

STANDARDS OWNERSHIP AND COMPETITION POLICY

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Abstract: Antitrust law is a blunt instrument for dealing with many claims of anticompetitive standard setting. Antitrust factfinders lack the sophistication to pass judgment on the substantive merits of a standard. In any event, antitrust is not a roving mandate to question bad standards. It requires an injury to *competition*, and whether the minimum conditions for competitive harm are present often can be determined without examining the substance of the standard itself. When government involvement in standard setting is substantial, antitrust challenges generally should be rejected. The petitioning process in a democratic system protects even bad legislative judgments from collateral attack. In any event, antitrust's purpose is to correct private markets. It is not a general corrective for political processes that have gone awry. The best case for antitrust liability occurs when the government somehow has been deceived into adopting a standard that it would not have adopted had it known the true facts. Even then, nonantitrust remedies such as equitable estoppel are probably a superior solution.

INTRODUCTION

Antitrust's purpose is to protect competition while giving firms reasonable freedom to innovate, develop, produce, and distribute their products. Although standard setting can enable firms to improve along all of these avenues of business progress, it also can facilitate both of antitrust's twin evils: collusion and exclusion. This Article explores some of the ways antitrust policy can evaluate claims that privately promulgated standards are anticompetitive without hindering socially beneficial conduct.

For antitrust purposes, a standard is usefully defined as a set of technical specifications that provides a common design for some product or process.¹ Although the focus of standard setting today is

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¹ See 2 HERBERT HOVENKAMP, MARK D. JANIS & MARK A. LEMLEY, *IP AND ANTITRUST: AN ANALYSIS OF ANTITRUST PRINCIPLES APPLIED TO INTELLECTUAL PROPERTY LAW* § 35.1a, at 35-3 (2002 & Supp. 2006). On antitrust and standard setting generally, see *id.* at ch. 35.

high-technology industries with significant technological sophistication, the history of antitrust reaches back to standards that were less complex. The U.S. Supreme Court's first antitrust decision on the merits involved a joint running arrangement among railroads that included a significant standard-setting component.² The Court condemned the arrangement as nothing more than a cartel, ignoring the lower courts' conclusions that the agreement was intended primarily to coordinate schedules and standardize freight classifications, cargo transfer protocols, and the like.³

In some ways, standards resemble intellectual property ("IP") rights. Economically, the increased welfare that they produce is largely a consequence of product improvement, not of prices that are brought closer to marginal cost.⁴ As a result, some of the same antinomies exist between antitrust and standard setting as exist between antitrust and IP rights. Effective promulgation of standards may involve a certain amount of coordination of output by rivals and a certain amount of market exclusion—both things that antitrust generally abhors.⁵ Further, the development of appropriate standards is often a Research and Development activity, characterized by up-front costs and amortization over long time periods.

Standards also share one important characteristic with technology choices generally: they can become path dependent. Once a standard is adopted and technology designed around the standard, switching costs increase, making the exercise of durable market power possible.⁶ Standards often are subject to significant network effects. As a result, they acquire increased value per user as they are more widely adopted.⁷ This

See generally Mark A. Lemley, *Intellectual Property Rights and Standard-Setting Organizations*, 90 CAL. L. REV. 1889 (2002); Mark A. Lemley & David McGowan, *Legal Implications of Network Economic Effects*, 86 CAL. L. REV. 479, 515 (1998); David J. Teece & Edward F. Sherry, *Standards Setting and Antitrust*, 87 MINN. L. REV. 1913 (2003).

² *United States v. Trans-Mo. Freight Ass'n*, 58 F. 58, 79–80 (8th Cir. 1893), *rev'd*, 166 U.S. 290 (1897); see also Herbert Hovenkamp, *Regulatory Conflict in the Gilded Age: Federalism and the Railroad Problem*, 97 YALE L.J. 1017, 1041 (1988). Even the setting of track gauges in nineteenth-century railroading promoted a standards battle. See HERBERT HOVENKAMP, *THE ANTITRUST ENTERPRISE: PRINCIPLE AND EXECUTION* 284 (2006) [hereinafter HOVENKAMP, *THE ANTITRUST ENTERPRISE*].

³ *Trans-Mo.*, 58 F. at 79–80.

⁴ 2 HOVENKAMP, JANIS & LEMLEY, *supra* note 1, § 35.2b, at 35-9 to -10.

⁵ *Id.* at 35-8 to -9.

⁶ See Teece & Sherry, *supra* note 1, at 1937.

⁷ For example, the model electrical code at issue in *Allied Tube & Conduit Corp. v. Indian Head, Inc.*, 486 U.S. 492, 495 (1988), was a standard with considerable exclusionary power because it was adopted almost verbatim by thousands of communities across the country.

can facilitate the exercise of market power because the standard's owners will be able to charge more for products compatible with the standard, or perhaps for access to the standard itself. Some, but certainly not all, standards are capable of conferring significant market power. In certain cases, an "insider" with respect to some standard has a significant market advantage over outsiders, and thus may be in a position to set a price substantially above costs. This can happen if duplication of the standard is costly and compliance with it is essential for market success. For example, when compatibility with the standard is technologically essential, or when a government rule requires that a specific standard be followed, standards can have significant exclusionary power, provided that they are difficult to appropriate. Although IP rights do not inherently confer significant market power,⁸ some IP rights do, particularly if they control effective access to a market. The same thing is largely true of standards. Some are easily complied with, widely shared among a large group of firms, or unnecessary for successful competition in the market.⁹ Such standards are completely consistent with robust competition. Others are tightly controlled, however, and effective access may be restricted to a small number of firms.¹⁰

Standards also can have some of the other consumption characteristics shared by IP rights. For example, an additional firm can adopt a standard without taking any production away from the standard's owner, other than the right to obtain royalties by licensing the standard. At the same time, many standards are not licensed at all, but are

⁸ See *Ill. Tool Works, Inc. v. Indep. Ink, Inc.*, 126 S. Ct. 1281, 1293 (2006) (holding that tying plaintiff must prove that the defendant has market power in the tying product, thereby upsetting half-century-old antitrust presumption in the federal courts that a patent in a tying product confers market power upon the patentee for purposes of a tying claim against the patentee).

⁹ See, e.g., *Found. for Interior Design Educ. Research v. Savannah Coll. of Art & Design*, 244 F.3d 521, 531–32 (6th Cir. 2001) (holding that privately promulgated accreditation standards for interior design schools were not anticompetitive because there was no evidence that accredited schools had any market advantages over nonaccredited ones); *George R. Whitten, Jr., Inc. v. Paddock Pool Builders, Inc.*, 508 F.2d 547, 558 (1st Cir. 1974) (holding that private standard setting for swimming pool heating and circulatory systems did not restrain trade because it was a common practice, a "matter of salesmanship").

¹⁰ E.g., *In re Union Oil Co. of Cal. (Unocal)*, No. 9305, 2004 FTC LEXIS 115, at *1–3 (F.T.C. July 7, 2004) (evaluating alleged misrepresentations by a company with a patented standard for cleaner-burning gasoline mandated by state law); *In re Rambus, Inc.*, No. 9302, 2004 WL 390647, at pt. 4 (F.T.C. Feb. 23, 2004) (evaluating a patented standard for RAM chips), *set aside by* No. 9302, 2006 WL 2330117 (F.T.C. Aug. 2, 2006).

given away, in the sense that anyone who is willing to conform to them is invited into the relevant area of enterprise.¹¹

The most likely economic effect of private standard setting is increased social value. By promulgating standards, producers can increase both horizontal and vertical compatibility. By "horizontal" compatibility, I refer to compatibility as between competing goods that are subject to a standard. For example, a user can substitute one brand of compact disc, computer monitor, or shotgun shell for another in the same computer or shotgun. By "vertical" compatibility, I refer to the ability of goods to use the same inputs. For example, all Windows computers run the same software, and all automobiles burn the same gasoline. Standards also can reduce consumer search costs, increase consumer confidence, significantly reduce the costs of input suppliers, make networking possible or at least much more efficient, or facilitate the achievement of scale economies. As a result, there should be no antitrust presumption against standards, even those that are jointly set by competing firms.

Nevertheless, standards also can facilitate both of the evils that concern antitrust law—namely, collusion and exclusion. Collusion is possible when standards are created or enforced by competing producers.¹² Exclusion is possible when standards are used to keep some producers out of the market.¹³

Thus, antitrust rules for standard setting permit the great majority of standard-setting activities to proceed. But they also identify some instances where standards are used anticompetitively. Antitrust performs this function best by clearly identifying the dangers, specifying the conditions under which those dangers are likely to be realized, and then paying special attention to standard setting in situations that meet those conditions.

Importantly, if the standards in question are complex, the antitrust decisionmaker must avoid becoming overly involved in the substantive merits of the standard itself.¹⁴ Antitrust tribunals, particularly juries, lack the technical skills to answer these questions, such as whether chi-

¹¹ See, e.g., *United States v. Realty Multi-List, Inc.*, 629 F.2d 1351, 1361–62 (5th Cir. 1980) (noting the generally open standards for membership on real estate brokerage boards); *Brown v. Indianapolis Bd. of Realtors*, No. IP 76-587-C, 1977 WL 1405, at *1–2 (S.D. Ind. May 6, 1977) (same); cf. *SCFC ILC, Inc. v. Visa USA, Inc.*, 36 F.3d 958, 961 (10th Cir. 1994) (noting that Visa joint venture is open to any institution that qualifies for FDIC insurance).

¹² 13 HERBERT HOVENKAMP, *ANTITRUST LAW* ¶ 2136, at 231 (2d ed. 2005).

¹³ *Id.* ¶ 2231, at 409.

¹⁴ *Id.* ¶ 2235a, at 436.

ropractic is really a legitimate form of medical practice,¹⁵ whether a particular medical procedure is safe and effective,¹⁶ or whether a particular engineering standard is necessary for passenger limousines.¹⁷ Well-formulated antitrust rules should try to evaluate standard setting whenever possible by avoiding these difficult technological issues.

In the great majority of cases, an antitrust tribunal can evaluate standards by looking, not at the substantive "reasonableness" of the standard itself, but at issues such as the number and identity of the persons making the standard, the exclusionary power that the standard generates, or other signs of the standard's potential to facilitate collusion or exclude rivals and facilitate the exercise of market power.¹⁸ This is not to say that antitrust always can avoid substantive evaluations of standards, but rather that it need do so in only a few situations.

The history of antitrust policy suggests that it has been unreasonably hostile toward private standard setting. Nonetheless, many of the early standard-setting antitrust cases provoked legitimate competitive concerns, and some were nothing more than fronts for naked collusion.

I. STANDARDS, PRODUCT DIFFERENTIATION, AND COLLUSION

One explanation for antitrust's traditional hostility toward joint standard setting is that many of the early cases involved obvious, often ham-handed, attempts at price fixing.¹⁹ This seemed to create a mindset that found jointly set standards to be anticompetitive.

Standards facilitate collusion by minimizing product or service differentiation, or by making product specifications or terms readily observable across sellers.²⁰ Cartels are much more difficult to manage when products are differentiated or sold subject to unique specifications.²¹ The fewer variables that cartel members must observe, the

¹⁵ See *Wilk v. Am. Med. Ass'n*, 895 F.2d 352, 378 (7th Cir. 1990) (condemning American Medical Association ("AMA") standard-setting rule that excluded chiropractors).

¹⁶ *E.g.*, *Schachar v. Am. Acad. of Ophthalmology, Inc.*, 870 F.2d 397, 400 (7th Cir. 1989) (radial keratotomy); *Hassan v. Spicer*, No. 05-CV-1526(FB)(CB), 2006 WL 228958, at *4 (E.D.N.Y. Jan. 31, 2006) (nuclear cardiology).

¹⁷ See *Craftsmen Limousine, Inc. v. Ford Motor Co.*, 363 F.3d 761, 774-76 (8th Cir. 2004); see also, *e.g.*, *Consol. Metal Prods., Inc. v. Am. Petroleum Inst.*, 846 F.2d 284, 297 (5th Cir. 1988) (oil well drilling heads); *Moore v. Boating Indus. Ass'ns*, 819 F.2d 693, 710 (7th Cir. 1987) (submersible boat trailer tail lights); *Eliason Corp. v. Nat'l Sanitation Found.*, 614 F.2d 126, 130-31 (6th Cir. 1980) (commercial refrigerators).

¹⁸ 13 HOVENKAMP, *supra* note 12, ¶ 2232a, at 414.

¹⁹ See *Standard Sanitary Mfg. Co. v. United States*, 226 U.S. 20, 40-41 (1912).

²⁰ 13 HOVENKAMP, *supra* note 12, ¶ 2136, at 232.

²¹ See HOVENKAMP, *THE ANTITRUST ENTERPRISE*, *supra* note 2, at 132; RICHARD A. POSNER, *ANTITRUST LAW* 75-76 (2d ed. 2001); F.M. SCHERER & DAVID ROSS, *INDUSTRIAL*

easier it is to stabilize a cartel equilibrium.²² These observations generally apply to both "explicit" price fixing and to the more informal methods of collusion generally associated with oligopoly industries.

Antitrust history is fairly filled with attempts to facilitate collusion by standardizing products, terms of sale, delivery, or other components of a transaction. In *Standard Sanitary Manufacturing Co. v. United States* in 1912, a cartel of bathroom pottery manufacturers was led by a patentee who licensed its finishing process to other cartel members.²³ The cartel then designated goods that did not employ this process as "seconds" and required cartel members either to destroy them or ship them abroad in a fairly obvious attempt to reduce the output sold on the domestic market.²⁴ In addition, the cartel fixed the price of all the goods that were designated first quality.²⁵

In the more famous *National Macaroni Manufacturers Ass'n Federal Trade Commission* case of 1964, the defendants responded to a temporary shortage of durum semolina wheat by setting a product standard for pasta that called for 50% durum semolina and 50% inferior farina wheat.²⁶ The standard was intended to suppress the price of durum

MARKET STRUCTURE AND ECONOMIC PERFORMANCE 279 (3d ed. 1990). On oligopoly pricing under product differentiation, see HERBERT HOVENKAMP, *FEDERAL ANTITRUST POLICY: THE LAW OF COMPETITION AND ITS PRACTICE* §§ 4.1a, 4.2a, 4.4b, at 149, 161, 170 (3d ed. 2005); W. KIP VISCUSI, JOHN M. VERNON & JOSEPH E. HARRINGTON, JR., *ECONOMICS OF REGULATION AND ANTITRUST* 108-12 (3d ed. 2000).

²² See SCHIERER & ROSS, *supra* note 21, at 279.

²³ 226 U.S. at 35-36 (holding that the trade agreement violated antitrust laws); *cf.* *Milk & Ice Cream Can Inst. v. FTC*, 152 F.2d 478, 482-83 (7th Cir. 1946) (noting testimony "that sales of 'firsts' as 'seconds' was a method of indirect price cutting").

²⁴ *Standard Sanitary*, 226 U.S. at 40-41.

²⁵ *Id.* at 44.

²⁶ See *Nat'l Macaroni Mfrs. Ass'n v. FTC*, [1963-1965 Transfer Binder] Trade Reg. Rep. (CCH) ¶ 16,897, at 21,931-32 (F.T.C. Apr. 30, 1964) (entering order prohibiting Association from taking concerted action to fix the proportion of ingredients in macaroni), *enforced*, 345 F.2d 421 (7th Cir. 1965). In the recent and troublesome decision in *Golden Bridge Technology, Inc. v. Nokia, Inc.*, 416 F. Supp. 2d 525, 535 (E.D. Tex. 2006), the U.S. District Court for the Eastern District of Texas found that a plaintiff adequately alleged a collusion claim based on product standardization. The plaintiff complained that it developed a patented technology for cellular phones that it wished to license to the cell phone companies. *Id.* at 527-28. Acting through their standard-setting organization, however, the cell phone companies adopted standards that excluded the technology and thus avoided the license fees. *Id.* The court refused to dismiss a complaint that adoption of the standard amounted to a per se antitrust boycott. *Id.* at 535. Although a standard-setting organization is free to adopt a lower-cost standard, the effect of its adoption may be to prevent individual members from licensing the disapproved technology even if they wanted to. Nevertheless, antitrust's per se rule is reserved for practices that are so clearly anticompetitive that detailed inquiry into the market structure or the effects of the practice is unnecessary. *Golden Bridge* hardly seems like such a case. The court distinguished *Allied Tube & Conduit*

semolina, and thus reduce the defendants' production costs.²⁷ Similarly, *C-O-Two Fire Equipment Co. v. United States* in 1952 involved nothing more than a naked cartel, accomplished by turning a product-differentiated industry into a completely standardized one.²⁸ The defendants made fire extinguishers that were publicly bid to government purchasers such as schools. They agreed on product specifications that were so detailed that the extinguishers could not be differentiated from one another except by the manufacturer's identification tag.²⁹ In condemning the restraint, the U.S. Court of Appeals for the Ninth Circuit found, first, that it facilitated price fixing, and second, that the standards were completely unnecessary to the safe and effective operation of the fire extinguishers.³⁰ Notwithstanding the obvious advantages of standardized container sizes, the Seventh Circuit reached the same conclusion in the *Milk & Ice Cream Can Institute v. FTC* case, which involved

Corp. v. Indian Head, Inc., 486 U.S. 492 (1988), discussed *infra* note 59 and accompanying text, and held that the *per se* rule applies in the context of private standard-setting organizations. In *Allied Tube*, however, the plaintiff was not asking other manufacturers in the organization to license its technology; it simply wanted market approval side-by-side with other products.

²⁷ *Nat'l Macaroni*, [1963-1965 Transfer Binder] Trade Reg. Rep. (CCH) at 21,931-32. Contrast *Tag Manufacturers Institute v. FTC*, 174 F.2d 452, 463 (1st Cir. 1949), which refused to condemn a trade association's rules that both standardized the format and design of shipping tags and required detailed reporting concerning prices. The FTC had argued that the product standardization made price collusion much easier; the court replied:

Nor is the conclusion of the Commission strengthened by its finding that the administration of the reporting agreements 'was materially assisted by the standardization of the component parts of tags and tag products developed and adopted under the auspices of the respondent Institute.' . . . These standardizations are deemed to be to the advantage of all concerned, including the consumer who, among other benefits, is thereby better enabled to know what he is buying and to make intelligent price comparisons. Of course, the detailed standardization of tags and components which the Institute has assisted in developing tends to make more serviceable the information reported . . . under the Tag Industry Agreement and . . . collated and disseminated among the Subscribers. But if the reporting agreement is otherwise lawful, such enhanced usefulness of the agreement as results from standardization would hardly infect it with illegality.

Id. at 461-62.

²⁸ 197 F.2d 489, 491-93 (9th Cir. 1952); see also *United States v. Am. Radiator & Standard Sanitary Corp.*, 433 F.2d 174, 185-86 (3d Cir. 1970) (condemning standard-setting agreement on plumbing fixtures that effectively eliminated lower-price, lower-quality products).

²⁹ *C-O-Two Fire*, 197 F.2d at 493.

³⁰ *Id.* at 496-97.

agreements that standardized the sizes of milk containers when the agreements were being used to facilitate price fixing.³¹

Several antitrust cases also involved standardization of terms of sale and delivery. For example, in *Catalano, Inc. v. Target Sales, Inc.* in 1980, the Supreme Court condemned an agreement that standardized credit terms for the wholesaling of beer to retailers.³² The courts have routinely condemned "basing point" pricing and related agreements among sellers to standardize delivery terms.³³ And in the famous 1936 *Sugar Institute, Inc. v. United States* case, the Supreme Court condemned an agreement among sugar manufacturers to issue standardized price lists for sugar and then to adhere to the lists while they were in force.³⁴

To be sure, the pricing mechanism itself can be improved by standard setting. Standardized price terms can reduce consumer search costs and minimize fraud or misrepresentation. Here, antitrust has taken the administratively defensible position that, for most pricing standards, the risks of collusion are simply too high in relation to the gains.³⁵ As a result, promulgation of standards concerning pricing should come from the government.³⁶ Indeed, even here, some of the most anticompetitive statutory regimes are those that regulate such things as the posting of retail liquor or wine prices, effectively permitting sellers to collude.³⁷

A few of these decisions, such as *Milk Institute*, undoubtedly reached too far. But most probably did not. Further, they carry a fairly important message: product differentiation is still an important value,

³¹ 152 F.2d at 482.

³² 446 U.S. 643, 643 (1980); see 12 HOVENKAMP, *supra* note 12, ¶ 2022, at 170.

³³ E.g., *FTC v. A.E. Staley Mfg. Co.*, 324 U.S. 746, 750 (1945) (condemning an agreed-upon basing-point pricing system for the sale of glucose); *Corn Prods. Ref. Co. v. FTC*, 324 U.S. 726, 732, 738 (1945) (similar); see also *FTC v. Cement Inst.*, 333 U.S. 683, 696-700 (1948) (condemning agreement to employ basing-point pricing, noting its tendency to lead to complete uniformity of pricing, particularly when the product at issue is fungible); *Clamp-All Corp. v. Cast Iron Soil Pipe Inst.*, 851 F.2d 478, 484-85 (1st Cir. 1988). On the economics of these decisions, see Dennis W. Carlton, *A Reexamination of Delivered Pricing Systems*, 26 J.L. & ECON. 51 (1983). See generally David D. Haddock, *Basing-Point Pricing: Competitive v. Collusive Theories*, 72 AM. ECON. REV. 289 (1982); George J. Stigler, *A Theory of Delivered Price Systems*, 39 AM. ECON. REV. 1143 (1949).

³⁴ 297 U.S. 553, 601-05 (1936).

³⁵ 12 HOVENKAMP, *supra* note 12, ¶ 2021, at 162; POSNER, *supra* note 21, at 39.

³⁶ A notable exception is *California Dental Ass'n v. FTC*, 526 U.S. 756, 771-78 (1999) (vacating Ninth Circuit decision because the case requires more thorough inquiry where anticompetitive effects of restraints on advertising are far from obvious).

³⁷ E.g., *324 Liquor Corp. v. Duffy*, 479 U.S. 335, 341-43 (1987); *TFWS, Inc. v. Schaefer*, 242 F.3d 198, 210 (4th Cir. 2001).

primarily because consumers have different preferences, but also because it makes collusion more difficult to sustain. Standards that do no more than reduce product differentiation in order to facilitate price matching do not provide a social benefit.

The values of product differentiation probably do not extend to the sizes of milk containers, however. And school children might be safer if all fire extinguishers work exactly the same way so that teachers reliably can be trained one time for all of them. So, antitrust must tread carefully even when it is attacking standard setting that might facilitate collusion. If standard setting is accompanied by price fixing, as it very likely was in the *C-O-Two* and *Milk Institute* decisions, then the antitrust tribunal always can respond by condemning the price fixing. But most cases are more difficult and involve situations where standardization facilitates express or tacit collusion, but the collusion itself is evidenced only by parallel prices. In those cases, antitrust factfinders must look at other factors. For example, do consumers benefit from the standard setting? Do the standards create the kind of product homogeneity that facilitates collusion, or do they merely regulate safety or functionality in ways that permit significant product differentiation along other avenues? It is also important to determine whether nonproducer interests have a significant role in the standard setting. For example, while fire extinguisher producers have an interest in colluding on the price of fire extinguishers, fire insurance companies do not; they are benefited by fire extinguishers that work as well as possible and are sold competitively.

Finally, the number of firms in the market is often important. Cartels become much more difficult to manage as the number of significant firms in a market rises above a dozen or so.³⁸ Informal cartels, or those relying on tacit rather than express collusion, may require even fewer. Although a large number of participants is an indicator that collusion is less likely, in some cases collusive output reductions and higher prices are quite possible even though the market has numerous competitors. This can happen when the standard in question is itself a direct restraint on output or pricing and violation of the standard is readily observable by other cartel members. For example, even though the National Collegiate Athletic Association (the "NCAA") has several hundred members, its rule limiting nationally televised football games

³⁸ SCHERER & ROSS, *supra* note 21, at 277.

reduced output anticompetitively.³⁹ No member could surreptitiously cheat on the cartel by secretly televising a football game. In the Supreme Court's 1984 decision in *NCAA v. Board of Regents of the University of Oklahoma*, the Court invalidated the NCAA plan, noting that it created higher prices and lower output than would occur in a free market situation.⁴⁰ In sum, a large number of firms in the market subject to standard setting is often relevant, but needs not be decisive. One must always consider how the collusive restraint on output or price is being carried out.

II. EXCLUSION AND STANDARD SETTING

Before firms can charge monopoly prices, they must be able to do two things. The first is to coordinate the output and pricing decisions of existing producers.⁴¹ The difficulty of accomplishing this ranges from nil in the case of the monopolist, which absolutely controls its own price and output, to quite severe if the market has a large number of firms, particularly if the firms use different technologies or produce differentiated products.

The second requirement for firms to charge monopoly prices is to keep the output of others out of the market.⁴² Standard setting can accomplish this by setting standards in such a fashion that only a small number of compliant firms meet the standard, or that the standard is licensed only to such firms.

At the same time, if a standard-setting process is at all meaningful, one or more firms will either "flunk" the standard or else have to make a significant investment to comply with it. The most common antitrust claim involving standard setting is that it limits competition by excluding rivals, whether through restrictive bar passage rates,⁴³

³⁹ *NCAA v. Bd. of Regents of the Univ. of Okla.*, 468 U.S. 85, 104-13 (1984). At the time of the litigation, the NCAA had 850 members. *Id.* at 89.

⁴⁰ The Supreme Court noted that the District Court found that if member institutions were free to sell television rights, many more games would be shown on television, and that the NCAA's output restriction has the effect of raising the price the networks pay for television rights. *Id.* at 105 & n.29 (citing *Bd. of Regents of the Univ. of Okla. v. NCAA*, 546 F. Supp. 1276, 1294 (W.D. Okla. 1982)); cf. *Nat'l Soc'y of Prof'l Eng'rs v. United States*, 435 U.S. 679, 682, 692-93 (1978) (condemning canon against competitive bidding that affected 69,000 members of Society, of whom 12,000 were active consulting engineers).

⁴¹ 13 HOVENKAMP, *supra* note 12, ¶ 2231b, at 411.

⁴² *Id.* ¶ 2231c, at 412.

⁴³ *Hoover v. Ronwin*, 466 U.S. 558, 569-74 (1984) (holding that bar exam grading standards that were promulgated by state supreme court qualified for antitrust "state action" immunity); *Mothershed v. Justices of the Supreme Court (Ariz.)*, 410 F.3d 602, 609 (9th Cir. 2005) (similar).

hospital accreditation standards that exclude chiropractors,⁴⁴ surgical standards that protect against cost-cutting medical procedures,⁴⁵ or building code or product safety standards that protect incumbent firms from threatening technologies.⁴⁶ For example, network standards might keep some firms off the network, perhaps imposing prohibitive costs on them in the process.⁴⁷ Closely related is the proprietary standard protected by IP rights, whose licensing costs imposed on rivals create a price umbrella protecting the IP holders. Sometimes these standards are created or made enforceable with the help of the government,⁴⁸ thus implicating antitrust's *Noerr-Pennington* doctrine, which gives a measure of quasi-constitutional protection to petitions to the government for anticompetitive actions.⁴⁹ Sometimes they are created by private bodies that have a significant influence over government decision making.⁵⁰

To repeat an earlier warning: antitrust is often way outside its competence when it attempts to evaluate standard setting by examining the technological merits of the challenged standard. Although

⁴⁴ *Wilk v. Am. Med. Ass'n*, 895 F.2d 352, 378 (7th Cir. 1990) (condemning AMA rule excluding chiropractors from access to important inputs such as hospital X-ray facilities); see also *Schachar v. Am. Acad. of Ophthalmology, Inc.*, 870 F.2d 397, 400 (7th Cir. 1989) (upholding standards for eye surgery that allegedly discriminated against radial keratotomy); *Hahn v. Or. Physicians' Serv.*, 868 F.2d 1022, 1028-29 (9th Cir. 1988) (evaluating exclusion of podiatrists); cf. *Mass. Sch. of Law at Andover, Inc. v. ABA*, 107 F.3d 1026, 1031-32, 1038-41 (3d Cir. 1997) (upholding law school accreditation standards that, in part, linked accreditation to professor salaries); Notice Regarding *United States v. ABA*, 60 Fed. Reg. 39,421, 39,422 (Aug. 2, 1995) (announcing consent decree limiting American Bar Association's ability to tie law school accreditation to faculty compensation).

⁴⁵ *Summit Health, Ltd. v. Pinhas*, 500 U.S. 322, 326 (1991) (evaluating claim by physician who was allegedly denied staff privileges because he had developed a lower-cost procedure for conducting eye surgery that required only one surgeon instead of two).

⁴⁶ *Allied Tube & Conduit Corp. v. Indian Head, Inc.*, 486 U.S. 492, 496-97 (1988) (evaluating claim against defendants who manipulated standard-setting organization to disapprove plaintiff's plastic electrical conduit in order to protect the market for traditional steel conduit); *Am. Soc'y of Mech. Eng'rs, Inc. v. Hydrolevel Corp.*, 456 U.S. 556, 558-64 (1982) (considering Society's liability when its officer participated in a fraudulent scheme to discredit plaintiff's valve); *Consol. Metal Prods., Inc. v. Am. Petroleum Inst.*, 846 F.2d 284, 297 (5th Cir. 1988) (finding no antitrust violation when institute made up of manufacturers and users of oil well equipment refused to approve plaintiff's allegedly innovative and lower-cost design).

⁴⁷ 13 HOVENKAMP, *supra* note 12, ¶ 2233, at 429.

⁴⁸ E.g., *Allied Tube*, 486 U.S. at 509-10; *In re Union Oil Co. of Cal. (Unocal)*, No. 9305, 2004 FTC LEXIS 115, at *87-106 (F.T.C. July 6, 2004).

⁴⁹ See *Mine Workers v. Pennington*, 381 U.S. 657, 670 (1965); E.R.R. Presidents Conference v. *Noerr Motor Freight, Inc.*, 365 U.S. 127, 130 (1961).

⁵⁰ E.g., *Allied Tube*, 486 U.S. at 495 (National Fire Protection Association); *Hydrolevel*, 456 U.S. at 558-59 (American Society of Mechanical Engineers).

antitrust contains a rule of reason, "reasonableness" in this context refers to the impact of a standard on competition, not to the substantive reasonableness of the standard itself.⁵¹ In most private antitrust cases, the plaintiff seeks damages and, as a result, most of them contemplate a jury trial. Except in clear cases of abuse, juries are not up to answering technical questions concerning the necessity or appropriateness of a particular standard.⁵²

A. Concerted Standard Making and Exclusion

The antitrust problem of concerted standard setting that excludes rivals is a half-century old, including the 1943 *American Medical Ass'n v. United States (AMA)* case which condemned the AMA for adopting an "ethical" standard that forbade physicians from working for prepaid health organizations.⁵³ The grandparent of explicit product safety standards cases is the 1961 *Radiant Burners, Inc. v. Peoples Gas Light & Coke Co.* decision, in which the U.S. Supreme Court sustained the complaint of a gas heater manufacturer, alleging that it was excluded from the market by an industry safety standard that had been biased and capriciously enforced.⁵⁴

Radiant Burners suggested that one should evaluate standards by looking at the intent of those setting them. The defendants in that case included not only competing manufacturers of gas heaters, but also natural gas utilities and pipeline companies.⁵⁵ One easily can see why a competing heater manufacturer would wish to exclude a cheaper or more efficient burner, or simply remove rivals from the market generally. But natural gas utilities and gas pipeline companies sell a complementary product and ordinarily would not have any incentive to keep a safe, efficient heater off the market. Indeed, they

⁵¹ 13 HOVENKAMP, *supra* note 12, ¶¶ 2232a, 2232b, at 414, 415.

⁵² *Id.* ¶¶ 2232a, 2235a, at 414, 436.

⁵³ 317 U.S. 519, 532-33 (1943).

⁵⁴ 364 U.S. 656, 657-60 (1961) (reversing lower courts' dismissals on pleadings); *cf.* *Carleton v. Vt. Dairy Herd Improvement Ass'n*, 782 F. Supp. 926, 934 (D. Vt. 1991) (holding that plaintiff's claim that market-dominating milk-testing organization disapproved his milk without subjecting it to a fair test stated claim under rule of reason); *McCreery Angus Farms v. Am. Angus Ass'n*, 379 F. Supp. 1008, 1018, 1020 (S.D. Ill. 1974) (granting preliminary injunction against enforcement of plaintiff's suspension resulting from dispute over blood typing; emphasizing denial of due process or any effective right to challenge association decision making or even obtain a clear statement of the problem), *aff'd mem.*, 506 F.2d 1404 (7th Cir. 1974). *But see* *Eliason Corp. v. Nat'l Sanitation Found.*, 614 F.2d 126, 130-31 (6th Cir. 1980) (approving standard-setting program that did not attempt to exclude disapproved products from the market or test them in a discriminatory fashion).

⁵⁵ *Radiant Burners*, 364 U.S. at 656 n.1.

might share liability for fires caused by unsafe heaters. Further, although control of the natural gas industry by a burner maker or even a cartel of them is possible, it is quite unlikely and almost certain to be apparent to a factfinder.

This scenario suggests that an early inquiry into challenges to exclusionary standard setting should be structural, asking whether the defendants (or a controlling number of them) are likely to have anti-competitive incentives. The Seventh Circuit's 1987 *Moore v. Boating Industry Ass'ns* decision suggests the proper approach.⁵⁶ There, the plaintiff made a submersible tail light for boat trailers, which was excluded by an association of boat trailer manufacturers because of a tendency to short out.⁵⁷ The court found no antitrust violation, observing that the plaintiff tail light manufacturer did not compete with the trailer makers who controlled the association, and that trailer manufacturers would have no incentive to place an anticompetitive restraint on tail light manufacturers. They wished only to purchase safe tail lights that complied with federal specifications.⁵⁸

As with standard setting intended to facilitate collusion, the number of players can be relevant. If the firms in a market are so numerous that collusion is impossible then they may have little incentive to exclude another firm. However, even firms that are behaving competitively vis-à-vis one another have an incentive to exclude lower-cost or superior technologies from the market, particularly if they cannot readily obtain access to the technology. Even if the slide rule market contains a hundred firms that compete aggressively on price and slide rule design, these firms still have an incentive to keep electronic cal-

⁵⁶ See 819 F.2d 693, 702 (7th Cir. 1987).

⁵⁷ *Id.*

⁵⁸ *Id.* at 700. The court stated:

Manufacturers of boat trailers, some of which are members of TMA, are customers for trailer lamps. The trailer manufacturers do not make lamps. There is no competition between lamp and trailer manufacturers. The latter are the customers of the former.

... It would seem to make no difference to a trailer manufacturer from whom he bought lamps, so long as they complied with federal safety standards and thus did not expose the trailer manufacturer to federal penalties of fines and recalls.

Id.; see also *M & H Tire Co. v. Hoosier Racing Tire Corp.*, 733 F.2d 973, 980 (1st Cir. 1984) (finding track owners excluding plaintiff had legitimate intentions and no anticompetitive motive); *Jessup v. Am. Kennel Club, Inc.*, 61 F. Supp. 2d 5, 6 (S.D.N.Y. 1999) (rejecting antitrust challenge to breed standards because American Kennel Club "does not compete or engage in the breeding, selling or showing of" Labrador Retrievers), *aff'd mem.*, 210 F.3d 111 (2d Cir. 2000).

culators off the market if they believe that the calculators constitute a major competitive threat to the demand for slide rules. For example, the standard-setting organization in the *Allied Tube & Conduit Corp. v. Indian Head, Inc.* Supreme Court case contained several thousand members.⁵⁹ In that case, a manufacturer of steel electric conduit, fearing that the plaintiff's plastic conduit was both cheaper and superior, organized a cartel that manipulated the standard-setting process so as to disapprove the plastic conduit. In this case, the numerosity of the membership did not mitigate competitive concerns because the concern was not price fixing, but rather the removal of a threatening, superior product from the market. Someone who wanted to cheat on the cartel could not surreptitiously flood the market with the excluded product.

B. *Standard Making and Unilateral Acts by Dominant Firms*

In markets where interfirm compatibility is valuable, dominant firms (or dominant cartels or coalitions) typically profit by maintaining incompatibility with rivals.⁶⁰ By maintaining incompatibility, a dominant firm protects itself from new entries or raises the costs of its rivals—for example, consider *United States v. Microsoft Corp.* involving Microsoft's efforts to ensure that the Windows operating system would not become compatible with rival operating systems and that new rival systems would not be permitted to emerge.⁶¹ By contrast, survival or growth for a nondominant firm may require it to become compatible with the dominant firm's technology.⁶²

Exceptions exist to both of these rules. First, a dominant firm may decide to open its architecture, believing it can earn more from marketwide acceptance and licensing. IBM made this decision with respect to the personal computer architecture in the early 1980s. Second, even a nondominant firm, such as Apple Computer, might wish

⁵⁹ 486 U.S. at 494. According to its website, the National Fire Protection Association (the "NFPA") has 79,000 members today. NFPA, About Us, <http://www.nfpa.org> (follow "About Us" hyperlink) (last visited Nov. 1, 2006). The number involved in the vote to disapprove plastic conduit was 784, and the conduit was disapproved by a vote of 394 to 390. See *Allied Tube*, 486 U.S. at 497.

⁶⁰ 3A PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶ 776, at 232 (2d ed. 2002).

⁶¹ See 87 F. Supp. 2d 30, 43–44 (D.D.C. 2000) (speaking of Microsoft's efforts to prevent Sun Microsystems's Java from becoming a medium that would make rival operating systems more compatible with Microsoft Windows), *aff'd in part, rev'd in part*, 253 F.3d 34 (D.C. Cir. 2001).

⁶² See 3A AREEDA & HOVENKAMP, *supra* note 60, ¶ 776, at 232.

to preserve incompatibility in a product-differentiated market if it occupies a profitable market niche.

In monopolized markets, "standard setting" often refers to nothing more than the dominant firm's selection of a standard, which other firms are largely obliged to accept or else be relegated to small niches. For example, once Kodak, a film monopolist, selects a format for its Instamatic, cartridge-loading camera-and-film system, rival camera makers such as Berkey Photo may have very little choice but to design a compatible camera.⁶³

Should a dominant firm's unilateral selection of a standard be grounds for antitrust liability when the de facto result is that the selected standard becomes the market standard, perhaps raising the costs of rivals or, in extreme cases, excluding them altogether? Antitrust does not condemn no-fault monopolization.⁶⁴ About the closest we have ever come is an "essential facility" doctrine that may force a firm to share a technology that is essential for market access.⁶⁵ The Supreme Court's 2004 *Verizon Communications, Inc. v. Law Offices of Curtis Trinko, LLP* decision, however, leaves few opportunities for use of that doctrine.⁶⁶ It seems true, therefore, that a firm selecting a technology for its own products has no duty to protect its rivals' market by ensuring the compatibility of their competing or complementary products.

The essential facility doctrine speaks of the terms under which a firm may be required to share an existing technology.⁶⁷ The intentional selection of a technology that excludes rivals, however, is a more aggressive act. One might say that, although a firm has no duty to share its resources or inputs, it does have an obligation not to adopt a standard that excludes rivals unnecessarily. But antitrust tribunals cannot be in the business of making technology choices for firms. Further, product complementarity is a common feature of technologically sophisticated products and incompatibility is often a

⁶³ *Berkey Photo v. Eastman Kodak Co.*, 603 F.2d 263, 279–85 (2d Cir. 1979) (rejecting claim that Kodak had an antitrust obligation to "predisclose" its design so that rivals could invent around it and have copies ready by the time the product was introduced); cf. *Cal. Computer Prods. v. IBM*, 613 F.2d 727, 744 (9th Cir. 1979) (holding that IBM did not violate antitrust laws when it designed a personal computer with integrated components that forced rivals to adopt the same technology).

⁶⁴ See 3A AREEDA & HOVENKAMP, *supra* note 60, ¶ 776, at 232–33.

⁶⁵ *Id.* ¶ 773, at 195–96.

⁶⁶ 540 U.S. 398, 410–11 (2004) (holding that alleged breach of statutory obligation did not state an antitrust claim and noting that the Supreme Court never has recognized an essential facilities doctrine).

⁶⁷ 3A AREEDA & HOVENKAMP, *supra* note 60, ¶ 773, at 196.

consequence of technological success. If Kodak's Instamatic film system had been a flop, a rival camera maker would be unlikely to complain about its inability to produce complementary products.⁶⁸

Another reason for deferring to the technology choice of the dominant firm is that, typically, the old technology remains available. In that case, consumers are not injured by the dominant firm's innovation because they can still purchase the older product; they simply fail to obtain the full benefit of competition in the new technology. To be sure, this is not necessarily the case. Kodak might simultaneously introduce its Instamatic film system and withdraw from the older film format, thus forcing all consumers to the new technology. But it is difficult to claim that consumers are injured by a new, monopolized technology when the existing technology remains fully in place. About all we can say is that consumers lose the ability to migrate to the new technology at the competitive price.

One might conclude rationally that a completely unilateral technology choice that becomes an industry standard should *never* be the basis for an antitrust claim, no matter how much damage the technology choice does to rivals. Among the range of positions that one could take on this issue, I believe this would be better than any position that required juries to make substantive technological judgments (except in very clear cases) or that tried to discern a defendant's intent. It clearly would be better than any rule that required courts to make substantive *ex post* assessments about the consumer benefits that result from a particular technological choice. Innovation always occurs under great uncertainty, and not every successfully marketed innovation is a clear winner for consumer welfare.

A rule of complete nonliability probably goes too far, however. Situations exist where firms set out to redesign products for no other purpose (objectively measured) than to make rival technologies incompatible. The *C.R. Bard v. M3 Systems* case in the Federal Circuit in 1998 may have been such a situation.⁶⁹ C.R. Bard was the holder of

⁶⁸ See *Berkey Photo*, 603 F.2d at 279–85.

⁶⁹ 157 F.3d 1340 (Fed. Cir. 1998). Of course, the incompatibility has to be real, in the sense that the excluded firm cannot easily innovate around it. See *Medtronic Minimed, Inc. v. Smiths Med. MD, Inc.*, 371 F. Supp. 2d 578, 587–88 (D. Del. 2005) (holding that patentee of medical infusion pump with attachable disposable infusion sets did not violate Sherman Act by incorporating patented locking device on pump so as to be incompatible with plaintiff's infusion sets when nothing prevented the plaintiff from designing a compatible infusion set); see also *HDC Med., Inc. v. Minntech Corp.*, 411 F. Supp. 2d 1096, 1102 (D. Minn. 2006) (holding that defendant did not tie two components of kidney dialysis equipment together simply because its software for using the first machine was incompati-

multiple patents relating to a biopsy gun used for taking skin samples.⁷⁰ The gun itself was durable, but it used disposable needles that captured and enclosed tiny pieces of human skin, which could then be sent to the laboratory.⁷¹ The needles had been unpatented and were made by numerous manufacturers, subject only to the requirement that their connection end be structurally compatible with the collar on the gun.⁷² C.R. Bard then redesigned the collar and developed a new patented needle⁷³ that was the only one compatible with the gun. The jury rejected C.R. Bard's argument that the redesigned gun collar and needle were a technological improvement.⁷⁴

Assuming the strongest case—namely, that the dominant firm intentionally redesigned its dominant product in such a way that it was not an improvement at all, but simply moved complementary products from a competitive to a monopolized environment—one might wish to preserve some basis for antitrust liability. Of course, one still needs to ask how a dominant firm can “monopolize” by making a complementary product incompatible with that of rivals. The so-called “leverage” theory of tying arrangements, which was that tying of monopolized and complementary products turned one monopoly into two, was discredited in the literature a half-century ago.⁷⁵ Kodak or C.R. Bard can earn all the monopoly profits available in their markets by setting a monopoly price for the camera or biopsy gun. They cannot make a larger monopoly profit simply by monopolizing the complementary products as well.

One reason a firm in Kodak's or C.R. Bard's position might try to create incompatibility in complementary products is to further price discrimination. If the value that users place on the biopsy gun is a function of how often they use it, then C.R. Bard can charge a higher price for needles and earn greater returns from high-intensity users than from low-intensity users. Price discrimination itself is not a good reason for condemning such a practice because its welfare consequences are so indeterminate. Such a price discrimination scheme is likely to in-

ble with a rival's complementary machine; in this case, there was other software available that could operate with the two machines together).

⁷⁰ *C.R. Bard*, 157 F.3d at 1346–48.

⁷¹ *Id.*

⁷² *Id.* at 1347.

⁷³ Actually, the new patent was a combination patent covering the gun plus the needle. *See id.*

⁷⁴ *Id.* at 1382.

⁷⁵ Ward S. Bowman, Jr., *Tying Arrangements and the Leverage Problem*, 67 *YALE L.J.* 19, 32–36 (1957); *see* HOVENKAMP, *supra* note 21, § 10.6a, at 422.

crease rather than reduce the output of biopsy guns, thus making it a poor candidate for a claim of monopolization.⁷⁶ Further, the profitability of even inefficient price discrimination schemes does not necessarily depend on the exclusion of a rival. Section 2 of the Sherman Act is not a mandate to the courts to condemn economically inefficient practices, but only those practices that are unreasonably exclusionary.⁷⁷

But there are other explanations for why firms might try to create incompatibility in complementary products. For example, viable competition in the market for the complementary product might provide the platform for entry into the market for the primary product. Or alternatively, innovation by rivals in the complementary product might increase the likelihood that alternative technologies will emerge. For example, the concern in *Microsoft* was not that Microsoft wanted to exclude Netscape in order to charge higher prices for either Windows or Internet Explorer. Rather, Microsoft wanted to exclude Netscape because a viable Netscape complemented with Java would increase the compatibility between Windows and rival operating systems, or else facilitate the emergence of rival platforms.⁷⁸ If that should happen, Microsoft might be relegated to one among many players in a product-differentiated operating system market. As is so often the case in antitrust, such concerns are highly specific to the industry. As a result, one hesitates to adopt overly categorical rules in either direction.

Another issue concerns the firm that participates in a standard-setting process while withholding information about IP rights that it has or is in the process of perfecting. Although the facts vary, in the typical "holdup" case, the firm waits until the standard has been adopted and then surprises participants by asserting the IP right and demanding royalties from those that cannot comply with the standard without infringement.⁷⁹ Antitrust remedies for this unilateral conduct are appropriate only for monopolization. This does not mean that

⁷⁶ For example, under the older technology, C.R. Bard would charge everyone the profit-maximizing price for the gun because it has no control over the needles, which are sold in a competitive market. Under the new scheme, it might charge less than the monopoly price for the gun, or even give it away, but place all or part of the overcharge in the needles. As a result, low-intensity users unwilling to pay the old monopoly price will be able to purchase the gun, and, of course, C.R. Bard will earn even more from high-intensity users who consume a large number of needles. See HOVENKAMP, *supra* note 21, § 10.6c, at 428.

⁷⁷ See 1 AREEDA & HOVENKAMP, *supra* note 60, ¶ 103, at 40 (2d ed. 2000).

⁷⁸ See HOVENKAMP, THE ANTITRUST ENTERPRISE, *supra* note 2, at 292-98.

⁷⁹ See 2 HOVENKAMP, JANIS & LEMLEY, *supra* note 1, § 35.5b, at 35-37; Teece & Sherry, *supra* note 1, at 1938-42.

antitrust should never intervene when such holdup abuses occur, but it must stick to its focus on power and anticompetitive effects. Some courts have held that antitrust law does not apply to holdup problems because, under the antitrust laws, a firm is free to refuse to license its patents.⁸⁰ That position is incorrect, however, because it confuses two issues. One is the fact that a "mere" refusal to license is not an antitrust violation.⁸¹ The other is that compulsory licensing of patents is a common remedy for conduct that has been found to violate the antitrust laws.⁸²

Nevertheless, a misrepresentation rises to the level of an antitrust violation only when it permits the offender to dominate a market, or creates a dangerous probability that this will occur. Or to say it differently, the misrepresentation satisfies the conduct component of the offense of monopolization or attempt to monopolize, but the structural component of the offense and causation must also be proven.⁸³ Proving structure may require a showing that the standard dominates a relevant market, and also that the patent is either necessary for meeting the standard or that the costs of meeting it without infringing the patent are higher.

As a result, doctrines derived from the patent laws or contract law, such as equitable estoppel, generally are more appropriate for addressing such holdup problems.⁸⁴ Most importantly, standard-setting proc-

⁸⁰ See *Townshend v. Rockwell Int'l Corp.*, 55 U.S.P.Q.2d 1011, 1018, 1021, 1024 (N.D. Cal. 2000) (reasoning from premise that the antitrust laws do not impose a duty to license to conclusion that alleged fraudulent misrepresentation before a standard-setting body did not violate the antitrust laws when the requested remedy involved compelled licensing).

⁸¹ See 1 HOVENKAMP, JANIS & LEMLEY, *supra* note 1, at ch. 13. Compulsory licensing is a rarity in patent law, although there are some exceptions. For example, an unused 1970 amendment in the Clean Air Act, 42 U.S.C. § 7608 (2000), provides that the U.S. Attorney General can seek judicially supervised compulsory licensing of patented technology necessary to achieve clean air standards, where such licensing might be needed to avoid giving the patentee a monopoly.

⁸² *Contra* 3 AREEDA & HOVENKAMP, *supra* note 60, ¶¶ 709–710, at 220, 236.

⁸³ See 2 HOVENKAMP, JANIS & LEMLEY, *supra* note 1, § 35.5b, at 35-42 to -43.

⁸⁴ See *Rambus, Inc. v. Infineon Techs. AG*, 318 F.3d 1081, 1100–01 (Fed. Cir. 2003) (refusing to find a duty to disclose under state common law of fraud; also finding that standard could be met without infringing Rambus's patent claims); *Wang Labs., Inc. v. Mitsubishi Elecs. Am.*, 103 F.3d 1571, 1581–82 (Fed. Cir. 1997) (holding that patentee was equitably estopped from asserting a patent when it had encouraged others to adopt a standard containing the patent); *Symbol Techs., Inc. v. Proxim Inc.*, No. Civ. 01-801-SLR, 2004 WL 1770290, at *7–8 (D. Del. July 28, 2004) (refusing to assert equitable estoppel where patentee did not mislead other participant in standard-setting process about the existence of its patents); *Stambler v. Diebold, Inc.*, 11 U.S.P.Q.2d 1709, 1714–15 (E.D.N.Y. 1988) (holding that patentee who knew it had patent covering standard adopted in procedure in which it participated, and who kept silent, was later equitably estopped from en-

esses must be defined in such a way as to give firms incentives to disclose their IP claims and place a price on them in advance of adoption, after which the exercise of market power typically is far more likely.⁸⁵ Failures are probably best addressed via the institutional design of standard-setting procedures, including predisclosure obligations, rather than by antitrust.

III. GOVERNMENT INVOLVEMENT IN ANTICOMPETITIVE STANDARD SETTING

Federal and state governments are the largest standard setters in the economy. The vast majority of these standards are readily available for private appropriation and completely consistent with competition. For example, government agencies might define a standard for grade A milk or prime beef, bar passage and licensing of attorneys, or safety of electrical components. Any firm or person that can comply with the standards may sell lawfully in the market.⁸⁶

Claims that direct government involvement in private standard setting is anticompetitive typically arise in one of two ways. In the first, some governmental or quasi-governmental entity adopts a standard put forward by private firms that is claimed by rivals to be anticompetitive. Such an action can implicate the *Noerr-Pennington* doctrine, which declares that qualifying petitions to the government cannot be antitrust violations, even if the intent or effect of the requested action is anticompetitive.⁸⁷ For example, in the 1991 *City of Columbia v. Omni Outdoor Adventure, Inc.* U.S. Supreme Court case, the city of Columbia, South Carolina adopted a land use standard regulating the size, loca-

forcing the patent), *aff'd mem.*, 878 F.2d 1445 (Fed. Cir. 1989); see also *In re Dell Computer Corp.*, No. 931-0097, 1995 FTC LEXIS 466, at *10 (F.T.C. Oct. 20, 1995) (creating consent decree under which Dell agreed not to assert IP rights when it had represented in standard-setting process that it in fact had no such rights); cf. *In re Rambus, Inc.*, No. 9302, 2004 WL 390647, at pt. 4 (F.T.C. Feb. 23, 2004) (comprising an initial decision in which the administrative law judge held that a firm could withhold information about pending patent applications even when the standard-setting process in which it was participating required disclosure), *set aside by* No. 9302, 2006 WL 2330117 (F.T.C. Aug. 2, 2006). These issues are thoroughly explored in 2 HOVENKAMP, JANIS & LEMLEY, *supra* note 1, § 35.5b, at 35-37 to -48. See generally Lemley, *supra* note 1.

⁸⁵ See generally Daniel G. Swanson & William J. Baumol, *Reasonable and Nondiscriminatory (RAND) Royalties, Standards Selection, and Control of Market Power*, 73 ANTITRUST L.J. 1 (2005).

⁸⁶ For example, the standards for electrical components at issue in *Allied Tube & Conduit Corp. v. Indian Head, Inc.*, 486 U.S. 492, 494-95 (1988), were placed in local government building codes.

⁸⁷ See *Mine Workers v. Pennington*, 381 U.S. 657, 670 (1965); *E.R.R. Presidents Conference v. Noerr Motor Freight, Inc.*, 365 U.S. 127, 130 (1961).

tion, and spacing of billboard signs that favored the signs of a politically favored business firm and excluded those of a rival.⁸⁸ The Supreme Court applied the historical *Noerr* rule that private parties have a right, essentially protected by the First Amendment of the U.S. Constitution, to petition the government for even anticompetitive actions.⁸⁹ Rivals cannot use antitrust suits to challenge the legislation or executive action that results. Indeed, the *Noerr* case itself was about a standard-setting campaign by railroads to induce the Commonwealth of Pennsylvania to impose cost-increasing standards on truckers that were competing with the railroads for freight business.⁹⁰ The history of regulation is fairly filled with the efforts of interest groups to impose restrictive standards on rivals that either increase the rivals' costs or remove their competition from the market altogether.⁹¹

Significantly, *Noerr* protects the petitioning process by which anticompetitive government regulation is made. It does not, however, protect the marketplace results of that process. For example, if a group of businesses petitions a legislature for a statute that gives the businesses the authority to exclude competition by setting standards, *Noerr* would protect the group's right to obtain this legislation. Under the antitrust "state action" doctrine, however, private conduct approved by that statute still could be challenged unless it was "actively supervised" by a public official or agency.⁹² The same rule generally applies to federal regulatory standards: private standard setting promulgated under

⁸⁸ *City of Columbia v. Omni Outdoor Adver., Inc.*, 499 U.S. 365, 367–68 (1991).

⁸⁹ *Id.* at 379–80.

⁹⁰ *Noerr*, 365 U.S. at 129–30.

⁹¹ *E.g.*, *TEC Cogeneration, Inc. v. Fla. Power & Light Co.*, 76 F.3d 1560, 1573 (11th Cir. 1996) (government restrictions on power cogeneration), *modified on reh'g*, 86 F.3d 1028 (11th Cir. 1996); *Nat'l Bd. for Certification in Occupational Therapy, Inc. v. Am. Occupational Therapy Ass'n*, 24 F. Supp. 2d 494, 508–09 (D. Md. 1998) (legislative adoption of licensing restrictions on occupational therapists); *Christian Mem'l Cultural Ctr. v. Mich. Funeral Dirs. Ass'n*, 998 F. Supp. 772, 778 (E.D. Mich. 1998) (regulations directed at discount funeral services); *see* I AREEDA & HOVENKAMP, *supra* note 60, ¶¶ 201–204, at 145–214 (3d ed. 2006).

⁹² *Patrick v. Burget*, 486 U.S. 94, 102–06 (1988) (finding inadequate state supervision to immunize physician discipline by peers); *Pinhas v. Summit Health, Ltd.*, 894 F.2d 1024, 1030 (9th Cir. 1989) (finding inadequate state supervision to immunize private standard setting for surgical procedures), *aff'd on other grounds*, 500 U.S. 322 (1991); *Jiricko v. Coffeyville Mem'l Hosp. Med. Ctr.*, 700 F. Supp. 1559, 1563 (D. Kan. 1988) (similar); *cf.* *Earles v. State Bd. of Certified Pub. Accountants of La.*, 139 F.3d 1033, 1041 (5th Cir. 1998) (holding that state board setting accountancy standards needs no supervision); *Health Care Equalization Comm. v. Iowa Med. Soc'y*, 851 F.2d 1020, 1027 (8th Cir. 1988) (immunizing exclusion of chiropractors from insurance coverage pursuant to medical society accreditation decision because a state official supervised the process).

such regimes is not immunized from the antitrust laws unless the relevant federal agency exercises sufficient oversight over the conduct.⁹³

The second way that claims arise that direct government involvement in private standard setting is anticompetitive is when a firm gives false information that distorts the process by which a government standard is created or applied.⁹⁴ The previously discussed standards holdup problem can implicate *Noerr* when the standard maker is the government. For example, in *In re Union Oil Co. of California (Unocal)*, a firm allegedly proposed standards for low-emission fuel to a state air quality agency while surreptitiously perfecting patent claims that covered those very standards.⁹⁵ Once the standards were adopted, the firm surprised rivals with the patents and requested large license fees.⁹⁶

As in the case of purely private standard setting, antitrust liability in holdup cases should be reserved for the relatively rare situation in which there is a clear misrepresentation to the government standard

⁹³ See *Silver v. N.Y. Stock Exch.*, 373 U.S. 341, 357–60 (1963) (holding that unsupervised discipline by NYSE, a private group, is not immunized); see also *MCI Commc'ns Corp. v. AT&T Co.*, 708 F.2d 1081, 1102–03 (7th Cir. 1983) (holding that AT&T's unilateral setting of standards for interconnection by competing carriers was not immunized when it was not sufficiently supervised by regulatory agency); *Litton Sys., Inc. v. AT&T Co.*, 700 F.2d 785, 807 (2d Cir. 1983).

⁹⁴ See *Israel v. Baxter Labs., Inc.*, 466 F.2d 272, 279 (D.C. Cir. 1972) (considering misrepresentations to FDA as part of drug approval process); cf. *St. Joseph's Hosp., Inc. v. Hosp. Corp. of Am.*, 795 F.2d 948, 955 (11th Cir. 1986) (finding that misrepresentations in application to state agency for certificate of need for new medical facility did not enjoy immunity).

⁹⁵ *In re Union Oil Co. of Cal. (Unocal)*, No. 9305, 2004 FTC LEXIS 115, at *6–7 (F.T.C. July 6, 2004).

⁹⁶ As the FTC observed:

Awareness of potential competitive harm is particularly important in settings like the one presented here. Government regulations such as CARB's standards may impose potent entry barriers capable of preserving market power over extended periods of time. Whereas an exercise of unprotected market power may sow the seeds of its own erosion if firms are free to enter and compete on equal terms with the incumbent, governmentally-enforced limits on entry may impede and even prevent that process. Consequently, misrepresentations that distort government decision making in ways that create or shield market power may inflict severe and long-lasting public harm. Such considerations support our conclusion that the substantial public interest in antitrust enforcement may outweigh countervailing policy reservations when those concerns are sufficiently muted.

Id. at *55–56 (citations omitted). The dispute eventually was resolved by a consent decree in which the FTC approved a merger between Unocal and Chevron, and Chevron agreed to dedicate the disputed patents to the public. See Press Release, Chevron, Federal Trade Commission Accepts Chevron's Acquisition of Unocal (June 10, 2005), available at http://www.chevron.com/news/press/2005/2005-06-10_1.asp.

maker and clear evidence that the agency relied on the misrepresentation in setting its standard. In addition, the usual structural requirements for an antitrust violation must be met. *Noerr* protects a right to petition the government, but not the right to make false statements to a government decisionmaker. And, of course, one does not even get to these issues unless it is clear that the resulting standard plus the defendant's IP rights create a clear likelihood of monopoly pricing. This could occur if the IP rights effectively excluded other firms from making the product subject to the standard and if that exclusion made it impossible for rival firms to compete effectively. Once again, the case for a patent law remedy such as equitable estoppel is at least as strong here as it is in the case of the private standard-setting organization.⁹⁷

CONCLUSION

Given the ubiquity of standard setting in our economy and its undisputed promotion of social welfare, claims of anticompetitive standard setting must be scrutinized very closely. Antitrust law is a fairly blunt instrument for dealing with such claims. Except in easy cases, antitrust factfinders lack the sophistication to pass judgment on the substantive merits of a standard. In any event, antitrust is not a roving mandate to question bad standards. It requires an injury to *competition*, and whether the minimum conditions for competitive harm are present often can be determined without examining the substance of the standard itself.

When government involvement in standard setting is substantial, antitrust challenges generally should be rejected. The petitioning process in a democratic system protects even bad legislative judgments from collateral attack. In any event, antitrust's purpose is to correct private markets. It is not a general corrective for political processes that have gone awry. The best case for antitrust liability in this context occurs when the government somehow has been deceived into adopting a standard that it would not have adopted had it known the true facts. Even then, nonantitrust remedies such as equitable estoppel are probably a superior solution.

⁹⁷ However, see *Bristol-Myers Squibb Co. v. Immunex Corp.*, 84 F. Supp. 2d 574, 578 (D.N.J. 2000), which concluded that because *Noerr* protected a firm's right to obtain an exclusive license based on alleged misrepresentations to the government, promissory estoppel based on the same alleged misrepresentations could not be used to prevent it from enforcing that right.