03 [hereinafter “Intellectual Property Guidelines”]. However, this application of antitrust law is not the concern of this Article. This Article focuses on approaches to market definition *within* the intellectual property doctrine.

14. *Qualitex Co. v. Jacobsen Prods. Co.*, 514 U.S. 159, 163-64, 34 U.S.P.Q.2d (BNA) 1161, 1162-63 (1995) (citing J. THOMAS MCCARTHY, MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION § 2.01[2] (3d ed. 1994)).

15. Lanham Act § 2(e)(5), 15 U.S.C. § 1052(e)(5) (2002).

issue in trade dress cases, where the question is whether the overall appearance of a product is functional,¹⁶ and in product design cases, such as those in which an applicant seeks registration for the shape or configuration of its product.¹⁷ Generally, registration is sought before the product is marketed.

The United States Supreme Court (“Supreme Court” or “Court”) held in *Qualitex Co. v. Jacobsen Products Co.*¹⁸ that: “The functionality doctrine prevents trademark law, which seeks to promote competition by protecting a firm’s reputation, from instead inhibiting legitimate competition by allowing a producer to control a useful product feature.”¹⁹ The Supreme Court emphasized that it is the role of patents to protect new product designs or features, not the role of trademarks.²⁰ The Court held that a product feature is functional, and cannot serve as a trademark, “if it is essential to the use or purpose of the article or if it affects the cost or quality of the article; that is, if exclusive use of the feature would put competitors at a significant non-reputation-related disadvantage.”²¹

In *In re Morton-Norwich Products, Inc.*,²² the Court of Customs and Patent Appeals held that “[u]tilitarian means superior in function . . . or economy of manufacture, which superiority is determined in light of competitive necessity to copy.”²³ The court identified the following factors for assessing functionality: (1) whether “the existence of an expired . . . patent . . . disclos[ing] the utilitarian advantage of the design,”²⁴ which would provide evidence of functionality, is present; (2) whether there is advertising of “utilitarian advantages”²⁵; (3) whether “there are other alternatives available”²⁶; and (4) whether the “particular design results from a comparatively simple or cheap method

16. See, e.g., *Two Pesos, Inc. v. Taco Cabana, Inc.*, 505 U.S. 763, 23 U.S.P.Q.2d (BNA) 1081 (1992).

17. See, e.g., *Qualitex*, 514 U.S. at 162, 34 U.S.P.Q.2d (BNA) at 1162 (holding that color was “within the universe of things that can qualify as a trademark”); *In re Morton-Norwich Prods., Inc.*, 671 F.2d 1332, 213 U.S.P.Q. (BNA) 9 (C.C.P.A. 1982) (finding that the configuration of a spray container was not functional).

18. 514 U.S. 159, 34 U.S.P.Q.2d (BNA) 1161.

19. *Id.* at 164, 34 U.S.P.Q.2d (BNA) at 1163.

20. *Id.*

21. *Id.* (quoting *Inwood Labs., Inc. v. Ives Labs., Inc.*, 456 U.S. 844, 850 n.10 (1982)).

22. 671 F.2d 1332, 213 U.S.P.Q.2d (BNA) 9 (C.C.P.A. 1982).

23. *Id.* at 1339, 213 U.S.P.Q. (BNA) at 15 (internal quotations omitted).

24. *Id.* at 1340-41, 213 U.S.P.Q. (BNA) at 15-16 (internal citations omitted).

25. *Id.*

26. *Id.*

of manufactur[e].”²⁷

Most recently, in *TrafFix Devices, Inc. v. Marketing Displays, Inc.*,²⁸ the Supreme Court considered functionality in relation to a mechanism for keeping outdoor signs upright, finding it functional on the facts.²⁹ The Court held that a feature is functional “[when] it is essential to the use or purpose of the [device] or [when] it affects the cost or quality of the [device].”³⁰ When the design is functional under this formulation, there is no need to consider competitive necessity for the feature. *TrafFix* now applies in configuration of goods cases, although, arguably, it does not apply to container configuration and trade dress cases. In cases of aesthetic functionality, the *TrafFix* Court held that “[i]t is proper to inquire into a ‘significant non-reputation-related disadvantage.’”³¹ This test may be compared to an alternative test for aesthetic functionality proposed by Judge Posner in *Publications International, Ltd. v. Landoll, Inc.*:³² “[I]f consumers derive a value from the fact that a product looks a certain way that is distinct from the value of knowing at a glance who made it, then it is a nonappropriable feature of the product.”³³

After *TrafFix*, competitive disadvantage is an issue in cases of aesthetic functionality and, arguably, also in cases of trade dress functionality. In these cases, assessment of functionality requires consideration of whether registration of the trademark would disadvantage competitors. This assessment apparently requires courts to identify competitors, which in turn requires identification of the market in which they compete. However, courts in functionality cases do not generally use even a modified version of antitrust market definition. Rather, courts generally decide whether competitors are or are not disadvantaged without defining the market, although in some cases considerable evidence of competitive alternatives to the allegedly functional trademark design is presented.

Two pre-*TrafFix* cases are illustrative. First, in the case of *In re Babies Beat, Inc.*,³⁴ the applicant had applied for a trademark registration for the shape of an easy-to-hold baby bottle and the

27. *Morton-Norwich*, 671 F.2d at 1340-41, 213 U.S.P.Q.2d (BNA) at 15-16.

28. 532 U.S. 23, 58 U.S.P.Q.2d (BNA) 1001 (2001).

29. *Id.*

30. *Id.* (quoting *Inwood Labs.*, 456 U.S. at 850-51 n.10).

31. *Id.* at 33, 58 U.S.P.Q.2d (BNA) at 1006 (quoting *Qualitex*, 514 U.S. at 165).

32. 164 F.3d 337, 49 U.S.P.Q.2d (BNA) 1139 (7th Cir. 1998).

33. *Id.* at 339, 49 U.S.P.Q.2d (BNA) at 1141.

34. 13 U.S.P.Q.2d (BNA) 1729 (T.T.A.B. 1990).

application was rejected by the Examining Attorney on grounds of (among others) functionality.³⁵ The applicant appealed and produced, as evidence, a competitor's bottle, which was also easy to hold, suggesting that competitors did not need to use the applicant's design and would not be disadvantaged by registration.³⁶ The Trademark Trial and Appeal Board ("Board") nevertheless upheld the finding of functionality, holding in effect that the two easy-to-hold baby bottles were not substitutes because of differences in the grippers and in ease of cleaning.³⁷ Thus, in antitrust terms, the Board effectively found that the relevant market was a single product market for the applicant's bottle.

The second case, *In re Weber-Stephen Products Co.*,³⁸ involved an application for registration of a design of a barbecue grill that used a "kettle body and legs," which was also rejected by the Examining Attorney as functional.³⁹ In arguing that the mark was not functional, the applicant presented extensive evidence of alternative shapes and designs. The Board held that:

In summary, the evidence indicates that a wide variety of alternative barbecue grill designs, including other covered round designs, is available to applicant's competitors, and that applicant's covered round design is not superior, in cooking performance, to any of the other covered designs, be they round, square, rectangular, or whatever.⁴⁰

The Board also found no evidence that the applicant's design was cheaper or simpler to make than existing grills.⁴¹ The Board held that the mark was not functional.⁴² It thus gave careful consideration to the needs of competitors. Although it did not undertake an express exercise in market definition, the Board effectively found that there was a market for barbecue grills in which the applicant's design was just one of a number of substitute grill designs.⁴³

Although courts in at least a subset of functionality cases are required to consider competition, they do not use antitrust market definition. This is so despite the fact that the objectives of the

35. *Id.*

36. *Id.* at 1730.

37. *Id.* at 1730-31.

38. 3 U.S.P.Q.2d (BNA) 1659 (T.T.A.B. 1987).

39. *Id.*

40. *Id.* at 1668.

41. *Id.* at 1668-69.

42. *Id.* at 1669-70.

43. *Weber-Stephens Prods.*, 3 U.S.P.Q.2d (BNA) at 1667.

functionality doctrine and trademark law are generally congruent with the objectives of antitrust law; both regimes are primarily concerned with promoting and facilitating competition in the interest of consumers. In addition, trademark law does not have incentives for innovation as a primary goal, in contrast to patent and copyright law.

This Article argues that antitrust market definition could be usefully imported into this area of trademark law. Antitrust market definition could therefore function as an appropriate and useful tool in trademark analysis, and it could produce more consistent and predictable results. For example, use of antitrust analysis would not have found a single product market in *Babies Beat*, and the applicant need not have been denied registration. The result would then have been more consistent with the result in *Weber-Stephen Products*.

2. Trademark Infringement

Under § 32(1) of the Lanham Act:

Any person who shall, without the consent of the registrant—

(a) use in commerce any reproduction, counterfeit, copy, or colorable imitation of a registered mark in connection with the sale, offering for sale, distribution, or advertising of any goods or services on or in connection with which such use is likely to cause confusion, or to cause mistake, or to deceive . . . shall be liable in a civil action by the registrant for the remedies hereinafter provided.⁴⁴

In assessing likelihood of confusion, courts look at a number of factors. These factors are not standard across the circuits, but they are broadly similar. The United States Court of Appeals for the Second Circuit (“Second Circuit”) enunciated a nonexhaustive list of eight factors for evaluating likelihood of confusion between nonidentical goods or services in *Polaroid Corp. v. Polarad Electronics Corp.*⁴⁵ These factors are as follows:

1. “[T]he strength of [the plaintiff’s] mark”;
2. “[T]he degree of similarity between [plaintiff’s and defendant’s] marks”;
3. “[T]he proximity of the products [or services]”;
4. “[T]he likelihood that the [plaintiff] will bridge the gap”;
5. Evidence of “actual confusion”;

44. Lanham Act § 32(1), 15 U.S.C. § 1114(1) (2002).

45. 287 F.2d 492, 128 U.S.P.Q. (BNA) 411 (2d Cir. 1961).

6. “[D]efendant’s good faith in adopting [the] mark”;
7. “[T]he quality of defendant’s product [or service]”; and
8. “[T]he sophistication of the buyers.”⁴⁶

The third and fourth factors, proximity of the products or services and likelihood that the plaintiff will bridge the gap, require some assessment of the relevant market. The “proximity of the products or services” factor requires courts to consider how close the products or services are in the market place or in stores. The “likelihood that the plaintiff will bridge the gap” factor asks whether consumers think that the plaintiff will move into the defendant’s product category. It is at least arguable that a considered assessment of market proximity requires identification of the markets in which the plaintiff’s and defendant’s goods or services are sold. However, courts in trademark infringement cases do not expressly undertake antitrust market definition in this context. Indeed, it is common to see assertions of what the market is without apparent empirical evidence. The following cases provide examples of this approach and of some of its uncertain results.

In *E. & J. Gallo Winery v. Consorzio del Gallo Nero*,⁴⁷ the plaintiff held a registered trademark, “Gallo,” which it used on its wines in the United States.⁴⁸ The defendant, Gallo Nero, was an Italian trade association that promoted Chianti wines and had long used “Gallo Nero” on its wines in Italy but had not yet used it in the United States.⁴⁹ The defendant argued that the goods were not similar, because it sold only Italian-produced Chianti, whereas the plaintiff sold only American-produced wines, not including Chianti.⁵⁰ The court, however, held that the goods were substantially similar, referencing the facts that wines of all types constitute a single class of goods in the Patent and Trademark Office and that the plaintiff and the defendant used similar marketing channels.⁵¹ The court also stated that confusion is more likely for “relatively inexpensive, ‘impulse’ products to which the average ‘unsophisticated’ consumer does not devote a great deal of care and consideration in purchasing.”⁵² The court put wine into this “impulse” category, citing testimony from the defendant’s employees that “the

46. *Id.* at 495, 128 U.S.P.Q. (BNA) at 413.

47. 782 F. Supp. 457, 20 U.S.P.Q.2d (BNA) 1579 (N.D. Cal. 1991).

48. *Id.* at 459, 20 U.S.P.Q.2d (BNA) at 1580.

49. *Id.* at 460, 20 U.S.P.Q.2d (BNA) at 1580.

50. *Id.* at 464, 20 U.S.P.Q.2d (BNA) at 1583.

51. *Id.* at 467, 20 U.S.P.Q.2d (BNA) at 1586.

52. *Gallo*, 782 F. Supp. at 465, 20 U.S.P.Q.2d (BNA) at 1584.

average American consumer is unlearned in the selection of wine.”⁵³ The court did not use an antitrust approach to define the market, which would have taken into account substitution effects, and the court’s reliance on Patent and Trademark Office classifications is not congruent with an economic approach.

Gallo can be compared to the case of *Banfi Products Corp. v. Kendall-Jackson Winery Ltd.*,⁵⁴ also a wine trademark case. In assessing proximity of products, the court found that one wine was a cheaper, “affordable, everyday red wine,” that the other was a more expensive, “high-end, special occasion wine,” and that they were sold at different locations.⁵⁵ It therefore found “that the products . . . differ[ed] in ways that may be deemed material to consumers.”⁵⁶ The court also found no evidence that the party alleging infringement planned to bridge the gap, although it did not consider whether consumers would think it was likely to do so. Interestingly, the court also found “that wine purchasers [were] likely to be older, wealthier, and better educated than the general population,” suggesting relative sophistication.⁵⁷ The court concluded that there was no likelihood of confusion.⁵⁸ Thus, the *Banfi* court did not find that all wine was in the same market as the *Gallo* court did. However, neither court undertook an antitrust market analysis. Without empirical evidence, both courts made assertions about what consumers were likely to think or do, and both courts came to apparently inconsistent conclusions.

There are similar examples of this nonempirical approach to market definition in trademark cases in which the First Amendment is implicated. In *MGM-Pathé Communications Corp. v. Pink Panther Patrol*,⁵⁹ the owner of the registered trademark “The Pink Panther” sought to enjoin the use of its mark by “The Pink Panther Patrol,” a New York City street patrol that aimed to protect the gay community against attacks and to educate the public about anti-gay violence.⁶⁰ The court found a lack of proximity between the plaintiff’s product and defendant’s services, but this “d[id] not insure that confusion [would] be

53. *Id.*

54. 74 F. Supp. 2d 188, 52 U.S.P.Q.2d (BNA) 1825 (E.D.N.Y. 1999).

55. *Id.* at 197, 52 U.S.P.Q.2d (BNA) at 1835-36.

56. *Id.*

57. *Id.* at 199, 52 U.S.P.Q.2d (BNA) at 1837.

58. *Id.*

59. 774 F. Supp. 869, 21 U.S.P.Q.2d (BNA) 1208 (S.D.N.Y. 1991).

60. *Id.* at 871, 21 U.S.P.Q.2d (BNA) at 1209.

avoided.”⁶¹ The court found that the public could easily draw an inference that the plaintiff sponsored the defendant, especially since both parties used their marks on their T-shirts.⁶² The judge said:

[A]lthough plaintiff and defendants are primarily engaged in different types of “commerce,” the Patrol seeks public recognition for its name and mission in the news media, which is not so distant from plaintiff’s field of entertainment. It is indeed entirely likely that a large percentage of the population of the United States might see and hear both plaintiff’s and defendants’ names during a single evening of nationwide television broadcasting, if a telecast of an MGM film should be followed by a newscast including reference to the Patrol’s activities.⁶³

In relation to bridging the gap, the Patrol argued that it was unlikely that MGM would “enter the field of protecting homosexuals from attack.”⁶⁴ However, the court found that “[b]oth users are promoting their marks in the same marketplace—the general public for television entertainment and news.”⁶⁵ The court continued: “Where the two usages [were] sufficiently likely to engender confusion . . . the absence of likelihood that the [plaintiff would bridge the gap was] of less significance.”⁶⁶ Thus, the judge defined the market extremely, even extraordinarily, broadly, without substantial empirical evidence. This market definition suggested that the parties were in fact competitors, and assisted the plaintiff in demonstrating likelihood of confusion. The court found likelihood of confusion and granted a preliminary injunction.⁶⁷

MGM can be compared to *Yankee Publishing Inc. v. News America Publishing Inc.*,⁶⁸ which was decided by the same judge in the following year. In *Yankee*, the plaintiff was the publisher of the *Old Farmers Almanac* and the holder of a registered trademark for its cover design.⁶⁹ The defendant was the publisher of *New York* magazine, which had published an issue with a cover design that was a takeoff of the *Almanac* cover design.⁷⁰ The court found no likelihood of confusion, and decided

61. *Id.* at 875, 21 U.S.P.Q.2d (BNA) at 1212.

62. *Id.* at 871, 875, 21 U.S.P.Q.2d (BNA) at 1209-10, 1212.

63. *Id.* at 875, 21 U.S.P.Q.2d (BNA) at 1212.

64. *MGM*, 774 F. Supp. at 875, 21 U.S.P.Q.2d (BNA) at 1213.

65. *Id.*

66. *Id.*

67. *Id.* at 875-77, 21 U.S.P.Q. (BNA) at 1214.

68. 809 F. Supp. 267, 25 U.S.P.Q.2d (BNA) 1752 (S.D.N.Y. 1992).

69. *Id.* at 269-70, 25 U.S.P.Q.2d (BNA) at 1753.

70. *Id.* at 270-71, 25 U.S.P.Q.2d (BNA) at 1754.

that even if there were confusion, the confusion was outweighed by First Amendment considerations.⁷¹ In relation to proximity of products and bridging the gap, the plaintiff argued that both magazines were in the same “magazines” market.⁷² The court, however, found that this was “too crude a characterization”—that, in fact, the products were far apart and there was no likelihood that either would bridge the gap.⁷³ The judge said:

The markets for *New York* and the *Almanac* are quite different. They discuss fundamentally different materials; they espouse different values; they sell primarily in different markets, both as to location and customer base. There is no indication in the record that purchasers of *New York* have any interest in buying the *Almanac* or vice versa.⁷⁴

Thus, the *Yankee Publishing* court found a narrow market, and in doing so drew conclusions about consumers, apparently without substantial empirical evidence. The finding of a narrow market in which the parties were not competitors favored the defendant and supported a finding that confusion was not likely.

These cases demonstrate the importance of market definition in trademark infringement cases and the effect the holding on market definition can have on the ultimate finding on infringement. Courts do not use empirical evidence in defining the market and do not use an antitrust approach. As with the doctrine of functionality, this is so despite trademark law and antitrust law having common objectives of protecting consumer interests and despite the relative unimportance in trademark law of concerns for innovation as compared to other areas of intellectual property law. It is argued that antitrust market definition could usefully be imported into trademark infringement. An antitrust approach would enable courts to refer to empirical evidence of consumer behavior and thereby make more informed decisions. Such an approach should also produce more consistent and predictable results for litigants. For example, an antitrust market definition likely would not have found both parties were in a market for “television entertainment and news” in *MGM*, and the infringement result might have been different. In relation to the wine cases, *Banfi* and *Gallo*, use of an antitrust market definition approach would have required

71. *Id.* at 273-82, 25 U.S.P.Q.2d (BNA) at 1754-64.

72. *Id.* at 274, 25 U.S.P.Q.2d (BNA) at 1757.

73. *Yankee*, 809 F. Supp. at 274, 25 U.S.P.Q.2d (BNA) at 1757.

74. *Id.*

empirical evidence about consumer preferences, which would have indicated whether consumers regarded cheap wine as a substitute for expensive wine and whether sale from different locations was material. Such evidence would have been the basis for defining the market.

B. Patents

The overall purpose of patent law is to promote innovation, as innovation is understood to provide broad social benefits. As a reward for innovation and as an incentive for further innovation, patent law therefore provides an inventor with exclusive rights in his or her invention for a limited period in exchange for public disclosure.

Competition and consumer protection are not central concerns of patent law, as they are in trademark and antitrust law. Nevertheless, the patent law doctrine is concerned with competition, and market concepts are essential elements in patent doctrine in relation to patent misuse and patent damages.

1. Patent Misuse

The patentee's right to exclude others from making, using, or selling the invention enables the patentee to profit from the invention. It also enables the patentee to exclude competitors and creates the potential for anticompetitive effects, particularly where the patent creates market power.⁷⁵ There is, therefore, a tension between patent doctrine and competition doctrine, and antitrust law applies to patents as it does to other intellectual property. Within patent law, the doctrine of patent misuse mediates this tension.

Patent misuse is a defense to infringement and can be established even where the patentee's conduct does not give rise to an antitrust violation.⁷⁶ The doctrine "requires that the alleged infringer show that the patentee has impermissibly broadened the 'physical or temporal scope' of the patent grant with anticompetitive effect."⁷⁷ Tying agreements and postexpiration royalties constitute per se patent misuse.⁷⁸ In relation to other practices, courts determine whether the

75. Intellectual Property Guidelines, *supra* note 13, §§ 1.0-2.3.

76. *Morton Salt Co. v. G. S. Suppiger Co.*, 314 U.S. 488, 52 U.S.P.Q. (BNA) 30 (1942).

77. *Windsurfing Int'l, Inc. v. AMF, Inc.*, 782 F.2d 995, 1001, 228 U.S.P.Q. (BNA) 562, 566-67 (Fed. Cir. 1986) (quoting *Blonder-Tongue Labs., Inc. v. Univ. of Ill. Found.*, 402 U.S. 313, 343 (1971)).

78. See *Morton Salt*, 314 U.S. 488, 52 U.S.P.Q. (BNA) 30 (1942); *Brulotte v. Thys Co.*, 379 U.S. 29, 143 U.S.P.Q. (BNA) 264 (1964).

practice relates to subject matter within the scope of the patent claims. If it does not broaden the claims, then it is not misuse. “If . . . the practice has the effect of extending the patentee’s statutory rights and does so with an anti-competitive effect, that practice must then be analyzed [under an antitrust] ‘rule of reason’”⁷⁹ The remedy for patent misuse is that the patent is unenforceable.⁸⁰ The harshness of this remedy is justified because misuse harms the public. However, a patent may become enforceable again if the patentee “purges” (or abandons) the misuse.⁸¹

Patent misuse law was reformed by the Patent Misuse Reform Act of 1988, which added § 271(d)(5) to the Patent Act of 1952.⁸² Section 271(d)(5) provides that:

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.⁸³

In early cases on patent misuse, courts did not consider whether the patentee had market power but rather referred to the “patent monopoly,” on the assumption that every patentee had a monopoly in his or her patented product.⁸⁴ The patent claims defined the market. Patent misuse could therefore be found in cases in which an antitrust claim would not have succeeded. Section 271(d)(5) explicitly requires an assessment of market power in the relevant market, requiring that the relevant market be defined. During the Senate discussion of the Patent Misuse Reform Act, Senator Leahy, Chairman of the

79. *Va. Panel Corp. v. MAC Panel Co.*, 133 F.3d 860, 869, 52 U.S.P.Q. (BNA) 1225, 1232 (Fed. Cir. 1997) (quoting *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700, 708 (Fed. Cir. 1992)).

80. *See Morton Salt*, 314 U.S. 488, 52 U.S.P.Q. (BNA) 30 (1942).

81. *See B. B. Chem. Co. v. Ellis*, 314 U.S. 495, 52 U.S.P.Q. (BNA) 33 (1942).

82. 35 U.S.C. § 271(d)(5) (2002) (codified as amended by Patent Misuse Reform Act, Pub. L. No. 100-703, Title II, § 201, 102 Stat. 4676 (1988)).

83. *Id.*

84. *See Morton Salt*, 314 U.S. 488, 52 U.S.P.Q. (BNA) 30 (1942); *Int’l Salt Co. v. United States*, 332 U.S. 392, 75 U.S.P.Q. (BNA) 184 (1947). *Cf. United States v. Loew’s Inc.* 371 U.S. 38, 135 U.S.P.Q. (BNA) 201 (1962) (applying the same principle to copyrights).

Subcommittee on Technology and the Law, said, "Courts will have to go through the process of evaluating the patent owner's market power . . . and must consider the availability of substitutes, and the existence of any business justifications or other benefits, before concluding that a patent has been misused."⁸⁵

In the House of Representatives, Representative Robert W. Kastenmeier introduced the Bill. He stated:

The use of the term relevant market is designed to import into the courts' analysis the idea that the scope of the product involved focuses the courts' attention on the nature of the property right. If a patented product is unique because no practical substitutes exist, the scope of the relevant market would be coextensive with the patent. In the situation where the product is sold in a marketplace context where there are substitute products, the scope of the market should resemble the typical antitrust analysis of relevant market.⁸⁶

Subsequent cases have adopted an approach to market definition much closer to the antitrust approach and rejected the argument that a patent right automatically creates a monopoly or market power.⁸⁷ There have been suggestions that patent misuse and antitrust claims are now so similar that they are effectively converging.⁸⁸ This is especially so when an antitrust claim is available as an affirmative defense against infringement.⁸⁹ However, patent misuse is available even when the conduct does not constitute an antitrust violation, and it offers the lesser remedy of unenforceability, as compared to treble damages, for an antitrust violation. The two causes of action arguably have somewhat different objectives; patent misuse controls the proper scope of the patent rights, whereas antitrust law deters anticompetitive conduct.⁹⁰

If the latter objective is favored, it is clearly appropriate that courts

85. *Tex. Instruments Inc. v. Hyundai Elecs. Indus.*, 49 F. Supp. 2d 893, 912 (E.D. Tex. 1999) (quoting 134 CONG. REC. S17, 147-48 (daily ed. Oct. 21, 1988) (statement of Sen. Leahy)) (internal quotations omitted).

86. 134 CONG. REC., 10,649 (1988), *reprinted in* 36 PAT. TRADEMARK & COPYRIGHT J. (BNA) 226 (Oct. 27, 1988).

87. *See, e.g., Tex. Instruments*, 49 F. Supp. 2d at 916.

88. *See USM Corp. v. SPS Techs., Inc.*, 694 F.2d 505, 511 (7th Cir. 1982) (opinion by Posner, J.).

89. *See, e.g., Walker Process Equip., Inc. v. Food Mach. & Chem. Corp.*, 382 U.S. 172, 147 U.S.P.Q. (BNA) 404 (1965). In antitrust counterclaims, antitrust market definition is used.

90. ROBERT P. MERGES & JOHN P. DUFFY, *PATENT LAW AND POLICY: CASES AND MATERIALS* 1376 (3d ed. 2002).

use antitrust market definition in patent misuse cases, as the causes of action are virtually the same. However, if the objective is control of the proper scope of the patent rights, it is still arguable that antitrust market definition is a useful and appropriate tool for assessing competition and market power. The legislative history suggests that antitrust market definition should certainly be used in the context of § 271(d)(5) findings on market power.⁹¹ Beyond § 271(d)(5), use of antitrust market definition would not affect per se misuse, but it would affect rule of reason analysis that considers whether the practice imposes an “unreasonable restraint on competition.”⁹² It might be argued that use of antitrust market definition in this context would effectively raise the bar for a party pleading misuse by requiring proof of market power. Such raising of the bar would thereby favor patentees—an outcome that would be contrary to the objectives of the misuse doctrine. However, given that courts have apparently imported antitrust rule of reason analysis, it would be anachronistic not to also use antitrust market definition. Antitrust market definition thus seems appropriate in cases of patent misuse.

2. Patent Damages

Section 284 of the Patent Act provides that “[u]pon finding for the claimant the court shall award the claimant damages adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention”⁹³ Patentees generally seek damages in the form of lost profits, but will seek a reasonable royalty if lost profits cannot be proven. Lost profits claims raise issues of market definition. In *Aro Manufacturing Co. v. Convertible Top Replacement Co.*,⁹⁴ the Supreme Court stated that “[t]he question to be asked in determining damages is ‘how much had the Patent Holder and Licensee suffered by the infringement. And that question [is] primarily: had the Infringer not infringed, what would the Patent Holder-Licensee have made?’”⁹⁵ Section 284, therefore, establishes a “but for” test; that is, lost profits are determined as the sales and profits the patentee would have made but for the infringement.⁹⁶

91. See *supra* note 86 and accompanying text.

92. *Ariz. v. Maricopa County Med. Soc.*, 457 U.S. 332, 343 (1982).

93. Patent Act § 284, 35 U.S.C. § 284 (2002).

94. 377 U.S. 476, 141 U.S.P.Q. (BNA) 681 (1964).

95. *Id.* at 507, 141 U.S.P.Q. (BNA) at 694 (quoting *Livesay Window Co. v. Livesay Indus. Inc.*, 251 F.2d 469 (5th Cir. 1958)).

96. *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1545, 35 U.S.P.Q.2d (BNA) 1065, 1069

The United States Court of Appeals for the Sixth Circuit (“Sixth Circuit”) established the “*Panduit* test” for lost profits in 1978:

To obtain as damages the profits on sales he would have made absent the infringement, i.e., the sales made by the infringer, a patent owner must prove: (1) demand for the patented product, (2) absence of acceptable noninfringing substitutes, (3) his manufacturing and marketing capability to exploit the demand, and (4) the amount of the profit he would have made.⁹⁷

The *Panduit* test is useful and widely used, although it is not the exclusive way for a patentee to prove entitlement to lost profit damages.⁹⁸ Element two of the *Panduit* test suggests a need for market definition, but courts applying the *Panduit* test do not treat this as a requirement to identify economic substitutes, and therefore to do an economic market definition exercise. Rather, they generally define the market by the scope of the patent claims. The *Panduit* court said that “a product lacking the advantages of that patented can hardly be termed a substitute ‘acceptable’ to the customer who wants those advantages.”⁹⁹ In a footnote, the court also observed that:

The “acceptable substitute” element, though it is to be considered, must be viewed of limited influence where the infringer knowingly made and sold the patented product for years while ignoring the “substitute.” There are substitute products for virtually every patented product; the availability of railroads and box cameras should not of itself diminish royalties payable for infringement of the right to exclude others from making and selling the Wright airplane or the Polaroid camera.¹⁰⁰

This suggests that the Sixth Circuit was expressly excluding antitrust-style market definition from the identification of acceptable noninfringing substitutes. (It also suggests some confusion between economic substitutes and mere alternatives.)

After *Panduit*, courts tended to take a restrictive approach to acceptable substitutes, effectively defining the market as being co-extensive with the patent claims. Patented inventions were found to have no substitutes, even when consumers might have perceived substitutes to exist, which had the apparent effect that patents were

(Fed. Cir. 1995) (en banc).

97. *Panduit Corp. v. Stahl Bros. Fibre Works, Inc.*, 575 F.2d 1152, 1156, 197 U.S.P.Q. (BNA) 726, 729-30 (6th Cir. 1978).

98. *Rite-Hite*, 56 F.3d at 1545, 35 U.S.P.Q.2d (BNA) at 1069.

99. *Panduit*, 575 F.2d at 1162, 197 U.S.P.Q. (BNA) at 734-35.

100. *Id.* at 1162 n.9, 197 U.S.P.Q. (BNA) at 734 n.9.

presumed to grant market power.¹⁰¹ For example, in *Polaroid Corp. v. Eastman Kodak Co.*,¹⁰² the court held that “acceptable substitutes are those products which offer the key advantages of the patented device but do not infringe.”¹⁰³ The inquiry is “quite narrow,” and “[m]ere existence of a competing device does not make that device an acceptable substitute.”¹⁰⁴ On the facts, the court held that conventional photography was not an acceptable noninfringing substitute for instant photography.¹⁰⁵ However, the court held that competition from conventional photography did affect the price of instant photography, and the court took this into account in assessing the profit the patentee would have made but for the infringement.¹⁰⁶

Another example of the courts’ restrictive approach is found in *State Industries, Inc. v. Mor-Flo Industries, Inc.*,¹⁰⁷ in which the district court found (and with which finding the United States Court of Appeals for the Federal Circuit (“Federal Circuit”) did not disagree) that fiberglass insulation for water heaters was not an acceptable substitute for foam insulation,¹⁰⁸ and yet another in *Radio Steel & Manufacturing Co. v. MTD Products, Inc.*,¹⁰⁹ in which the Federal Circuit held that conventional wheelbarrows were not acceptable substitutes for a patented wheelbarrow, despite evidence that consumers regarded them as substitutes.¹¹⁰

However, in assessing substitutability for the *Panduit* test, courts generally have not used antitrust market analysis. None of the cases discussed above used antitrust market analysis. Similarly, in *Rite-Hite Corp. v. Kelley Co.*,¹¹¹ the district court, without discussing market definition, held that there was no acceptable noninfringing substitute.¹¹² This finding was upheld on appeal, also without a market definition discussion.¹¹³

101. MERGES & DUFFY, *supra* note 90, at 1123-24.

102. 16 U.S.P.Q.2d (BNA) 1481 (D. Mass. 1990).

103. *Id.* at 1491.

104. *Id.*

105. *Id.* at 1492.

106. *Id.*

107. 883 F.2d 1573, 12 U.S.P.Q.2d (BNA) 1026 (Fed. Cir. 1989).

108. *Id.*

109. 788 F.2d 1554, 229 U.S.P.Q. (BNA) 431 (Fed. Cir. 1986). See MERGES & DUFFY, *supra* note 90, at 1123.

110. *Radio Steel*, 788 F.2d at 1554, 229 U.S.P.Q. (BNA) at 431.

111. 774 F. Supp. 1514, 21 U.S.P.Q.2d (BNA) 1801 (E.D. Wis. 1991).

112. *Id.*

113. *Rite-Hite*, 56 F.3d 1538, 35 U.S.P.Q.2d (BNA) 1065.

In *Rite-Hite*, market definition was likewise relevant in a context separate from the consideration of acceptable noninfringing substitutes. The Federal Circuit awarded lost profits for sales lost not from the patented product, but from a different product made by the patentee and covered by a separate patent.¹¹⁴ The court awarded the lost profits after finding that these lost sales were “reasonably foreseeable.”¹¹⁵ Dissenting in part, Judge Nies argued that lost profits were not available for lost sales of a product not covered by the scope of the patent claims and that a reasonable royalty should apply instead.¹¹⁶ To grant lost profits would be to extend the scope of the patent to cover subject matter not within the claims.¹¹⁷ Judge Nies noted that:

[T]he majority’s foreseeability standard contains a false premise, namely, that the “relevant market” can be “broadly defined” to include all competitive truck restraints made by the patentee. The *relevant* market for determining damages is confined to the market for the invention in which the patentee holds exclusive property rights In sum, patent rights determine not only infringement but also damages.¹¹⁸

The majority replied that “Judge Nies appears to confuse exclusion under a patent of a product that comes within the scope of the claims with the determination of damages to redress injury caused by patent infringement once infringement has been found.”¹¹⁹

The *Rite-Hite* discussion reveals a difference in judges’ opinions regarding the role of market definition in assessing lost profits, with a dispute arising over whether the patent claims define the market or whether other competing products made by the patentee are included in the market. However, neither side of the dispute represents an economic approach to market definition as used by courts in antitrust cases.

In a subsequent case, *Grain Processing Corp. v. American Maize-Products Co.*,¹²⁰ the Federal Circuit held that a noninfringing alternative available to the infringer, but not on the market at the time of

114. *Id.* at 1546, 35 U.S.P.Q.2d (BNA) at 1069-70.

115. *Id.*

116. *See id.* at 1556-78, 35 U.S.P.Q.2d (BNA) at 1078-96 (Nies, J., dissenting, joined by Archer, C.J., Smith, J., and Mayer, J.).

117. *See* MERGES & DUFFY, *supra* note 90, at 1102.

118. *Rite-Hite*, 56 F.3d at 1569-70, 35 U.S.P.Q.2d (BNA) at 1089 (internal citation omitted).

119. *Id.* at 1547 n.6, 35 U.S.P.Q.2d (BNA) at 1071 n.6.

120. 185 F.3d 1341, 51 U.S.P.Q.2d (BNA) 1556 (Fed. Cir. 1999).

infringement, could constitute an acceptable noninfringing substitute.¹²¹ It also considered the question of *acceptability* of substitutes, and in so doing, stated:

Consumer demand defines the relevant market and relative substitutability among products therein Important factors shaping demand may include consumers' intended use for the patentee's product, similarity of physical and functional attributes of the patentee's product to alleged competing products, and price Where the alleged substitute differs from the patentee's product in one or more of these respects, the patentee often must adduce economic data supporting its theory of the relevant market in order to show "but for" causation.¹²²

This offers infringers the opportunity to show "that consumers do not demand every claimed feature" of the patentee's product and that there is a noninfringing substitute available.¹²³ Here, the Federal Circuit comes closer to an economic approach to market definition. However, the court in *Grain Processing* found that, based on the facts presented, the product (Process IV Lo-Dex 10) was a "perfect substitute," which "in the eyes of consumers . . . was the same product, for the same price, from the same supplier as Lo-Dex 10 made by other processes."¹²⁴ The approach and outcome might therefore be different where consumers do not see the products as the same and where a patent claim-based market definition might still be available.¹²⁵

The Federal Circuit considered market definition in the context of lost profits most recently in *Micro Chemical, Inc. v. Lextron, Inc.*¹²⁶ Judge Rader addressed market definition issues directly, using an approach closer to antitrust, but still defining the market in terms of the patent claims rather than in antitrust terms:

The proper starting point to identify the relevant market is the patented invention. The relevant market also includes other devices or substitutes similar in physical and functional characteristics to the patented invention. It excludes, however, alternatives "with disparately different prices or significantly different characteristics."¹²⁷

121. *Id.* at 1351, 51 U.S.P.Q.2d (BNA) at 1563.

122. *Id.* at 1355, 51 U.S.P.Q.2d (BNA) at 1566 (internal citations omitted).

123. See MERGES & DUFFY, *supra* note 90, at 1118.

124. *Grain Processing*, 185 F.3d at 1355, 51 U.S.P.Q.2d (BNA) at 1566.

125. See MERGES & DUFFY, *supra* note 90, at 1123-24.

126. 318 F.3d 1119, 65 U.S.P.Q.2d (BNA) 1695 (Fed. Cir. 2003).

127. *Id.* at 1124, 65 U.S.P.Q.2d (BNA) at 1699 (quoting *Crystal Semiconductor Corp. v. Tritech Microelects. Int'l, Inc.*, 246 F.3d 1336 (Fed. Cir. 2001)).

In summary, lost profits claims require courts to consider substitution, though courts generally do not use the type of analysis used in antitrust, and instead define the market by the patent claims.¹²⁸ The purpose here is to award damages “adequate to compensate” the patentee. An antitrust approach to identifying substitutes would tend to reduce damage awards to patentees, perhaps producing awards that courts would not consider “adequate to compensate,” as required by statute.¹²⁹ The law of lost profits has developed since the establishment of the Federal Circuit in 1982 so as to favor patentees, and damage awards have increased.¹³⁰ However, it is arguable that the protectionist policy objectives have produced excessive damages awards¹³¹ that have a potential chilling effect on second comers; an antitrust market definition could therefore tilt the balance toward a less protectionist approach. While it may be true that large rewards are necessary for patents to operate as an adequate incentive to innovate,¹³² this principle applies only where the patent describes an important advance. Patents do not automatically confer market power. Pioneer patents are more likely to confer market power, but determining this involves an empirical inquiry. Antitrust market definition is an instrument for determining market power and the presence of economic substitutes. In cases where there exist acceptable noninfringing substitutes in an economic sense, lost profits awards should be more limited than in cases where a patent

128. This approach persists despite occasional suggestions in the literature that courts could usefully employ antitrust market definition in determining lost profits. See, e.g., John C. Jarosz & Erin M. Page, *The Pandoit Lost Profits Test After BIC Leisure v. Windsurfing*, 3 FED. CIR. B.J. 311 (1993) (discussed in James Gould & James Langenfeld, *Antitrust and Intellectual Property: Landing on Patent Avenue in the Game of Monopoly*, 37 IDEA 449, 474 (1997)). See also Allan N. Littman, *Monopoly, Competition and Other Factors in Determining Patent Infringement Damages*, 38 IDEA 1 (1997).

129. See 35 U.S.C. § 284.

130. See Paul M. Janicke, *Contemporary Issues in Patent Damages*, 42 AM. U.L. REV. 691 (1993); Laura B. Pincus, *The Computation of Damages in Patent Infringement Actions*, 5 HARV. J.L. & TECH. 95 (1991); Mark Chretien, Note, *The Question of Availability: Grain Processing Corp. v. American Maize-Products Co.*, 38 HOUS. L. REV. 1489 (2002).

131. *Polaroid Corp. v. Eastman Kodak Co.*, 17 U.S.P.Q.2d (BNA) 1711, 1492 (D. Mass. 1991), where the court assessed total damages at \$873,158,971, is an early example. There was an award of \$211,499,731 in *Haworth, Inc. v. Steelcase, Inc.*, 43 U.S.P.Q.2d (BNA) 1223, 1224 (W.D. Mich. 1996), and there have been many other awards between fifty million dollars and two hundred million dollars. George M. Sirilla & Honorable Giles S. Rich, 35 U.S.C. § 103: *From Hotchkiss to Hand to Rich, the Obvious Patent Law Hall-of-Famers*, 32 J. MARSHALL L. REV. 437, 445 (1999).

132. See generally F. M. Scherer, *The Innovation Lottery*, in EXPANDING THE BOUNDARIES OF INTELLECTUAL PROPERTY: INNOVATION POLICY FOR THE KNOWLEDGE SOCIETY 3-21 (Rochelle Dreyfuss et al. eds., 2001).

genuinely confers market power. Antitrust market definition offers a means of tailoring damages awards according to the importance of the patent. Important patents would receive greater protection from infringement, providing a greater incentive and reward to patentees where their contribution is greater. Patents representing lesser contributions, where substitutes exist, would receive commensurately lesser rewards.

In practice, the effect of using antitrust market definition would be substantial. For example, consider a pioneering invention that opens up an entire new field of communications technology. There are no economic substitutes in the market. Lost profits would therefore be awarded against an infringer. Compare this to a patent in the same field that covers only a minor improvement, for which there are effective economic substitutes. Using an antitrust approach, the second prong of *Panduit*, absence of acceptable noninfringing substitutes, could not be established. The patentee would be likely to receive a lesser award, likely based on a reasonable royalty rather than lost profits. This result would accord with patent policy by providing a larger reward for the patentee who made the larger contribution.

C. Copyright: Fair Use

Section 107 of the Copyright Act of 1976¹³³ provides that fair use of a copyrighted work is not an infringement of a copyright. This section states that:

In determining whether the use made of a work in any particular case is a fair use[,] the factors to be considered shall include (1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes; (2) the nature of the copyrighted work; (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and (4) the effect of the use upon the potential market for or value of the copyrighted work. The fact that a work is unpublished shall not itself bar a finding of fair use if such finding is made upon consideration of all the above factors.¹³⁴

The factors are not weighted and the provision is open to criticism for being manipulable. The fourth factor explicitly directs a court to identify the potential market for the copyrighted work. Courts have

133. Copyright Act § 107, 17 U.S.C. § 107 (2002).

134. *Id.*

given considerable weight to this factor. In *Campbell v. Acuff-Rose Music, Inc.*,¹³⁵ the Supreme Court explained that “[s]ince fair use is an affirmative defense, its proponent would have difficulty carrying the burden of demonstrating fair use without favorable evidence about relevant markets.”¹³⁶ However, the Court also said in a footnote that:

Even favorable evidence, without more, is no guarantee of fairness This factor, no less than the other three, may be addressed only through a “sensitive balancing of interests.” Market harm is a matter of degree, and the importance of this factor will vary, not only with the amount of harm, but also with the relative strength of the showing on the other factors.¹³⁷

Where the challenged use is noncommercial in nature under the first factor, the copyright holder has the burden to show market harm under the fourth factor.¹³⁸ Market harm includes “not only harm to the original but also harm to . . . derivative works,”¹³⁹ “because the licensing of derivatives is an important economic incentive to the creation of originals.”¹⁴⁰ In *Campbell*, the Supreme Court suggested that courts are concerned only with the harm of market substitution or the harm of displacement of the work. Disparagement of the original (for example, in the form of literary criticism) may harm a work but nevertheless constitute fair use. When the use claimed to be “fair” is transformative rather than merely consumptive, market harm may not be too readily inferred.¹⁴¹

Courts have increasingly interpreted this fourth factor as permitting fair use only where “market failure” is present. This is based on the idea that a copyright exists to protect a copyright owner’s market.¹⁴² In

135. 510 U.S. 569, 29 U.S.P.Q.2d (BNA) 1961 (1994).

136. *Id.* at 590, 29 U.S.P.Q.2d (BNA) at 1970 (internal citations omitted).

137. *Id.* at 591 n.21, 29 U.S.P.Q.2d (BNA) at 1970 n.21 (quoting *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 455 n.40 (1984)). *Contra* *Harper & Row Publ’rs, Inc. v. Nation Enters.*, 471 U.S. 539, 566, 225 U.S.P.Q. (BNA) 1073, 1083 (1985) (holding that “[t]his last factor is undoubtedly the single most important element of fair use”). Since *Campbell*, courts have continued to treat the fourth factor as the most important. *See, e.g.*, *Princeton Univ. Press v. Mich. Doc. Servs., Inc.*, 99 F.3d 1381, 40 U.S.P.Q.2d (BNA) 1641 (6th Cir. 1996) (en banc).

138. *See* *Sony Corp. v. Universal City Studios, Inc.*, 464 U.S. 417, 451, 220 U.S.P.Q. (BNA) 665, 682 (1984); *Princeton*, 99 F.3d 1381, 40 U.S.P.Q.2d (BNA) 1641.

139. *Harper & Row*, 471 U.S. at 568, 225 U.S.P.Q. (BNA) at 1084. *See also* *Campbell*, 510 U.S. at 592, 29 U.S.P.Q.2d (BNA) at 1970-71; *UMG Recordings, Inc. v. MP3.com, Inc.*, 92 F. Supp. 2d 349, 54 U.S.P.Q.2d (BNA) 1971 (S.D.N.Y. 2002).

140. *Campbell*, 510 U.S. at 593, 29 U.S.P.Q.2d (BNA) at 1971.

141. *Id.* at 591-94, 29 U.S.P.Q.2d (BNA) at 1970-71.

142. *See generally* *Harper & Row*, 471 U.S. at 559, 225 U.S.P.Q. (BNA) at 1080 (citing

this context, courts have interpreted market failure as existing where a market for the work is not operating for technical reasons,¹⁴³ where a copyright owner refuses to license the work,¹⁴⁴ or where the defendant's intended use of the work will confer public benefits for which the user cannot pay the copyright owner.¹⁴⁵

Courts place importance on the fourth factor of market harm, and they increasingly conceptualize fair use as market failure.¹⁴⁶ However, the concepts of market harm and market failure are less than clear about exactly what constitutes the market in this context. The Copyright Act provides that harm can be to the potential market, thus covering derivative markets.¹⁴⁷ Courts therefore look at the market for the work and for possible future works that derive from the original. What is unclear is how the courts identify and define the market for a work or a license for a work; equally unclear is how the courts *should* identify and define these markets. The concept of "market failure" is also not useful in clarifying *which* market is relevant to the inquiry. We do not know which market must have failed for fair use to be justified, and we likewise do not know what kind of analysis should be used to identify the market.

We do, however, know that courts do not engage in antitrust market definition in this context. For example, in *Campbell*, the Supreme Court referred only to "market harm to the original" and "the market for a

Wendy Gordon, *Fair Use as Market Failure: A Structural and Economic Analysis of the Betamax Case and its Predecessors*, 82 COLUM. L. REV. 1600, 1615 (1982)).

143. For example, where transaction costs are high. See, e.g., *Sony*, 464 U.S. 417, 220 U.S.P.Q. (BNA) 665 (often interpreted as having been decided on this basis, although the language in the opinion does not actually support this interpretation); *Am. Geophysical Union v. Texaco Inc.*, 60 F.3d 913, 35 U.S.P.Q.2d (BNA) 1513 (2d Cir. 1994) (in which the Second Circuit took this approach, finding a sufficiently developed licensing market, although the dissent disagreed on this point); *Princeton*, 99 F.3d 1381, 40 U.S.P.Q.2d (BNA) 1641 (in which the Sixth Circuit made a similar finding that market failure was not present because a licensing market already existed).

144. That is, when there are "endowment effects." Wendy Gordon, *The "Market Failure" and Intellectual Property: A Response to Professor Lunney*, 82 B.U. L. REV. 1031, 1033 (2002). See, e.g., *Campbell*, 510 U.S. at 591-94, 29 U.S.P.Q.2d (BNA) at 1970-71 (parody).

145. That is, where "positive externalities" are present. Gordon, *supra* note 144, at 1033; Wendy Gordon, *Fair Use as Market Failure: A Structural and Economic Analysis of the Betamax Case and its Predecessors*, 82 COLUM. L. REV. 1600, 1630 (1982).

146. Wendy Gordon argues for a broader concept of market failure that asks: "[W]hen can we as a society not safely rely on the bargain between owner and user to achieve social goals?" Gordon, *supra* note 144, at 1034-37.

147. See 17 U.S.C. § 104(4) (2002).

nonparody rap version.”¹⁴⁸ Similarly, in *A&M Records, Inc. v. Napster, Inc.*,¹⁴⁹ the district court found that “Napster . . . harm[ed] the market for plaintiffs’ copyrighted musical compositions and sound recordings by reducing CD sales among college students.”¹⁵⁰ The court decided that Napster also harmed the “present and future digital download market.”¹⁵¹ These findings were not disturbed on appeal. In *American Geophysical Union*, the Second Circuit considered the market for journal subscriptions (as no market existed for individual copies of articles), and the market for institutional users to obtain licenses.¹⁵² In *Harper & Row*, the Supreme Court referred to the “market for prepublication excerpts.”¹⁵³ The court did not use antitrust market definition in any of these cases.

The “potential market” for the work in § 107 has been interpreted as meaning sales, potential sales, or licenses of the work and its derivatives. The market is a single product market in every case. Clearly, courts are required to consider sales and licensing of the work and derivatives, but it is argued that they should consider sales and licensing of the individual work within the context of the market defined in antitrust terms. The approach that defines the market as a single product market has the effect of favoring the copyright holder. If the market is defined as a single product market, then every copyright holder is a monopolist in its own product. The copyright holder has market power and can expect monopoly rents in the form of higher prices or higher license fees. The user has no alternatives to using the copyrighted work, as there are no substitutes, and the user is therefore expected to be willing to pay more for the work. This is different from an antitrust approach to market definition, which generally would not find that there was a single product market for each work; rather, an antitrust approach would find that works were sold and licensed in markets in which consumers could substitute one work for another and in which copyright owners could not extract monopoly rents.¹⁵⁴ The Department of Justice

148. *Campbell*, 510 U.S. at 593, 29 U.S.P.Q.2d (BNA) at 1971.

149. 239 F.3d 1004, 57 U.S.P.Q.2d (BNA) 1729 (9th Cir. 2001).

150. *Id.* at 1017, 57 U.S.P.Q.2d (BNA) at 1736.

151. *Id.* at 1017, 57 U.S.P.Q.2d (BNA) at 1737.

152. *Am. Geophysical Union*, 60 F.3d at 930-31, 35 U.S.P.Q.2d (BNA) at 1527.

153. *Harper & Row*, 471 U.S. at 568, 225 U.S.P.Q. (BNA) at 1084.

154. *Cf. Broad. Music, Inc. v. Columbia Broad. Sys., Inc.*, 441 U.S. 1, 201 U.S.P.Q. (BNA) 497 (1979). On this point, see also Edmund W. Kitch, *Taking Stock: The Law and Economics of Intellectual Property Rights: Elementary and Persistent Errors in the Economic Analysis of Intellectual Property*, 53 VAND. L. REV. 1727, 1729-38 (2000); Kenneth W. Dam, *Some Economic Considerations in the Intellectual Property Protection of Software*, 24 J.

and Federal Trade Commission's Antitrust Guidelines for the Licensing of Intellectual Property are explicit on this point:

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. If a patent or other form of intellectual property does confer market power, that market power does not by itself offend the antitrust laws As in other antitrust contexts, however, market power could be illegally acquired and maintained, or, even if lawfully acquired and maintained, would be relevant to the ability of an intellectual property owner to harm competition through unreasonable conduct in connection with such property.¹⁵⁵

This difference matters. Courts considering a work for which they perceive there to be no substitutes will see the work as being more valuable in a market sense than it really is. This may lead them to be more concerned about market harm and more protective of copyright holders. They are therefore less likely to find that a use is fair, and more likely to award large damages for a work that they believe is more valuable than it is. The overall effect creates a more protectionist approach to fair use than would be the case if an antitrust market definition were used. This Article, then, argues that use of antitrust market definition in this context would provide a useful, economically rational approach to the market harm element of fair use. It is recognized that there are difficulties involved in predicting the precise impact of a switch to an antitrust approach in the fair use context. These difficulties arise at least in part from the inherent uncertainty and manipulability of the fair use factors. Nevertheless, the antitrust approach offers a more accurate assessment of the market than does an assumption of a monopoly for every work. It permits better-informed judicial decision-making and avoids the biasing of findings toward excessive protection.¹⁵⁶

LEGAL STUD. 321, 336 (1995) (observing that the monopoly concern is particularly overstated for copyright where no power to exclude is granted).

155. Intellectual Property Guidelines, *supra* note 13, § 2.2.

156. Antitrust market definition could be interpreted as suggesting that, since works generally have economic substitutes, defendants cannot rely on fair use where they could have used a different work (for example, parodied a different song). However, § 107 of the Copyright Act refers to "the use made of a work in any particular case." 17 U.S.C. § 107.

IV. RATIONALES FOR DIFFERENT CONCEPTS OF “MARKET” AND DIFFERENT APPROACHES TO MARKET DEFINITION

Courts do not generally use antitrust market definition when deciding intellectual property cases. “Market” carries different meanings within different areas of intellectual property law, depending on the underlying purposes of the relevant intellectual property regime and the underlying purposes of the particular issue under consideration.

There are a number of plausible explanations for this difference in judicial approaches. First, it might be argued that intellectual property cases are about new products and that many cases involve products that have not yet come to market. For example, trademark functionality cases commonly arise at the time of application for trademark registration, before the product is marketed. Antitrust market definition may therefore be inappropriate, due to a lack of empirical data about consumer preferences, since such preferences have not yet been developed. Even so, such a lack of definition is not a reason to disregard antitrust analysis. It is true that new products raise some difficulties for market definition. However, an antitrust court dealing with a new product would also face these difficulties, for example in an antitrust counterclaim. Evidential difficulties are not a reason to abandon antitrust market definition in favor of assertions without empirical foundation.

Second, it might be argued that courts deciding intellectual property cases value judicial flexibility, and that a formalized approach to market definition would limit judicial freedom of movement in weighing the equities in a particular case. On this rationale, courts are prepared to accept some uncertainty of outcome as the price of flexibility. This is a realist argument, and one that might be more convincing to judges than to potential litigants who (arguably) may place a higher value on certainty.¹⁵⁷

Third, courts may be reluctant to import the antitrust doctrine and transplant it into intellectual property, with the risk of uncertain results. Courts may also be reluctant to burden the parties and the courts by requiring the kind of expensive and time-consuming economic evidence used in antitrust cases. This is a plausible explanation for the persistence of the status quo but not a convincing argument. In

Section 107 is not concerned with other uses of other works. To interpret market definition under the “different work” suggestion would lead to absurd results, contrary to the legislative intent in enacting § 107, and such an interpretation is not advocated in this Article.

157. Of course, litigants generally prefer winning to certainty.

circumstances where intellectual property courts are required to define a market in order to identify competitors or assess market power, an antitrust market definition offers a useful tool and should be employed so long as the costs do not outweigh the benefits.¹⁵⁸

Fourth, courts follow precedent and are therefore heavily influenced by the reasoning used in earlier cases in which antitrust market definition was not used. Courts are also influenced by the way in which cases are argued before them. If an antitrust market definition is not argued and economic evidence is not presented, judges do not have a basis for using antitrust techniques in decision-making.¹⁵⁹ This lack of antitrust basis is a plausible explanation for the status quo, but not a good reason to disregard a better approach.

Fifth, it might be argued that the concept of “market” in intellectual property law simply carries a different meaning or meanings than it does in antitrust law. In intellectual property, “market” is a flexible concept used to refer, in some circumstances to sales and licenses of a product or right, and in other circumstances, to a market in which competitors operate. In any given intellectual property context, “market” has a particular meaning that is congruent with the objectives of the law. To use an antitrust market definition would alter this meaning in its context and would produce different legal outcomes. On this rationale, it is arguable that an antitrust market definition is an instrument designed for the identification of competition and market power. As such, it is well adapted for its antitrust purpose. However, it is not a suitable instrument for intellectual property market definition. This last rationale is the strongest argument for retaining the status quo, at least in areas of law in which the concept of “market” is used for a purpose other than to assess competition or market power. Such a rationale is, however, unconvincing in circumstances where courts are required to define a market in order to identify competitors or assess market power; the rationale is convincing only in other areas of intellectual property law if the underlying protectionist policy objectives are accepted.

158. Whether the costs of economic evidence would be so substantial as to outweigh the benefits of such evidence is an empirical question that would require further research. If the costs were found to outweigh the benefits, this also has implications for the use of such economic evidence in antitrust cases.

159. For example, Roger Blair & Thomas Cotter have observed that “patent litigants rarely estimate the cross-elasticity of demand between the infringing product and the noninfringing alternative, despite the potential usefulness of this information in determining whether the infringement has cost the patentee any sales.” Roger D. Blair & Thomas F. Cotter, *Rethinking Patent Damages*, 10 *TEX. INTELL. PROP. L.J.* 1, 19-20 (2001).

This Article argues that an antitrust market definition could usefully be employed in these areas of intellectual property law. Trademark law has as its primary goal the facilitation of competition in order to protect consumers; it is not primarily about providing incentives for innovation, in contrast to patent and copyright law. Trademark law's basic objectives are therefore congruent with antitrust objectives, while patent and copyright law's objectives are not. In both functionality and trademark infringement cases, courts are required to identify competitors and substitute products. At present, courts reach conclusions based largely on assertions rather than economic evidence. Use of antitrust market definition would produce more empirically based results and more consistent outcomes.

An antitrust market definition could also be usefully employed in patent misuse cases, in relation to, and beyond, § 271(d)(5). The patent misuse doctrine is now very close to the antitrust doctrine, and there appears to be no compelling reason why markets should not be defined in the same way under both doctrines in order to assess competition and market power under the two doctrines, especially as the two are commonly pleaded together.

Patent damages cases and copyright cases are, however, more difficult. Courts in these cases read "market" to mean a market defined by the patent claims or the work, so that the defined market is a market for the invention or the work. Economic substitution is not considered. Using an antitrust view, this approach to market definition is simply wrong. However, market definition is only an instrument, and it is arguable that courts in these cases have developed a different instrument to achieve a different underlying policy objective. The effect of this approach is protectionist, and the underlying policy objective at work is to maximize the reward and protection to the right holder. It is now acknowledged that an intellectual property right does not automatically confer a monopoly, so that intellectual property rights are not automatically suspect under the antitrust laws. However, to provide additional protection, courts in these cases treat the intellectual property right as if such a right did confer a monopoly.

In patent damages cases this protectionist approach is arguably an available interpretation of the statute (which refers only to "damages adequate to compensate"), although it is also arguable that damages calculated in this manner exceed the "adequate." However, even accepting that this is a fair reading of the statute, a challenge may still be made to the underlying policy objective. It is arguable that a less protectionist approach is desirable and that use of an antitrust market

definition would produce more appropriate results. Antitrust market definition would not affect awards for patents covering unique products representing a significant advance on the prior art, because there would be no noninfringing substitutes. An antitrust market definition would reduce awards where there existed economic substitutes, because consumers do not regard the patent as describing something unique; that is, the patent does not confer market power. It is argued that this would be a very desirable result and generally in accord with the policy objectives of patent law, which aims to reward and provide incentives for innovation. More innovative patents would get more reward. It is thus argued that antitrust market definition could usefully be employed in patent damages cases.

In cases of copyright fair use, it is arguable that Congress did not intend that “market” in § 107 be interpreted to mean only a single product market for each work. It is at least equally likely that Congress intended an economic meaning of market in which one work is a potential substitute for other works. The use of “market failure” offers no assistance here as the doctrine offers no insights into *which* market is supposed to have failed. An antitrust market definition could therefore be imported into the copyright fair use doctrine to provide an economically rational basis for a less protectionist interpretation. Courts could then consider the effect on sales or licensing of the particular work in the context of the market as defined in antitrust terms. An antitrust market definition would therefore be a means to reinvigorate fair use without abandoning an economic rationale.

V. CONCLUSION

This Article has reviewed the uses of market concepts and market definition in intellectual property law and has drawn comparisons with the antitrust approach to market definition. It argues that antitrust market definition should be imported into intellectual property law in circumstances in which courts are required to define a market to identify competitors or assess market power in intellectual property cases. In other areas of intellectual property law, courts use a narrow interpretation of market to produce protectionist results. In these areas, the use of an antitrust market definition could be employed to provide a rational basis for reduced protection—to the benefit of consumers, the public domain, and future innovators.