

PRODUCT MARKET DEFINITION FOR VIDEO PROGRAMMING

INTRODUCTION

“[E]ntertainment is an industry in which antitrust concepts such as product market . . . are exceptionally difficult to apply”¹ The problems of applying the tests of market definition in this industry have been recognized ever since the tests themselves were devised.² The Federal Communications Commission has suggested that all information and entertainment media are reasonable substitutes, that consumers consider them interchangeable for the same uses.³ If this regulatory definition were applied to antitrust cases, all media would be in the same market.⁴ Though this broad definition of the video market may be appropriate in other contexts,⁵ for antitrust cases it provides an

1. *National Ass'n of Theatre Owners v. FCC*, 420 F.2d 194, 204 (D.C. Cir. 1969), cert. denied, 397 U.S. 922 (1970).

2. See *United States v. E.I. du Pont de Nemours & Co.*, 351 U.S. 377, 423 (1956) [also referred to by commentators as the *Cellophane* case] (Warren, C.J., dissenting) (criticizing the majority's market definition because it “would apparently enable a monopolist of motion picture exhibition to avoid Sherman Act consequences by showing that motion pictures compete in substantial measure with legitimate theater, television, radio, sporting events, and other forms of entertainment”).

3. See, e.g., *In re Amendment of Sections 73.35, 73.240, and 73.636 of the Commission's Rules Relating to Multiple Ownership of AM, FM and Television Broadcast Stations*, 95 F.C.C.2d 360, 387–89 & n.101 (1983) (Notice of Proposed Rulemaking) [hereinafter Amendment Notice]; *In re Amendment of Section 73.3555, [formerly Sections 73.35, 73.240, and 73.636] of the Commission's Rules Relating to Multiple Ownership of AM, FM and Television Broadcast Stations*, 100 F.C.C.2d 17, 25–26, 54 (1984) (Report and Order) [hereinafter Amendment Report and Order]; see also *National Ass'n of Theatre Owners*, 420 F.2d at 204 (ruling that the FCC was not arbitrary and capricious in finding that subscription television was substitutable and thus could compete with other forms of entertainment in the community); Majority Staff of the Subcomm. on Telecommunications, Consumer Protection, and Finance of the Comm. on Energy and Commerce, 97th Cong., 1st Sess., *Telecommunications in Transition: The Status of Competition in the Telecommunications Industry* 22, 279–80, 326 (Comm. Print 1981) (advocating a broad “video market” that excludes print and audio media) [hereinafter *Telecommunications in Transition*]; J. Levy & F. Setzer, *Measurement of Concentration in Home Video Markets* 41–42, 51–53 (FCC Office of Plans & Policy Staff Report, 1982) (discussing substitutability of media in context of communications regulation).

4. See, e.g., *Satellite Television & Associated Resources v. Continental Cablevision*, 714 F.2d 351, 355–56 (4th Cir. 1983) (affirming lower court's dismissal based on minimal market power, but disagreeing with lower court's acceptance of the parties' stipulation that pay television competed with “cinema, broadcast television, video disks and cassettes, and other types of leisure and entertainment-related businesses” on the grounds that such stipulation was based on inadequately proven product market definition), cert. denied, 465 U.S. 1027 (1984); see also *United States v. Tracinda Inv. Corp.*, 477 F. Supp. 1093, 1109 (C.D. Cal. 1979) (finding lack of market power because “other forms of entertainment and leisure collectively constitute a good substitute for consumer expenditures on motion pictures”).

5. See *infra* notes 114–15 and accompanying text. Some commentators have at-

approach that is conclusory and overinclusive given the recent, rapid changes in the video market. For antitrust purposes, a product market definition should focus on the content of video programming, as well as on the media themselves.

This Note proposes a three-step approach to defining product markets: first, define a tentative market of programs of like type. Second, segregate into their own market those program types shown on media to which consumers have special affinities. Finally, cluster into a single market those program types exhibited on certain multichannel media. Part I describes the variety of the media marketplace. Part II explains the basic principles used to define product markets in general. Part III applies those principles to video programming and sets out a model for defining the product market for that programming. Part IV provides examples of how the model functions.

I. VIDEO TECHNOLOGY AND PROGRAMMING

The past few years have seen an unprecedented rise in the number of outlets for public entertainment and information. Satellite television, cable television, and other exotic pay television technologies are now available to consumers in addition to the comparatively older technologies of print, motion pictures, radio, and broadcast television.⁶ To understand these new technologies, one must understand some basic terms and concepts.

A *medium* is a delivery system for conveying programs to the consumer.⁷ There are two types of media: single channel and multichannel. A *channel* is any portion of the electromagnetic spectrum capable of carrying intelligible images or sounds.⁸ If a medium is physically capable of carrying more than one channel simultaneously and if one person has editorial or access control over more than one channel, then the medium is a *multichannel medium*.⁹ A *single channel medium* is a me-

tempted to harmonize the competitive assumptions of this Note with the first amendment policy of "the widest possible dissemination of information from diverse and antagonistic sources." *Associated Press v. United States*, 326 U.S. 1, 20 (1945). However, the difficulty of defining adequate standards for such "diversity" makes comparisons difficult. See Amendment Notice, *supra* note 3, at 390-97 & nn.109-110. First amendment concerns are beyond the scope of this Note.

6. See Amendment Report and Order, *supra* note 3, at 26-27; Henry, *The Economics of Pay-TV Media*, in *Video Media Competition* 19 (E. Noam ed. 1985).

7. Cf. 47 U.S.C. § 309(i)(3)(C)(i) (1982) (defining "media of mass communications").

8. For example, channels would include the frequency bands for broadcast television and satellite television transmissions, and even the spectrum required (i.e., visible light) for projecting motion pictures. Cf. *Cable Communications Policy Act of 1984*, § 602(3), 47 U.S.C.A. § 522(3) (West Supp. 1986) (defining "cable channel").

9. See Noam, Introduction, in *Video Media Competition* 2 (E. Noam ed. 1985) (distinction of single and multichannel media is "not technical, but regulatory in nature, i.e., based on ownership rules and spectrum allocation").

dium on which one person controls at most one channel, even if the medium is physically capable of carrying more than one channel. For example, even though television sets can receive several channels, broadcast television is a single channel medium because FCC regulations prohibit any broadcaster from owning more than one channel in a viewing area.¹⁰

A *program* is a coherent sequence of video or audio information, regardless of the medium over which it is communicated.¹¹ An *exhibited program* is a program as conveyed by a particular medium and subject to the constraints of that medium. A *program type* is a group of programs set apart by similarities in format, length, or content, such that viewers consider them reasonably substitutable.¹² An *exhibited program type* is a program type subject to and restricted by the constraints of a particular medium.¹³

Broadly defined, a "video" medium is any medium that conveys moving visual images and sounds. However, most consumers generally use the word to refer only to television.¹⁴ In this Note, traditional broadcast television, live exhibition, cinema and the new technologies

10. See 47 C.F.R. § 73.3555(a) (1985).

11. Cf. Cable Communications Policy Act of 1984, § 602(16), 47 U.S.C.A. § 522(16) (West Supp. 1986) (defining "video programming").

12. According to Peter Steiner, the originator of the concept of "program types," two programs are of the same type if listeners of "any one of them would always prefer listening to one of the others to not listening if the particular program of their choice was discontinued. Preferences among programs (which are assumed exclusive among types) are thus nonexclusive within program types." Steiner, *Program Patterns and Preferences, and the Workability of Competition in Radio Broadcasting*, 66 Q.J. Econ. 194, 202 (1952). Steiner's analysis has been adopted for video programming. See, e.g., Beebe, *Institutional Structure and Program Choices in Television Markets*, 91 Q.J. Econ. 15, 16, 18 (1977). While some commentators claim that program types should be defined to correspond to industry or genre categories, see, e.g., Levin, *Program Duplication, Diversity, and Effective Viewer Choices: Some Empirical Findings*, 61 Am. Econ. Rev. (Papers & Proceedings) 81, 83 nn.1, 2 (1971); see also *United States v. Columbia Pictures Indus.*, 507 F. Supp. 412, 417 n.7 (S.D.N.Y. 1980) (accepting industry categories), *aff'd*, 7 Media L. Rep. (BNA) 1342 (2d Cir. 1981); *United States v. Columbia Pictures Corp.*, 189 F. Supp. 153, 164 (S.D.N.Y. 1960) (same), others claim that program types based upon traditional genres, industry classifications, or audience demographics are naive, see generally Greenberg & Barnett, *TV Program Diversity—New Evidence and Old Theories*, 61 Am. Econ. Rev. (Papers & Proceedings) 89, 91–93 (1971) (citing opposing studies and arguing that program types "should be based on audience behavior"). The analysis of this Note is compatible with any definition of program type based on consumer preference; this flexibility is necessary due to the current lack of definitive empirical data concerning consumer preferences. See *infra* notes 116–18 and accompanying text (judicial and industry definition of "program type").

13. These definitions can be clarified by an analogy. If the "medium" were the concrete of a public highway, then "channel" would refer to a lane on the highway. "Programs" would be individual vehicles; "program types" would be types of vehicles, such as automobiles, pickup trucks, or buses. "Exhibited program types" would be types of vehicles on the road, subject to road conditions and the rules of the road.

14. Cf. Cable Communications Policy Act of 1984, § 602(16), 47 U.S.C.A. § 522(16) (West Supp. 1986) (defining "video programming").

of videocassette recorders, satellite, cable and other pay television are considered video media.¹⁵

Because the characteristics of the various video media affect the operation of video markets, understanding these characteristics is essential. They are summarized in Table A:

15. This Note does not consider print, radio, and still photography because they cannot display real-time moving images and sounds, and because converting texts, radio programs, and still photography into video media is much more difficult than converting video programming from one video medium to another. Cf. Kaplan, *The Impact of Cable Television Services on the Use of Competing Media*, 22 *J. Broadcasting* 155, 158, 165 n.15 (1978) (unable even to test for significant competitive effect of cable on print media due to small number of respondents regarding newspaper, book, and magazine reading); but cf. *id.* at 159 (suggesting some substitutability between news on radio and on other media). "Real-time" programming is programming transmitted at an unmodified rate. See Amendment Notice, *supra* note 3, at 387-88 n.101. For similar reasons, this Note does not consider textual material or interactive services available on electronic media. See *Telecommunications in Transition*, *supra* note 3, at 225.

TABLE A

Medium	No. of Channels	Pricing ¹⁶
Broadcast television ¹⁷	Single	No Charge
Cable television ¹⁸	Multiple	Pay & No Charge
Other pay television ¹⁹	Single & Multiple	Pay & No Charge
Satellite television ²⁰	Single & Multiple	Pay & No Charge
Videocassette recorders ²¹	Multiple	Pay
Cinema	Single & Multiple	Pay
Live exhibition	Single & Multiple	Pay & No Charge

16. Pricing refers to whether consumers must pay for programming through a direct charge, or indirectly through advertiser support. See *infra* note 27 and accompanying text.

17. As used here, the term includes all UHF and VHF broadcasting, including low-power television (LPTV). See Henry, *supra* note 6, at 47-51.

18. Cable television distributes programming by wire. See Note, *The Development of Video Technology*, 25 N.Y.L. Sch. L. Rev. 789, 793 (1980).

19. For purposes of this Note, other pay-TV is pay television provided to the home other than by a franchised cable operator or direct to the home by satellite. It includes, for example, subscription television (STV), a single-channel television broadcast system in which signals are scrambled so that only paid subscribers can watch, see Henry, *supra* note 6, at 42-47, and multipoint distribution service (MDS), which transmits programs via microwave from an omnidirectional antenna to viewers within its line of sight. Formerly a single-channel service, MDS has now become multichannel MDS (MMDS). See *In re Amendment of Parts 2, 21, 74 and 94 of the Commission's Rules and Regulations in regard to frequency allocation to the Instructional Television Fixed Service, and the Private Operational Fixed Microwave Service*, 94 F.C.C.2d 1203 (1983) (Report and Order); Henry, *supra* note 6, at 31-35. Finally, satellite master antenna television (SMATV) is considered a form of other pay-TV, though in some ways it is a hybrid of cable television and direct-to-home satellite television. See Henry, *supra* note 6, at 22-31. When this Note refers to multichannel other pay-TV it refers to MMDS and SMATV, currently the two most viable multichannel competitors to cable. See Henry, *supra* note 6, at 22-23, 31.

20. Satellite TV includes television receive-only (TVRO) and direct broadcast satellite (DBS) television, both of which involve direct reception in the home of television signals relayed by communications satellites. Consumer reception of programs via TVRO television is governed by the Cable Communications Policy Act of 1984, § 705, 47 U.S.C.A. § 605 (West Supp. 1986). DBS service has not yet begun, but was authorized on an experimental basis by *In re Inquiry into the development of regulatory policy in regard to Direct Broadcast Satellites for the period following the 1983 Regional Administrative Radio Conference*, 90 F.C.C.2d 676 (1982) (Report and Order), modified by *National Ass'n of Broadcasters v. FCC*, 740 F.2d 1190 (D.C. Cir. 1984).

21. Videocassette recorders (VCRs) are similar to audio recording devices, but allow recording and playback of television programming, or playback of prerecorded videocassettes. See Stern, Krasnow & Senkowski, *The New Video Marketplace and the Search for a Coherent Regulatory Philosophy*, 32 Cath. U. L. Rev. 529, 556-57 (1983). The similar but currently moribund technology of videodisks utilizes phonograph-type records, rather than erasable videocassettes; with present technology consumers cannot record upon them. See *id.* at 557.

This Note does not distinguish between the rental and sale of prerecorded videocassettes. But see generally Waterman, *Prerecorded Home Video and the Distribution*

There are at least four markets related to video programming:²² the advertising market,²³ the program acquisition market,²⁴ the program distribution market,²⁵ and the program exhibition market. In the program exhibition market, exhibitors²⁶ display programs to consumers.²⁷ Each market raises its own antitrust issues.²⁸ This Note focuses solely on the exhibition market, the least analyzed of the four markets.²⁹

of Theatrical Feature Films, *in* *Video Media Competition* 234 (E. Noam ed. 1985) (making this distinction).

22. See J. Levy & F. Setzer, *supra* note 3, at 39-40 (outlining three-level video market); see also B. Owen, *Economics and Freedom of Expression* 12-14 (1975) (extending three-level analysis to all media).

23. See J. Levy & F. Setzer, *supra* note 3, at 39-40; Bennett, *Media Concentration and the FCC: Focusing with a Section Seven Lens*, 66 *Nw. U.L. Rev.* 159 (1971).

24. In the program acquisition market, distributors buy programs from production companies, which include motion picture studios, independent producers, news services, and sports producers. See *United States v. Columbia Pictures Indus.*, 507 F. Supp. 412, 417-18 (S.D.N.Y. 1980), *aff'd*, 7 *Media L. Rep.* (BNA) 1342 (2d Cir. 1981). Distributors, who are essentially wholesalers, assemble programs into groups for sale in the distribution market. Distributors include the three traditional television networks, program syndicators, cable programmers, and distributors of videocassettes for resale or consumer rental. See J. Levy & F. Setzer, *supra* note 3, at 39-40, 59-60.

25. In this market, distributors sell to exhibitors, including local television stations, cable systems, cinemas, and videocassette rental stores. See J. Levy & F. Setzer, *supra* note 3, at 39-40.

26. "Exhibitor" is a technical term in the motion picture industry that refers to the company that actually projects a motion picture for viewing by the public in a cinema. This Note uses the term in a more general sense to refer to any company selling (or otherwise making available) the right to view programs intended for the public on any consumer video technology.

27. Exhibitors are compensated either by consumers through direct charges (pay television) or by advertisers. See B. Owen, *supra* note 22, at 115 (Advertiser-supported television is free "only in the sense that viewers cannot pay directly for programs"; viewers instead pay indirectly through higher prices on advertised goods.). Advertisers purchase time for their advertisements in the advertising market from distributors (e.g., networks) or from exhibitors (e.g., local broadcast TV stations). See Bennett, *supra* note 23, at 175-78.

28. See, e.g., *Levitch v. Columbia Broadcasting Sys.*, 495 F. Supp. 649 (S.D.N.Y. 1980) (program acquisition market), *aff'd*, 697 F.2d 495 (2d Cir. 1983); *United States v. Tracinda Inv. Corp.*, 477 F. Supp. 1093 (C.D. Cal. 1979) (program acquisition and distribution market); White, *Antitrust and Video Markets*, *in* *Video Media Competition* 338 (E. Noam ed. 1985) (distribution market).

29. This lack of antitrust analysis is due to prior FCC regulation of certain media in the exhibition market and to the fact that the technologies are new.

This Note deals only with market definition, which is the first step to an antitrust case. See generally Donovan, *Antitrust Considerations Applicable to Programming Ventures*, *in* *Practising Law Institute, New Program Opportunities in the Electronic Media* (1983) (discussing antitrust offenses involving video programming); Price & Nadel, *Antitrust Issues in the New Video Media*, 3 *Cardozo Arts & Ent. L.J.* 27, 43-52 (1984) (analysis of specific antitrust offenses in program exhibition market).

II. THE LAW OF MARKET DEFINITION

The first step in an antitrust inquiry³⁰ is to determine the relevant market and then the degree of market power that the defendant possesses in it.³¹ Defining the relevant market requires a determination of the products correctly included in the market and the geographic extent of the market. Once the product and geographic markets³² have been defined, market share is measured, and market power inferred from market share.³³

30. The Sherman, 15 U.S.C. §§ 1-7 (1982), and Clayton, 15 U.S.C. §§ 12-27 (1982), Antitrust Acts sanction a variety of practices that limit free competition. Section 1 of the Sherman Act declares "[e]very contract, combination . . . or conspiracy, in restraint of trade or commerce . . . to be illegal." 15 U.S.C. § 1 (1982). Section 2 prescribes civil and criminal penalties for "[e]very person who shall monopolize, or attempt to monopolize . . . any part of . . . trade or commerce . . ." 15 U.S.C. § 2 (1982). Section 7 of the Clayton Act declares that "no person . . . shall acquire . . . any . . . stock . . . where in any line of commerce . . . in any section of the country, the effect of such acquisition may be substantially to lessen competition, or to tend to create a monopoly." 15 U.S.C. § 18 (1982). These statutes do not, however, define the key terms "monopolize" or "monopoly." Filling that gap, courts have defined monopoly power as "the power to control prices or exclude competition." *United States v. E.I. du Pont de Nemours & Co. (Cellophane)*, 351 U.S. 377, 391 (1956).

31. Section 2 monopolization cases prior to *Cellophane* focused on monopoly power as the primary issue and considered market definition a subsidiary question. The *Cellophane* analysis departed from previous caselaw because it explicitly treated market definition as a step prior to determinations of market power. See Stein & Brett, *Market Definition and Market Power in Antitrust Cases*, 24 N.Y.L. Sch. L. Rev. 639, 659 & nn.105, 109 (1979). Compare *Cellophane*, 351 U.S. at 423-24 (Warren, C.J., dissenting) (arguing that *Cellophane* approach is inconsistent with precedent) with *Cellophane*, 351 U.S. at 395 n.23 (distinguishing narrower market definitions in previous cases because those cases concerned attempt or conspiracy to monopolize).

These determinations do not apply to a section 1 per se restraint of trade case. See, e.g., *Columbia Metal Culvert v. Kaiser Aluminum*, 579 F.2d 20, 26 & n.9 (3d Cir.), cert. denied, 439 U.S. 876 (1978).

32. Pursuant to the statutory prohibition against "creat[ing] a monopoly" in "any section of the country," 15 U.S.C. § 18 (1982); see *Brown Shoe Co. v. United States*, 370 U.S. 294, 336-37 (1962), courts have defined "geographic market" as the "area of effective competition," see *United States v. Philadelphia Nat'l Bank*, 374 U.S. 321, 359 (1963), the area in which consumers reasonably turn to obtain substitute products, see *id.*, or the area defined by actual sales patterns and customer convenience and preference, see *id.* at 358. This Note does not concentrate on geographic markets. However, because the tests for product market definition are similar to those for geographic market definition, the analysis developed here can be applied to geographic markets as well.

For examples of geographic market definitions for video programming, see, e.g., *Ralph C. Wilson Indus. v. American Broadcasting Cos.*, 598 F. Supp. 694, 703 (N.D. Cal. 1984), *aff'd*, 1986-1 Trade Cas. (CCH) ¶ 67,185 (9th Cir. 1986) (San Francisco bay area); *Satellite Television & Associated Resources v. Continental Cablevision*, 714 F.2d 351, 357 (metropolitan Richmond, Virginia); see also J. Levy & F. Setzer, *supra* note 3, at 53-58 (discussing alternative definitions); Botein, *Jurisdictional and Antitrust Considerations in the Regulation of New Communications Technologies*, 25 N.Y.L. Sch. L. Rev. 863, 882 (1979) (same).

33. See *United States v. Grinnell Corp.*, 384 U.S. 563, 571 (1965). But see *infra* note 56 and accompanying text (market definition may be a limited measure of market

A. Structural Criteria for Market Definition

Some product markets can be defined by using structural criteria. These criteria, substitutability and clustering, are based upon consumer buying patterns.

1. *Substitutability*. — The Supreme Court's basic test for defining the "part of . . . trade or commerce"³⁴ that comprises a single market is whether the products in it have "reasonable interchangeability for the purposes for which they are produced—price, use and qualities considered."³⁵ The more interchangeable the products, the more likely it is that they should be within the same product market. In addition to considering the ability of consumers to substitute one product for another,³⁶ courts look to the substitutability of production, that is, the ease with which producers who do not currently make the relevant product could alter their production to produce it.³⁷ Thus, a producer who does not make a given product may still be included in the same market with producers of that product, if the producer can easily alter production to make the product.³⁸

2. *Clustering*. — When products are usually sold or bought as a group, the "cluster market" doctrine requires them to be grouped together into a single market.³⁹ Under the cluster market approach, a group of products that are not substitutes for one another and are not

power). Defining an adequate measure of market share for exhibitors presents related, but complex issues that are beyond the scope of this Note. See generally J. Levy & F. Setzer, *supra* note 3, at 61–99 (market concentration analysis for video programming).

34. 15 U.S.C. § 2 (1982) (emphasis added). See *Grinnell*, 384 U.S. at 571, 573 (interpreting *Cellophane* to mean "that commodities reasonably interchangeable make up that 'part' of trade or commerce which § 2 protects against monopoly power" and finding "no reason to differentiate between 'line' of commerce in the context of the Clayton Act and 'part' of commerce for purposes of the Sherman Act").

35. *Cellophane*, 351 U.S. at 395, 404.

36. This ability to substitute is defined by the economic variable, "cross elasticity of demand." See Landes & Posner, *Market Power in Antitrust Cases*, 94 Harv. L. Rev. 937, 960 n.39 (1981).

37. See, e.g., *Twin City Sportservice Inc. v. Charles O. Finley & Co.*, 512 F.2d 1264, 1271 (9th Cir. 1975) (majority of cases considering substitutability use substitutability of demand, but courts have "not been unaware" of substitutability of production), cert. denied, 459 U.S. 1009 (1982). But see *Transamerica Computer Co. v. International Bus. Machines Corp.*, 481 F. Supp. 965, 979, 985 (N.D. Cal. 1979) (evidence does not support supply substitutability), *aff'd*, 698 F.2d 1377 (9th Cir.), cert. denied, 464 U.S. 955 (1983). This type of interchangeability is often defined by the economic variable, "cross elasticity of supply." See Landes & Posner, *supra* note 36, at 948–49.

38. See Landes & Posner, *supra* note 36, at 945 n.19, 948–49. Wooden table legs and wooden baseball bats are not ordinarily demand substitutes, but they may be supply substitutes if the table leg manufacturer could easily alter its manufacturing process to produce bats. If they were supply substitutes, they would be in the same antitrust market.

39. A growing body of precedent supports the cluster market approach. See, e.g., *United States v. Household Fin. Corp.*, 602 F.2d 1255, 1258 (7th Cir. 1979); *United States v. American Tel. & Tel. Co.*, 524 F. Supp. 1336, 1375–76 (D.D.C. 1981). However, academic commentary has been limited. See Reasoner, Turner, Glassman, Collins

formally tied together⁴⁰ are "clustered" into one antitrust market; the cluster is treated as a single product.⁴¹ Some lower courts have defined cluster markets based on the "existence of trade associations; census classifications; functional complementarity; common technology; distribution or marketing [practices]; a unique product group; . . . other market characteristics"⁴² and supply substitutability.⁴³

Another approach stresses consumer behavior: if consumers tend to buy several products in one place, then the products should be clustered.⁴⁴ This consumer behavior is best explained by the "one-stop shopping principle,"⁴⁵ which postulates that under some conditions consumers can reduce their per-product transaction cost by purchasing all their products in one place.⁴⁶ The tendency to purchase several products from one supplier is augmented by bundling benefits, the savings that occur when two different products are sold together at a reduced price.⁴⁷ When a significant number of consumers⁴⁸ takes advantage of one-stop shopping or bundling benefits, the relevant products should be clustered.⁴⁹ Conversely, if consumers persistently buy a product without taking advantage of one-stop shopping or bun-

& Kaplan, Panel Discussion on Market Definition in Merger & Monopolization Cases, 49 Antitrust L.J. 1167, 1179 (1980).

40. "Tying" occurs when "a seller requires that the buyer of a product purchase a second, distinct product as a condition of purchasing the first." Department of Justice, Vertical Distribution Restraints ¶ 5.1, reprinted in 5 Trade Reg. Rep. (CCH) ¶ 50,473 (Jan. 23, 1985) (footnote omitted). Tying itself can constitute an antitrust violation. See *infra* note 78.

41. See Note, Rationalizing Antitrust Cluster Markets, 95 Yale L.J. 109, 117 n.41 (1985). An example of such clustering is present in the leading case of *United States v. Philadelphia Nat'l Bank*, 374 U.S. 321, 356 (1963). There, the Supreme Court defined commercial banking services—checking accounts, commercial loans, and savings accounts—as a single cluster market separate from the markets for the services of other financial institutions such as savings banks and commercial loan companies.

42. Note, *supra* note 41, at 112–13 (footnotes omitted); see also *id.* at nn.15–20 (citing cases).

43. See *id.* at 109 n.3.

44. See *Philadelphia Nat'l Bank*, 374 U.S. at 356–57 (consumers usually purchased all their banking at one commercial bank and would not purchase individual products elsewhere because some of the commercial bank's products were distinctive, such as checking accounts, or enjoyed cost advantages or "settled consumer preference").

45. See *In re Grand Union Co.*, 102 F.T.C. 812, 998–99, 1044 (1983); Note, *supra* note 41, at 115.

46. See Harris & Jorde, Antitrust Market Definition: An Integrated Market Approach, 72 Calif. L. Rev. 1, 25–26 & n.76 (1984); see also Note, *supra* note 41, at 110 (courts should cluster only "transactional complements," i.e., products sold such that consumer transaction costs are significantly reduced when they are bought from a single company).

47. See L. Philips, The Economics of Price Discrimination 176–77 (1983).

48. See *United States v. Household Fin. Corp.*, 602 F.2d 1255, 1258, 1260–61 & n.7 (7th Cir. 1979), cert. denied, 444 U.S. 1044 (1980).

49. See *United States v. Phillipsburg Nat'l Bank*, 399 U.S. 350, 360–61 (1970).

dling benefits,⁵⁰ the product should be excluded from the cluster market, even if it is also sold by suppliers of the entire cluster.⁵¹ If particular suppliers sell only part of the cluster, they should be excluded from the cluster market.⁵² Since consumers cannot buy the whole cluster from the partial suppliers, they cannot save transaction costs or gain bundling benefits.⁵³

B. Market Performance and Supplier Conduct as Criteria for Market Definition

The structural market definitions just described must be supplemented with analysis based on the market's competitive performance⁵⁴ and on supplier conduct.⁵⁵ If a supplier can control the price of a product, but the tentative market definition and the share of that market imply no such power, then the market definition must be recast.⁵⁶

1. *Definition of Price Discrimination.* — One measure of competitive performance is price discrimination.⁵⁷ Price discrimination is the charging of different net prices to different buyers of the same product

50. See, e.g., *In re Grand Union Co.*, 102 F.T.C. 812, 1044-45 (1983) (evidence that some consumers buy "bread, milk, beer, and soft drinks" from both supermarkets offering a full cluster of products as well as from convenience stores with limited inventory).

51. Cf. Note, *supra* note 41, at 125 & n.71 (excluding product from cluster is "at least a plausible alternative" to a cluster definition when consumers purchase from partial cluster suppliers).

52. When defining the commercial banking market, the Supreme Court has repeatedly stressed this point by reversing lower courts that have included partial cluster suppliers. See *United States v. Connecticut Nat'l Bank*, 418 U.S. 656, 662-66 (1974); *Phillipsburg Nat'l Bank*, 399 U.S. at 360-61. But see *Grand Union Co.*, 102 F.T.C. at 1045 (including partial cluster producers in cluster market of grocery stores).

If significant numbers of consumers buy from the partial supplier, then there probably is no cluster market at all because consumers are not one-stop shopping.

53. Harris & Jorde, *supra* note 46, at 33.

54. See generally Department of Justice, Merger Guidelines ¶ 3.45, reprinted in 2 Trade Reg. Rep. (CCH) ¶ 4493.405 (June 14, 1984) (defining performance criteria); L. Sullivan, *Handbook of the Law of Antitrust* §§ 26-30, at 82-90 (1977) (same).

55. See generally Department of Justice, Merger Guidelines ¶ 3.44, reprinted in 2 Trade Reg. Rep. (CCH) ¶ 4493.404 (June 14, 1984) (defining conduct criteria); L. Sullivan, *supra* note 54, §§ 25, 32, at 80-82, 92-93 (same).

56. Cf. 3 P. Areeda & D. Turner, *Antitrust Law* ¶ 804 (1978) ("Were market definition . . . to be the sole presumptive basis for finding substantial market power, the burden of proof for establishing a narrow definition would be heavy, and close questions would be resolved against the plaintiff [W]here there is independent proof of substantial power . . . market definition is less critical"); 2 *id.* ¶ 507 (discussing limitations of market definition and reasons for using it); M. Handler, H. Blake, R. Pitofsky & H. Goldschmid, *Cases & Materials on Trade Regulation* 231 (2d ed. 1983) (tentative market definition should be supplemented by evidence of "durable and significant" market power) [hereinafter M. Handler].

57. See *United States v. United Shoe Machinery Corp.*, 110 F. Supp. 295, 325-29 (D. Mass. 1953) (per curiam), *aff'd*, 347 U.S. 521 (1954); Department of Justice, Merger Guidelines ¶ 2.13, reprinted in 2 Trade Reg. Rep. (CCH) ¶ 4492.103 (June 14, 1984); 2 P. Areeda & D. Turner, *supra* note 56, at ¶ 514; L. Sullivan, *supra* note 54, § 29, at 88-89.

so as to strip some purchasers of their consumer surplus.⁵⁸ For example, if the cost to a seller of each of two apples is the same, there is price discrimination if the seller sells an apple to *A* for \$1 and to *B* for \$2.

For price discrimination to occur, four conditions must be satisfied.⁵⁹ First, consumers must have differing intensities of demand;⁶⁰ that is, for the seller to discriminate, *A* must value the apple at \$1, while *B* values it at \$2. Second, the seller must be able to discover these differing intensities⁶¹ to sort consumers by the intensities of their demands.⁶² Even if *A* values the apple at \$1 and *B* at \$2, the seller cannot price discriminate unless he knows these differences. Certain pricing techniques⁶³ cause consumers to reveal the intensity of their demands and thus to sort themselves into groups for price discrimination. Third, the seller must have some monopoly power,⁶⁴ which can be the traditionally recognized monopoly power or power derived from the seller's product differentiation.⁶⁵

Finally, buyers must not be able to resell, or "arbitrage," the commodity among themselves.⁶⁶ In the example above, *A* must not be able to buy 2 apples at \$1 each and resell one to *B* for \$1.50. If arbitrage is possible, the original seller cannot price discriminate, since if he attempts to do so, those charged higher prices will defeat his effort by buying in the resale market. An important factor in determining whether arbitrage is possible is whether the product is a good⁶⁷ or a

58. See L. Philips, *supra* note 47, at 5, 11-14; see also B. Owen, J. Beebe & W. Manning, *Television Economics* 56 n.f (1974) (defining consumer surplus as difference between what customers pay for a product and what it is worth to them) [hereinafter *Television Economics*]. When price differences reflect only cost differences (for example, due to different transportation costs), then price discrimination does not occur. See L. Philips, *supra* note 47, at 6-7.

59. See L. Philips, *supra* note 47, at 16.

60. *Id.*

61. See *id.*

62. The ability to sort consumers is particularly important when the product is a "public good." See *Television Economics*, *supra* note 58, at 15. Video programming is a public good because "[u]nlike the purchase of a sweater or a car, one person's viewing of a particular program in no way limits any other consumer from viewing exactly the same program." Woodbury, Comment: Welfare Analysis and the Video Marketplace, in *Video Media Competition* 274 (E. Noam ed. 1985). Exhibitors can force all consumers to pay by implementing an "exclusion mechanism"—e.g., a ticket booth. Electronic media, such as other pay-TV, implement exclusion mechanisms by scrambling the signal, and renting descrambler equipment to paying customers. See Henry, *supra* note 6, at 42.

63. For example, volume discounts in excess of cost savings. See *infra* notes 79-85 and accompanying text (commodity bundling).

64. See L. Philips, *supra* note 47, at 16.

65. See *id.*

66. See *id.*

67. Goods are "material or physical objects, either natural or manmade, used to satisfy human needs or desires." C. Ammer & D. Ammer, *Dictionary of Business and Economics* 180 (1977).

service⁶⁸ since goods can be arbitrated but many services cannot.⁶⁹ The Supreme Court recognized the distinction for antitrust purposes between goods and services in *United States v. Grinnell Corp.*,⁷⁰ in which central station alarm services were held to be a separate (service) market from security goods such as alarm equipment and nightwatchmen.⁷¹

a. *Temporal Price Discrimination.* — Price discrimination can occur over time, if consumers are charged different prices for the same product at different times.⁷² Consumers who value the product highly pay a greater early price; consumers who value it less highly wait for a lower, later price.

The motion picture industry was highly adept at this practice during the 1930s and 1940s. At that time, motion pictures were exhibited in a series of "runs." Each run was separated by a block of time, known as a "clearance," in which the movie was not exhibited.⁷³ The price dropped at each run.⁷⁴ By manipulating runs, clearances, and the prices within each run, the industry could capture more of the surplus

68. Services are "actions performed to satisfy [human] needs or desires." See C. Ammer & D. Ammer, *supra* note 67, at 180. This Note uses the term "product" to encompass both goods and services. But see *United States v. Grinnell Corp.*, 384 U.S. 563, 572 (1966) (using "product" to refer to goods alone).

69. Services applied to the person, such as legal services, and to the home, such as electric or water service, generally cannot be arbitrated. See L. Philips, *supra* note 47, at 14. For example, if a seller sells lightbulbs and furnishes electric power to the home, the lightbulbs are a good and the electric power is a service. If seller discriminates in price on the bulbs and the electricity, its customers can arbitrage the bulbs but not the electricity, because consumers cannot transport the electricity from one place to another. If consumers used the electricity to recharge batteries, then by trading in the recharged batteries they could indirectly arbitrage the electricity.

When a product is a public good, see *supra* note 62, the nature of the exclusion mechanism determines whether the public good can be arbitrated. If the exclusion mechanism is a good, then arbitrage is possible. For example, the exclusion mechanism for a cinema is a movie ticket, a good that can be arbitrated through scalping. The exclusion mechanisms for cable are linked to provision of the service to an individual's home, and cannot be arbitrated. See R. Posner, *Cable Television, The Problems of Local Monopoly 2* (Rand Corp. Memorandum No. RM-6309-FF, 1970).

70. 384 U.S. 563 (1966).

71. *Id.* at 573. Customers who used alarms wired from their premises to a central station could not use arbitrage to protect themselves from price discrimination because they could not move another customer's wires to their premises. In contrast, users of equipment or watchmen could purchase these economic goods from another consumer, if the producer attempted to price discriminate. See M. Handler, *supra* note 56, at 228. This type of price discrimination, which could, for example, be based upon the customer's location or type of business, is termed "pure" price discrimination. See R. Posner, *supra* note 69, at 2.

72. This time difference may create different products or merely different product markets. For example, foals, yearlings, and colts are all horses, but may be different products for purposes of racing.

73. See *United States v. Paramount Pictures*, 334 U.S. 131, 144-48 & n.6 (1948).

74. See Waterman, *supra* note 21, at 232 (detailed historical example).

of consumers who valued the motion pictures highly.⁷⁵ Industry practices in the distribution market⁷⁶ applying these principles, which led to the higher prices in the exhibition market, were enjoined in *United States v. Paramount Pictures*.⁷⁷

b. *Commodity Bundling*. — Another form of price discrimination is commodity bundling, a form of tying,⁷⁸ which occurs when two different products are sold together for less than the sum of their individual prices.⁷⁹ For example, a cable company that offers a discount to those who buy more than one service is bundling the services.⁸⁰ Here, the individual products could be bought separately from the bundle. This form of bundling is called "mixed."⁸¹ "Pure bundling" occurs when individual products cannot be purchased separately.⁸²

Because purchasers of single products and purchasers of the bundle pay different prices per individual product,⁸³ mixed bundling not justified by cost savings is a form of price discrimination. Though purchasers of the bundle pay a higher total price for the bundle than single-product purchasers pay for an individual product, the purchasers of the bundle pay a smaller per-product price than do the single-product purchasers.⁸⁴ The single-product purchasers thus are stripped of the consumer surplus that they could have gained by purchasing at the bundle price.⁸⁵

2. *Effect of Price Discrimination on Market Definition*. — Leading commentators have read *Grinnell*⁸⁶ to require that products subject to price discrimination be placed in their own markets.⁸⁷ If the market were

75. See *id.* at 231; L. Philips, *supra* note 47, at 75.

76. See *supra* note 25 and accompanying text. Distributors sold motion pictures to exhibitors only in bundles, a practice known as "block booking." See *Paramount Pictures*, 334 U.S. at 156-59; see also Stigler, *United States v. Loew's Inc.: A Note on Block Booking*, 1963 Sup. Ct. Rev. 152 (giving example of how block booking operates as price discrimination); *infra* notes 79-85 and accompanying text (commodity bundling).

77. 334 U.S. 131 (1948).

78. See *supra* note 40. Tying includes pure and mixed bundling. Section 1 of the Sherman Act, 15 U.S.C. § 1 (1982), prohibits unreasonable tying in the form of pure bundling, see *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2 (1984), and as mixed bundling, see *In re Data General Antitrust Litigation*, 490 F. Supp. 1089, 1111 (N.D. Cal. 1980).

79. See Adams & Yellen, *Commodity Bundling and the Burden of Monopoly*, 90 Q.J. Econ. 475, 475, 478 (1976).

80. See K. Thorpe, *Cable Television, Market Power and Regulation* 28-34 (Rand Corp. Paper No. P-7095-RGI, 1985) (applying commodity bundling to cable systems).

81. See Adams & Yellen, *supra* note 79, at 478.

82. See *id.*

83. See *id.*, at 488-89; *supra* note 58.

84. See L. Philips, *supra* note 47, at 181.

85. See Adams & Yellen, *supra* note 79, at 488. Though "commodity bundling generally leads to welfare losses when compared with perfect competition," it need not always do so. See *id.* at 494-95 (giving example).

86. 384 U.S. 563 (1966).

87. See M. Handler, *supra* note 56, at 228; see also Department of Justice, *Merger*

broadly defined to include products not subject to price discrimination, the price discriminator would have only a small market share and therefore little perceived market power.⁸⁸ However, the existence of persistent price discrimination contradicts this conclusion.⁸⁹ Therefore, to account for the seller's power, the market must be defined narrowly.⁹⁰

The dangers of price discrimination are particularly visible when considered in the context of "diehards," consumers who have a decided preference for a particular product even though others find the product substitutable.⁹¹ The Supreme Court has dealt with this phenomenon, albeit not explicitly, in two leading cases. In *Grinnell*,⁹² the diehard consumers were companies that could not switch from central station alarm services to other security systems.⁹³ The Court protected these diehard customers by defining a narrower market comprising only the central station alarm services that they purchased.⁹⁴ Although the facts are unclear in the Court's opinion, commentators believe that the case can be explained only if price discrimination is inferred.⁹⁵ *Grinnell* thus stands for the principle that products desired by diehards and subject to price discrimination should be segregated into their own markets.

Similarly, in *Paramount*,⁹⁶ the Court held that first run motion pictures should be placed in a different market from movies in other runs. The Court did not speak of price discrimination, but commentators have noted that diehard consumers—those unwilling to wait for cheaper movies in later runs—were subject to temporal price discrimination and were correctly protected by the Court.⁹⁷ This case stands

Guidelines ¶ 2.13, reprinted in 2 Trade Reg. Rep. ¶ 4492.103 (June 14, 1984) (if price discrimination possible, Justice Department "will consider" defining narrower market). But see L. Sullivan, *supra* note 54, § 17, at 62 (Supreme Court has never "articulated" this analysis).

88. See M. Handler, *supra* note 56, at 228; see also 2 P. Areeda & D. Turner, *supra* note 56, ¶ 514a, at 342 ("persistent price discrimination . . . indicates that the customers are in separate markets and that there is a lack of effective competition in the market where the higher net returns are made").

89. See 2 P. Areeda & D. Turner, *supra* note 56, ¶ 514a, at 342.

90. See Harris & Jorde, *supra* note 46, at 51 & n.164.

91. See M. Handler, *supra* note 56, at 228; see also *United States v. Household Fin. Corp.*, 602 F.2d 1255, 1260 & n.7 (7th Cir. 1979) (finding significant group of consumers with decided preferences), cert. denied, 444 U.S. 1044 (1980). This Note assumes that the relevant diehard groups are large enough and their demand intense enough to qualify under the *Grinnell* and *Paramount* diehard rationale.

92. 384 U.S. 563 (1966).

93. *Id.* at 574-75; see *supra* notes 70-71 and accompanying text.

94. 384 U.S. at 572-73.

95. See M. Handler, *supra* note 56, at 228; cf. 2 P. Areeda & D. Turner, *supra* note 56, ¶ 532d-e, at 405 (no clearly separate market unless price discrimination possible, but no explicit fact finding on that issue). But see L. Sullivan, *supra* note 54, § 16, at 57 (price discrimination rationale does not explain entire case).

96. 334 U.S. 131 (1948).

97. See *supra* notes 75-77 and accompanying text.

for the principle that programming in each run should be segregated into separate markets when consumers have decided preferences for programs in a particular run and are thus subject to temporal price discrimination.

Price discriminators should be grouped into markets based on their ability to discriminate.⁹⁸ Suppliers able to discriminate a great deal have sizeable market power, which should not be masked by including less powerful discriminators in the defined market. The less powerful discriminators should be in their own market: since they have less ability to discriminate, they may be less likely to violate the anti-trust laws, even though they have a comparatively large share of a small market. *Grinnell*⁹⁹ and *Paramount*¹⁰⁰ did not segregate suppliers with differing abilities to price discriminate, because in those cases all suppliers had roughly the same ability.¹⁰¹

III. DEFINING THE PRODUCT MARKET FOR VIDEO PROGRAMMING

Information and entertainment programs can be grouped into antitrust product markets in a variety of ways. One approach, adopted by the FCC¹⁰² and some courts,¹⁰³ considers all media substitutes for one another and groups them all into a single market. Under this view, cinemas, broadcast, cable, and satellite television—and even newspapers, magazines and books—constitute one broad “information market.”¹⁰⁴ Each medium is a product; any medium is substitutable for another. Another approach defines markets by program types, such as “motion pictures,” “news,” or “variety shows.”¹⁰⁵ This approach, for example, puts motion pictures appearing in movie theaters, on broadcast TV, on videocassette, and on cable movie channels into the same market.

Neither of these approaches alone adequately defines a product market for the video media. Both approaches ignore the special char-

98. This performance criterion should be considered in conjunction with structural and conduct criteria, see *supra* notes 54–56 and accompanying text. See 2 P. Areeda & D. Turner, *supra* note 56, ¶ 514(c), at 344 (“market definition may be necessary to determine whether power identified by price discrimination is individually held or shared among oligopolists.”).

99. 384 U.S. 563 (1966).

100. 334 U.S. 131 (1948).

101. See 2 P. Areeda & D. Turner, *supra* note 56, ¶ 532(c)–(e), at 403 (“no clear answer” but “probably reasonable” in *Grinnell* to combine different services into one market rather than separately).

102. See *supra* note 3.

103. See *supra* note 4.

104. See J. Levy & F. Setzer, *supra* note 3, at 41–53.

105. See Note, *Defining the Relevant Product Market of the New Video Technologies*, 4 *Cardozo Arts & Ent. L.J.* 75, 102 (1985) (proposing that exhibition market be defined in terms of program types); cf. *Levitch v. Columbia Broadcasting Sys.*, 495 F. Supp. 649, 664 (S.D.N.Y. 1980) (news and documentary program acquisition market), *aff'd*, 697 F.2d 495 (2d Cir. 1983).

acteristics of video program delivery: that viewers' buying patterns are determined by both program type and transmission medium,¹⁰⁶ that multichannel media compete differently from single-channel media,¹⁰⁷ and that technical and historical considerations¹⁰⁸ create different pricing structures,¹⁰⁹ which in turn affect the level of competition in the marketplace.

For these media, the correct product market definition—the one that best “recognize[s] competition where, in fact, competition ex-

106. Because it is difficult to measure viewer preferences empirically, few studies exist. See *Telecommunications in Transition*, supra note 3, at 360; see also J. Levy & F. Setzer, supra note 3, at 37–38 & n.8 (substitution of programming); id. at 52 (substitution of media). Those that do exist imply that viewers do consider program type when choosing what to watch. See H. Levin, *Fact and Fancy in Television Regulation* 65, 70 (1980) (estimates from Nielsen data show statistical differences in audience sizes between program types); see also Jeffres, *Cable TV and Viewer Selectivity*, 22 *J. Broadcasting* 167, 170–71, 173 (1978) (program content motivates more consumers' viewing choices than medium). Other studies, however, show that both medium and program type influence consumer choice. See Kaplan, supra note 15, at 159; Jeffres, supra, at 173 (viewers became more selective in their program choices as the number of channels on the cable medium increased); Rubin, *Television Uses and Gratifications: The Interactions of Viewing Patterns and Motivations*, 27 *J. Broadcasting* 37 (1983) (varying importance of medium and program type to different viewer groups). For example, one study has shown that consumers consider different media substitutable only for certain program types: cinemas and broadcast television were considered substitutable for motion pictures, but not for news. See Kaplan, supra note 15, at 159.

107. See Wildman & Owen, *Program Competition, Diversity, and Multichannel Bundling in the New Video Industry*, in *Video Media Competition* 250–52, 259–62 (E. Noam ed. 1985); see also Beebe, supra note 12, at 23–32 (number of channels can determine types of programs offered).

108. For historical reasons, the media are subject to widely differing levels of government regulation, including regulatory barriers to entry, which currently hinder equal competition and which are under reconsideration. See Geller, *The Role of Future Regulation*, in *Video Media Competition* 283 (E. Noam ed. 1985); Botein, *The FCC's Regulation of the New Video Technologies*, in *Video Media Competition* 311 (E. Noam ed. 1985); Abel, *Comment: Competing Technologies and Inconsistent Regulation*, in *Video Media Competition* 332 (E. Noam ed. 1985).

109. Different media have different costs of operation due to the different costs of their technologies. See Henry, supra note 6 (detailing differences). Different production costs alone perhaps could justify placing different media into different markets. Cf. *United States v. Corn Prod. Ref. Co.*, 234 F. 964 (S.D.N.Y. 1916) (L. Hand, J.) (excluding higher cost producer from the market, because competition from the higher cost producer limits the lower cost producer only when the *price* is above the cost of the higher cost producer). But see M. Handler, supra note 56, at 229 (commenting that opinion dealt only with fungible commodities and would be difficult to apply to differentiated products).

In addition, pricing of programming depends upon the exhibition medium. Broadcast television is advertiser supported, and seems “free” to the consumer. See supra note 27. Other pay-TV, cable and satellite television require payment per household per month. Videocassettes are rented per household per night; cinema tickets are sold per person per view. But see J. Levy & F. Setzer, supra note 3, at 45–46 (arguing that price differences are not important).

ists' ”¹¹⁰—focuses on exhibited program types in a three-step process. The analysis starts from a market defined by program type. Program types exhibited over certain media are then excluded from the market due to the characteristics of those media. Finally, the programs appearing on multichannel media—cable television, satellite television, and other pay TV—are grouped together into a single “cluster market,” distinct from the market for single-channel broadcast television, videocassette or cinema exhibition.

A. *Step One: Program Type*

Focusing on program type in the first instance best accommodates the fact that different media show different mixes of program types. Competition is measured only to the extent that different media exhibit the same program types.¹¹¹ If, on the other hand, one summarily were to conclude, without more detail, that the media compete, the amount of competition could be overstated.

This approach is consistent with the market definition of the program acquisition and program distribution markets. Most cases in these markets examine program type as well as medium.¹¹² While the product need not be identical at every level of distribution, using the same definition simplifies the analysis of certain offenses, such as those involving vertical integration.¹¹³ Although this approach is not consistent with that used in the advertising market,¹¹⁴ consistency is not required; products in the advertising and program delivery markets are distinct and therefore do not raise the same antitrust problems.¹¹⁵

110. *Transamerica Computer Co. v. International Bus. Machines Corp.*, 481 F. Supp. 965, 978 (N.D. Cal. 1979) (quoting *Brown Shoe Co. v. United States*, 370 U.S. 294, 326 (1962)), *aff'd*, 698 F.2d 1377 (9th Cir.), *cert. denied*, 464 U.S. 955 (1983).

111. Most economic models assume that program types compete with one another. See *Television Economics*, *supra* note 58, at 50–59 (reviewing models). There also may be competition within a program type. See *Greenberg & Barnett*, *supra* note 12, at 93; see also *supra* note 12 and accompanying text (flexibility of definition of program type can take account of this competition). But see *Noam, Economies of Scale in Cable Television: A Multiproduct Analysis, in Video Media Competition* 93, 118 n.26 (E. Noam ed. 1985) (arguing that product is a subscription to a service).

112. See *Metromedia Broadcasting Corp. v. MGM/UA Entertainment Co.*, 611 F. Supp. 415, 425 (C.D. Cal. 1985) (program type is television series shows); *Ralph C. Wilson Indus. v. American Broadcasting Cos.*, 598 F. Supp. 694, 701 n.6, 703 (N.D. Cal. 1984) (quality television programming with high viewer ratings), *aff'd*, 794 F.2d 1359 (9th Cir. 1986); *United States v. Columbia Pictures Indus.*, 507 F. Supp. 412 (S.D.N.Y. 1980) (first-run movies), *aff'd*, 7 Media L. Rep. (BNA) 1342 (2d Cir. 1981); *United States v. Tracinda Inv. Corp.*, 477 F. Supp. 1093, 1103 (C.D. Cal. 1979) (movies regardless of quality). But see *United States v. Columbia Pictures Corp.*, 189 F. Supp. 153, 183 (S.D.N.Y. 1960) (all programming on broadcast television).

113. See, e.g., *Southway Theatres, Inc. v. Georgia Theatre Co.*, 672 F.2d 485, 500–04 & n.iii (5th Cir. 1982).

114. See *Bennett*, *supra* note 23, at 177.

115. See *Times-Picayune Publishing Co. v. United States*, 345 U.S. 594, 610, 612 & n.31 (1953); *Lorain Journal Co. v. United States*, 342 U.S. 143 (1951). In the advertis-

Economists criticize market definition by program type because of the difficulty of classifying programs into types.¹¹⁶ However, the industry has defined program types and uses these definitions in its work.¹¹⁷ Although classifying program types is difficult, the problem is of a sort that courts regularly must face.¹¹⁸

Another objection to a market definition based solely on program types is that it ignores the fact that some media exhibit more programs of a particular type than do others,¹¹⁹ which could affect the substitutability of the program types. However, the quantity of product supplied is not relevant for market definition in antitrust cases.¹²⁰ If a consumer wants to watch a motion picture, he can watch it on any medium showing it. The fact that one medium shows more movies merely makes it more likely that the desired motion picture will be exhibited on that medium. Quantity of programs exhibited is thus a factor relevant to market share rather than to market definition.

B. *Step Two: Exhibited Program Type*

Focusing on program type without regard to medium is not sufficient. As it appears on a particular medium, a program type may not be substitutable with the same program type appearing on another medium due to the differing characteristics of the media. Thus, although initial classification should depend on program type, the next step to market definition must consider the characteristics of the exhibition medium.¹²¹

ing market, advertisers purchase dissemination services. For many advertisers, the content is only a secondary consideration, and the characteristics of the advertising medium, such as efficiency or cost per thousand viewers exposed to the message, are more important. See Bennett, *supra* note 23, at 173-77. The product in the program exhibition market is a program type, not a dissemination service. However, the two markets do affect each other. For example, if consumers consider pay and advertiser-supported television substitutable, then as the price of pay television rises, viewers will switch to advertiser-supported television, enabling broadcasters to raise their advertising rates. See Wildman & Owen, *supra* note 107, at 250-55 (harmonizing economic treatment of the two markets).

116. See B. Owen, *supra* note 22, at 21 & n.k; Greenberg & Barnett, *supra* note 12, at 90-93 (empirical work based on program types is "difficult" but possible).

Though it would be plausible to claim that each program is in its own unique product market, cf. *United States v. Loew's Inc.*, 371 U.S. 38, 48-49 (1962) (in tying case, Court found market power in individual copyrighted films), such an argument ignores the similarities between programs of a given type. Courts and commentators have therefore defined markets by program types such as news and movies. See Price & Nadel, *supra* note 29, at 32-34.

117. See, e.g., Levin, *supra* note 12, at 83 nn.1-3.

118. Cf. *Anti-Monopoly, Inc. v. General Mills Fun Group, Inc.*, 611 F.2d 296, 300-06 (9th Cir. 1979) (defining categories for purposes of trademark protection).

119. See Bennett, *supra* note 23, at 196.

120. See *United States v. Paramount Pictures*, 334 U.S. 131, 173 (1948).

121. The program type as exhibited on a particular medium will be referred to as an "exhibited program type." See *supra* text accompanying note 13.

1. *Limited Substitutability of Program Types: Diehards and Price Discrimination.* — Even if it is possible to exhibit the same program on several media,¹²² some consumers may not consider those exhibited program types substitutable. When diehards are subject to price discrimination, *Grinnell* and *Paramount* require that the diehard product be placed in its own market:¹²³ even if some substitutability exists between exhibited program types, the market should be defined more narrowly in order to protect captive or diehard viewers from discretionary exercises of market power. Consumers of video programming become diehards for many reasons.¹²⁴ Some are sensitive to aesthetic differences.¹²⁵ Others are sensitive to prices.¹²⁶ Some, having paid substantial entry costs¹²⁷ to view programs on a particular medium, will not switch readily to programs on another medium.¹²⁸

2. *The Existence of Price Discrimination.* — Bundling and temporal price discrimination exist in the video market.¹²⁹ Exhibitors bundle

122. It is important to remember that some media cannot exhibit certain program types due to technological and regulatory reasons. Technologically, videocassette recorders cannot display *live* news. Differing content regulation creates even greater variation in the program types that various media can exhibit. See Botein, *supra* note 108, at 327–29. For example, certain programming, such as sexually explicit programs, cannot be exhibited on broadcast television and perhaps on DBS satellite television, but can be exhibited on cable, TVRO satellite television, and other pay-TV. See Abel, *supra* note 108, at 332–33; Botein, *supra* note 108, at 328. These differences must be kept in mind to avoid an overinclusive market definition that includes media that cannot exhibit a program type. Cf. *Morning Pioneer, Inc. v. Bismarck Tribune Co.*, 493 F.2d 383, 386 (8th Cir.) (excluding other media from market definition because newspapers include unique content such as details on births, deaths, marriages, and social engagements), cert. denied, 419 U.S. 836 (1974).

123. See *supra* notes 86–97 and accompanying text.

124. See *National Collegiate Athletic Ass'n v. Board of Regents*, 104 S. Ct. 2948, 2966–67 & n.49 (1984) (special demand for telecasted college football); *International Boxing Club v. United States*, 358 U.S. 242, 249–52 (1959) (consumers had special preference for championship boxing, as shown by Nielsen ratings and willingness to pay “substantially more” for championship tickets); *Paramount*, 334 U.S. at 167–73 (special demand and high profitability of first run motion pictures); cf. *Columbia Broadcasting Sys. v. FTC*, 414 F.2d 974, 979 (7th Cir. 1969) (special consumer demand in phonograph record industry), cert. denied, 397 U.S. 907 (1970).

125. Different amounts of viewing time, channel capacity, and image quality are readily apparent. These characteristics affect the kinds of programming on various media. For example, motion pictures aired on broadcast television are cut for different time lengths whereas motion pictures shown in the cinema or on pay television are uncut.

126. For example, households with incomes below \$20,000 subscribe more heavily to cable than do households with greater incomes. See, e.g., Collins, Reagan & Abel, *Predicting Cable Subscribership: Local Factors*, 27 J. Broadcasting 177, 180–82 (1983). But see Becker, Dunwoody & Rafaeli, *Cable's Impact on Use of Other Media*, 27 J. Broadcasting 127, 128 (1983) (studies inconclusive).

127. See *infra* notes 151–58 and accompanying text.

128. See *infra* note 159 and accompanying text.

129. Pure price discrimination could also exist. An exhibitor could charge fees according to subscriber characteristics, such as residence in a poor or affluent neighbor-

program types and sell them at discriminatory prices by charging more for single program types than they do for bundled program types,¹³⁰ thereby stripping the single purchaser of some of his surplus. The exhibition market is also subject to the effects of temporal price discrimination. Because specific programs are available on different media successively and not concurrently, this discrimination occurs when different media charge different prices at different times.¹³¹

Since diehards and price discrimination exist, the *Paramount* and *Grinnell* analysis requires that markets be narrowed.¹³² First, under *Paramount*, each run is to be considered its own market because diehard consumers will not view a program exhibited in an undesired run.¹³³ In today's video marketplace, runs usually correspond to exhibitions on different media. The first-run movies of *Paramount* still appear in cinemas,¹³⁴ but the later-run cinemas have been replaced by new media¹³⁵—videocassette (exhibiting movies two to six months old),¹³⁶ cable, satellite and other pay television (exhibiting movies from five months to one year old).¹³⁷ Second, by analogy to *Grinnell*, firms supplying products subject to price discrimination within a single run should also be segregated into separate markets from firms that cannot

hood. See R. Posner, *supra* note 69, at 2. However, regulation has been implemented to prevent such discrimination. See *infra* note 140.

130. This is a case of mixed bundling. See *supra* notes 78–81 and accompanying text. However, when bundling occurs through cost savings in supplying several channels together, a discount based on the cost savings is not price discrimination. See *supra* note 58; cf. Wildman & Owen, *supra* note 107, at 256 (cost savings can arise from multichannel bundling).

131. See *supra* notes 72–77 and accompanying text; *infra* note 137.

132. See *supra* notes 86–97 and accompanying text.

133. See *supra* notes 73–75 and accompanying text.

134. See *Southway Theatres, Inc. v. Georgia Theatre Co.*, 672 F.2d 485, 487–88 (5th Cir. 1982).

135. See Waterman, *supra* note 21, at 231. If clearances between runs are reduced, see *supra* note 73 and accompanying text, and if arbitrage between runs is possible, see *infra* note 136, then temporal price discrimination will not exist, and market narrowing will not be necessary.

136. Although the videocassette recorder is an exhibition technology when used to play prerecorded cassettes, it can also act as an "arbitrage machine" if pay television programming is recorded and the recording on videocassette resold to other viewers. In today's marketplace, the videocassette run precedes the cable-satellite run, see Waterman, *supra* note 21, at 230; if these runs were reversed, arbitrage by VCR would be quite profitable, see *id.* at 234. However, though this arbitrage occurs, it may be illegal piracy. See *id.* at 242 n.5. Compare *Sony Corp. v. Universal City Studios, Inc.*, 464 U.S. 417, 444–51 & nn.28, 33 (1984) (suggesting that time-shift videotaping from broadcast television is a fair use but leaving open the question of videotaping from pay-TV) with *supra* note 109 (outlining pricing differences over time on various media, which by implication affect profitability of arbitrage).

137. See *United States v. Columbia Pictures Indus.*, 507 F. Supp. 412, 418–19 & nn.11–12 (S.D.N.Y. 1980); Waterman, *supra* note 21, at 229–30. Note that even though distributors create the release schedule, see Waterman, *supra* note 21, at 229, the release schedule affects the definition of the *exhibition* market.

price discriminate.¹³⁸ Those firms with similar abilities to price discriminate should be grouped together.¹³⁹

In the video marketplace, the ability to price discriminate depends on criteria such as number of channels, legal regulation of pricing,¹⁴⁰ the sophistication of the exclusion mechanism,¹⁴¹ entry costs for consumers,¹⁴² and the size and preferences of the diehard groups.¹⁴³ For example, assume viewers have access to the usual broadcast television, to a thirty-five-channel satellite system, to a four-channel pay-TV system, and to two cable systems, one of which provides thirty channels and the other five. The broadcast television stations cannot price discriminate because they have no exclusion mechanism; they cannot sort viewers by intensity of demand.¹⁴⁴

In contrast, all the new multichannel media can price discriminate, because their programs are not arbitrageable¹⁴⁵ and because they can bundle programs.¹⁴⁶ Like the purchasers of central station alarm services in *Grinnell*, the new media viewers are linked to their suppliers and subject to their pricing whims. The pay-TV system and the small cable system, however, can price discriminate less than the larger systems because they can bundle fewer channels.¹⁴⁷ Assuming equal numbers of diehards with equal preferences on each medium, the larger systems have more ability to price discriminate and should be in one market; the smaller systems have less ability to price discriminate, and should be in another market.

138. See *supra* notes 92-95 and accompanying text. Though *United States v. Grinnell Corp.*, 384 U.S. 563 (1966), concerned pure price discrimination, its holding applies equally well to other forms of price discrimination, such as bundling.

139. See *supra* notes 98-101.

140. See, e.g., Cable Communications Policy Act of 1984, § 623(f), 47 U.S.C.A. § 543(f) (West Supp. 1985) (enabling cable franchising authorities to prohibit discrimination among certain classes of cable subscribers); 47 C.F.R. § 73.642(e)(4)(ii) (1984) (prohibiting unreasonable price discrimination among STV subscribers).

141. See *Unscrambling M/A Com's Videocipher II*, *Broadcasting*, Jan. 20, 1986, at 170 (satellite television uses exclusion mechanism difficult to defeat); *supra* notes 62, 69.

142. See *infra* notes 151-58 and accompanying text.

143. See *supra* note 91 (precise standards unclear).

144. See *Television Economics*, *supra* note 58, at 5, 16.

145. Just as you cannot resell your home electric service to someone else, see *supra* note 69, video programming exhibited as a service wired to the home cannot be resold. See R. Posner, *supra* note 69, at 2. Arbitrage via VCR may be illegal. See *supra* note 136.

146. See K. Thorpe, *supra* note 80, at 28-34; see also Wildman & Owen, *supra* note 107, at 255 (discussing ability to bundle).

147. Cf. Thorpe, *The Impact of Competing Technologies on Cable Television*, in *Video Media Competition* 148, 162 (E. Noam ed. 1985) (system with many channels could create entry barrier by duplicating the programming of smaller competitor on some channels and offering different material on excess channels). But see *id.* at 159-60 (no empirical evidence of such exercise of power); Brotman, *Comment: Analyzing the Critical Unknown Factor*, in *Video Media Competition* 182 (E. Noam ed. 1985) (consumers watch only four to five channels at most, so excess channel capacity possibly irrelevant).

C. *Step Three: Defining a Cluster Market for Video Programming*

The antitrust caselaw recognizes a special circumstance in which a product market should include products that do not compete: when consumers tend to buy products because it is cheaper to buy them from one producer, the products should be clustered together.¹⁴⁸ Because multichannel media provide one-stop shopping and bundling benefits,¹⁴⁹ but single-channel media do not, programs of all types exhibited on multichannel media should be combined into a single cluster market, while those on single-channel media should not be clustered.¹⁵⁰

1. *Switching Costs and Functional Incompatibility.* — High switching costs increase the likelihood of consumer clustering and one-stop shopping benefits. The higher the cost of switching from one supplier to another, the less likely the consumer is to buy products from several suppliers, and the stronger the argument for clustering. Because switching costs and bundling benefits are high in the new video marketplace,¹⁵¹ clustering is essential.

Some switching costs are artificially imposed as a marketing device to encourage consumers not to switch. For example, a videocassette rental store could require a high initial membership fee to prevent consumers from sharing their business among several stores. Switching costs imposed by producers are relevant to market definition since they diminish consumer switching as much as technologically-based switching costs.¹⁵²

More of the switching costs associated with video media, however, are not artificially created, but result from the technical incompatibility of video technologies. For example, viewing programs available directly by satellite currently requires a \$2,000 investment in a dish antenna.¹⁵³ To view programs available on videocassette, one must purchase a videocassette recorder, and to receive cable programs, one must pay for cable installation.¹⁵⁴ Consumers cannot use the equip-

148. See *supra* notes 39–49 and accompanying text.

149. See *infra* notes 151–63 and accompanying text.

150. A cluster market definition only superficially resembles the simplistic market definition in which all media are substitutes. A cluster market definition has much more flexibility to accommodate special market characteristics. See *infra* notes 198–199, 203–205, 208 and accompanying text. But see Lee, *Cable Franchising and the First Amendment*, 36 Vand. L. Rev. 867, 885–86 (1983) (cluster market approach should not be applied in all exhibition markets).

151. See generally Henry, *supra* note 6, at 19–55, 54 table 1.14 (discussing entry costs in detail).

152. Cf. *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 105 S. Ct. 2847 (1985) (antitrust liability because no business justification for monopolist's imposition of switching costs).

153. See *The Quickened March Toward Scrambling, Broadcasting*, Jan. 20, 1986, at 170.

154. But see Levy & Pitsch, *Statistical Evidence of Substitutability Among Video Delivery Systems*, in *Video Media Competition* 92 n.12 (E. Noam ed. 1985) (installation fee sometimes waived).

ment bought for one medium to receive another.¹⁵⁵ Because these entry costs are high, consumers who have invested in one medium are unlikely to purchase some program types from a different medium and are more likely to purchase those program types from the medium to which they currently subscribe.¹⁵⁶ For example, if a viewer receives cable television sports and desires to watch movies, she is more likely to buy those movies via cable than she is via satellite, since receiving them via satellite would require a large additional investment but receiving them over cable would not.

Switching costs do not absolutely prevent a consumer from changing media, especially if the costs can be amortized.¹⁵⁷ Nevertheless, given the significant consumer entry costs associated with new video technologies,¹⁵⁸ consumers tend to cluster all their purchases in one company's multichannel medium.¹⁵⁹ To reflect this situation, the cluster of programming offered by a single company on a multichannel medium should be considered a single product. Programming on the dominant single channel medium, broadcast television, should not be clustered, because federal statutes make switching between channels costless.¹⁶⁰

2. *Advantages of Not Switching: Bundling Benefits.* — Additionally, the pricing system frequently used by multichannel media companies encourages consumers to buy all their programs from a single company, thus further supporting clustering. Exhibitors usually sell their channels both individually and in bundles or tiers.¹⁶¹ Tiering inhibits

155. See Baer, *Telecommunications Technology in the 1980's*, in *Communications for Tomorrow: Policy Perspectives for the 1980's 90-91* (G. Robinson ed. 1978).

156. See, e.g., Glen, *Subscription Television and Multipoint Distribution Service*, in *Telecommunications Policy Handbook 54 n.56* (J. Schement, F. Gutierrez & M. Sirbu eds. 1982).

157. See J. Levy & F. Setzer, *supra* note 3, at 45-46.

158. See *supra* notes 151-55 and accompanying text.

159. See K. Thorpe, *supra* note 80, at iv-v, 71 (stressing importance of being first medium to supply neighborhood because consumers purchase all services from one medium); Glen, *supra* note 156, at 46 (same). Government regulations create unequal entry delays for different media. See K. Thorpe, *supra* note 80, at 8-9 & table 2.1. Clustering is increased by government regulations that impede new product entry and therefore impede competition.

160. See 47 U.S.C. § 303(s) (1982) (granting FCC authority to require that all television receivers be capable of receiving all television broadcast channels). It could be argued that broadcast television is a supply substitute, see *supra* notes 37-38, for multichannel media since various broadcast channels could combine into a multichannel system. However, currently FCC rules prohibit such combination. See 47 C.F.R. § 73.3555(a) (1985). But see, e.g., Besen & Johnson, *Regulation of Broadcast Station Ownership: Evidence and Theory*, in *Video Media Competition 383-84* (E. Noam ed. 1985) (criticizing basis for these regulations).

161. See Cable Communications Policy Act of 1984, § 602(14), 47 U.S.C.A. § 522(14) (West Supp. 1986) (defining "service tier"). Currently, only channels are tiered. The Cable Communications Policy Act explicitly gave cable operators more freedom to retier the video programming that they offer. See Cable Communications Policy

switching between firms and requires a clustered market because tiering makes it cheaper to buy all program types from a single firm than to buy some from one firm and others from a second firm. Tiering also indicates price discrimination, another reason for placing the exhibited program types subject to tiering into a cluster market.¹⁶² The ability to price discriminate indicates a degree of market power¹⁶³ and thus requires a correspondingly narrower market definition. Therefore, when price discrimination takes place through tiering, program types on media with these capabilities should be defined as a separate cluster market.

3. *Suppliers of a Subset of the Cluster.* — Competing exhibitors often supply only a subset of the program types in the cluster.¹⁶⁴ These exhibitors do not fit into the cluster market analysis because they provide less one-stop shopping savings and bundling benefits.¹⁶⁵ Thus, including such “partial cluster” exhibitors in the cluster market could distort the cluster market definition.

Two types of video exhibitors create this problem: exhibitors who show only one program type (such as a cinema that shows only motion

Act of 1984, § 625(d), 47 U.S.C.A. § 545(d) (West Supp. 1986). However, it is increasingly possible for bundling of specific program types or specific programs to occur. See Glen, *supra* note 156, at 44, 52 nn.41–44.

As an example of tiering, basic service on Manhattan Cable TV includes the 11 local broadcast channels and 21 other channels, for \$12.95 per month. See Manhattan Cable TV, N.Y. Times, May 11, 1986 (Advertising Supp.), at 7. Premium sports or movie channels are tied to the purchase of the basic service. To receive the next tier of premium channels, such as a sports channel, viewers must purchase the basic service and pay an additional \$12.95 per month. A single additional movie channel, such as HBO, costs the same. However, when two premium channels are purchased together, the price drops to \$11.50 per channel per month, an 11% savings on the price for a single premium channel. When three are purchased, the per channel cost of each premium channel drops to \$10.33 per month, roughly a 20% savings. See *id.* *Assuming no cost savings*, this pricing scheme would combine two types of price discrimination: pure commodity bundling of the basic and the premium services, and mixed commodity bundling of individual channels of the premium services. See *supra* notes 81–82 and accompanying text.

HBO has proposed a similar package deal for premium channels transmitted to home satellite dishes: \$12.95 per month for a single channel, or \$19.95 per month for two, a 23% savings. See In Brief, Broadcasting, Sept. 30, 1985, at 136.

162. See *supra* note 138; *supra* notes 86–89, 91–97 and accompanying text. New media can price discriminate more effectively than can older media because the former offer more channels and have more effective exclusion mechanisms. Cf. Unscrambling M/A Com's Videocipher II, Broadcasting, Jan. 20, 1986, at 170, 175 (describing descrambler for satellite television). But see *supra* note 130 (price discrimination does not occur if discount arises from cost savings in bundling).

163. Compare K. Thorpe, *supra* note 80, at 29 n.3 (“The fact that cable operators use commodity bundling schemes is *prima facie* evidence of market power.”) with Woodbury, *supra* note 62, at 276 (alternative rationale for bundling).

164. See, e.g., J. Levy & F. Setzer, *supra* note 3, at 42–45.

165. See Harris & Jorde, *supra* note 46, at 24–25, 33; Note, *supra* note 41, at 115–17.

pictures, and no news, sports, sitcoms, or weather), and exhibitors who show several program types, but only on one channel (such as a broadcast television station).¹⁶⁶

There are two alternative solutions: (a) to exclude the partial cluster exhibitor¹⁶⁷ from the cluster and consider it a separate market,¹⁶⁸ or (b) to remove the program type at issue from the cluster and segregate it into a product market separate from the cluster market.¹⁶⁹ The alternative chosen depends upon the actual competition faced by the exhibited program types shown by the partial cluster exhibitor.

a. *Exclusion from the Cluster of Partial Cluster Exhibitor.* — Some suppliers sell only a portion of the products within the cluster. The products of these suppliers should be excluded from the cluster market, if a significant segment of consumers purchases the cluster of products as a cluster.¹⁷⁰

Exhibitors, such as cinemas showing only one program type, should be omitted from the cluster market because entry, switching, and transaction costs cannot be spread over a sufficiently large variety of exhibited program types. Because consumers must spread these costs over fewer products, it is more expensive for them to purchase from partial cluster suppliers. Consumers who want to buy several products will therefore focus their purchases on the cluster supplier. The partial supplier will sell only to those consumers who want individual products.¹⁷¹ The two suppliers do not compete significantly,¹⁷² and are therefore in different markets. For example, in *Phillipsburg National Bank v. United States*,¹⁷³ the Supreme Court held that commercial finance companies, which provide only consumer loans, were not in the commercial banking cluster market, because the finance companies did not supply all of the clustered products, which included checking, loans, and savings accounts.¹⁷⁴

166. Single channel exhibitors are partial cluster exhibitors because they can show only one program at a time, making it impossible to bundle programs for any given time period.

167. For simplicity, the text speaks of excluding the partial cluster exhibitor from the cluster market, but the exhibited program types offered by that exhibitor are actually excluded. For example, though the cluster market would still include the program type "movies," all movies exhibited by a cinema might be excluded from the cluster market. See *infra* notes 170–78 and accompanying text.

168. See *supra* note 52 and accompanying text.

169. See *supra* notes 50–51 and accompanying text. In this case, the program type is excluded, regardless of the medium or the particular exhibitor.

170. See *United States v. Connecticut Nat'l Bank*, 418 U.S. 656, 662–66 (1974); *United States v. Household Fin. Corp.*, 602 F.2d 1255, 1258, 1264 (1979); Note, *supra* note 41, at 121–22 & nn.58, 60.

171. See Note, *supra* note 41, at 122.

172. That is, they do not compete for the significant number of consumers of the cluster.

173. 399 U.S. 350 (1970).

174. *Id.* at 360–61.

A similar analysis applies when a partial cluster exhibitor, such as a videocassette rental store or a live arena, shows more than one but fewer than all of the program types in the cluster. If the partial exhibitor supplies enough of the cluster to enable it to compete in the one-stop shopping marketplace, it should be included in the cluster market; if not, it should be segregated into a separate market. Whether an exhibitor is a partial supplier should be determined both quantitatively¹⁷⁵ and qualitatively.¹⁷⁶ No numerical test based on the number of program types supplied suffices, because the type omitted might be unimportant to consumers or available elsewhere at low transaction cost. The reality of the industry should govern here, as in all antitrust cases. For example, in *Connecticut National Bank v. United States*,¹⁷⁷ the Supreme Court held that even though savings banks could by that time provide checking as well as savings accounts, they were not in the same cluster market as commercial banks, since commercial banks still offered a number of significant services not offered by the savings banks.¹⁷⁸

b. *Exclusion from the Cluster of Exhibited Programs that Compete Despite Clustering.* — If consumers buy a product from a partial cluster supplier despite the benefits of buying from a full cluster supplier, then that product should be excluded from the cluster and placed in a separate product market.¹⁷⁹ The fact that consumers buy a product regardless of cluster benefits implies that they are not treating it as part of the cluster. Moreover, as to this product, the noncluster supplier is actually competing with the cluster supplier. For example, despite the benefits of multichannel media and the availability of sports programs on them, consumers still may attend live baseball games because they enjoy being part of the crowd. In general, then, if empirical research shows that a significant group of consumers ignores bundling benefits and switching costs for a particular program type, that program type should be excluded from the cluster.¹⁸⁰

175. See, e.g., *United States v. Grinnell Corp.*, 384 U.S. 563, 572 n.6 (1966) (cluster market included 38 companies, of which 14 did not offer the entire range of cluster products).

176. Each program type's importance to the consumer must be considered. If two multichannel systems compete, and one of them does not offer twenty-four hour weather or news channels, then depending on consumer tastes, these omissions may not be considered important enough to stop the second system's programming from being clustered. Cf. Implementation of the Provisions of the Cable Communications Policy Act of 1984, 50 Fed. Reg. 18637, 18650 (FCC 1985) (Report and Order) (cable operator may gain no market power by providing certain programming).

177. 418 U.S. 656 (1974).

178. See *id.* at 665-66.

179. See *supra* notes 50-51 and accompanying text.

180. See Note, *supra* note 41, at 122 n.62, 125 & n.71.

IV. APPLICATION OF THE MODEL

A. *Market Definition*

The model is best understood by applying it to several hypothetical cases. Assume that a typical urban American neighborhood can receive the media and programming indicated in Table B.¹⁸¹ An "x" indicates the exhibition of a program type on a medium; "(x)" indicates the exhibition of a similar and possibly substitutable type.¹⁸² A blank space indicates that the program type is not generally available on the medium.

The application of the model proceeds in three steps.

Step 1. — The focus begins on program types: all programs of the same type are grouped into a tentative market. Thus, at this stage, each row would be its own market, yielding nine product markets.

Step 2. — The tentative market is then limited because of characteristics of *exhibited* program types. On the table, an exhibited program type¹⁸³ is the intersection of a row and a column. The tentative market should, of course, be narrowed to account for the fact that certain media do not exhibit particular program types. For example, federal law prevents broadcast television from exhibiting many unexpurgated movies.¹⁸⁴ Blanks in the table indicate that the medium cannot or does not exhibit the program type in the corresponding row.

Some exhibited program types must also be segregated because of temporal price discrimination. Program types exhibited in runs where arbitrage between runs is not possible should be segregated in separate markets by runs. The market for the program type "movies" (row 3) should be segregated into runs because consumers committed to particular runs are subject to price discrimination.¹⁸⁵ Prime-time television series are also distributed in this manner.¹⁸⁶ Thus, the market for movies or prime-time television series would not include the entire row. Instead, the row would be divided into segments representing the separate markets for each run.¹⁸⁷

Some markets for program types are not divided into runs. Music videos, for example, currently are released to all media at the same time.¹⁸⁸ All such program types should be in the same market.¹⁸⁹ On

181. The program types listed in the table are arbitrary and simplified; in actual applications they would have to be based on actual consumer preference.

182. For example, some concert movies may actually compete with music videos.

183. See *supra* note 13 and accompanying text.

184. See *supra* note 122.

185. See *supra* notes 72-75, 96-97, 133-37 and accompanying text.

186. See *Television Economics*, *supra* note 58, at 31-35 (distinguishing network programming and subsequent syndication).

187. See Table C.

188. Cf. *Waterman*, *supra* note 21, at 237 (speculating that music videos could be exhibited in runs).

189. See, e.g., *supra* notes 133-37 and accompanying text.

[TABLE B]

	Media							
	A Cinema	B VCR ^a	C Cable ^b	D Satellite ^b	E Other Pay-TV ^c	F Network Broadcaster ^d	G Indp't Broadcaster ^e	H Live Arena
Program Types								
1 Religious	(x)	(x)	x	x	x	x	x	x
2 Music videos	(x)	x	x	x	x	x	x	(x)
3 Movies	x	x	x	x	x	x	x	
4 X-rated movies	x	x	x	x	x			(x)
5 Sports-nat'l		(x)	x	x	x	x	x	(x)
6 Sports-local		(x)	x			x	x	x
7 Prime time			x	x	x	x	x	
8 Network news			x	x	x	x		
9 Local news			x			x	x	

- ^a This discussion assumes that the VCR is used to display prerecorded programming that has been purchased or sold, and not simply to record the programming from another medium for arbitrage of pay-TV (a possibly illegal use) or time-shifting of broadcast television (a complementary, not competitive use).
- ^b The cable and satellite television systems display 20 channels that include an imported signal from a distant "superstation" television broadcaster, a motion picture channel, a sports channel, an all-news channel, and a channel showing only music videos.
- ^c The other pay-TV system can display only 8 channels of programming similar to the cable and satellite programming.
- ^d The network broadcaster shows the usual mix of network fare and some local news.
- ^e The independent broadcast station exhibits some news, reruns of old prime time series, and mostly movies.

[TABLE C]

Program Types	Media							
	A Cinema	B VCR	C Cable	D Satellite	E Other Pay-TV	F Network Broadcaster	G Indp't Broadcaster	H Live Arena
1 Religious	(x)	(x)	x	x	x	x	x	x
2 Music videos	(x)	x	x	x	x	x	x	(x)
3 Movies	x	x	x	x	x	x	x	
4 X-rated movies	x	x	x	x	x			(x)
5 Sports-nat'l		(x)	x	x	x	x	x	(x)
6 Sports-local		(x)	x			x	x	x
7 Prime time			x	x	x	x	x	
8 Network news			x	x	x	x		
9 Local news			x			x	x	

the table, the market would include the entire row.¹⁹⁰

Those media that can price discriminate should be segregated from those that cannot.¹⁹¹ This segregation should occur regardless of whether temporal price discrimination exists. For example, neither independent nor network broadcasters have the exclusion mechanisms to price discriminate.¹⁹² Similarly, although cinema, VCR, and live arenas have exclusion mechanisms, price discrimination based upon them can be defeated by arbitrage (otherwise known as scalping). Program types exhibited on these five media should therefore be in a separate market from programs on media subject to price discrimination.¹⁹³

The media able to price discriminate should be grouped by their relative ability to do so.¹⁹⁴ For example, although cable and other pay-TV exhibit programming in the same run, programming on cable television should be in a separate market from programming on other pay-TV,¹⁹⁵ because cable is a better price discriminator. Having more channels, cable can provide more bundles of programs, thereby stripping consumer surplus more effectively. Moreover, it is harder to detect those who avoid the exclusion mechanism of other pay-TV than those who pirate cable.¹⁹⁶

Step 3. — The final step is to cluster the appropriate program types—those sold together such that viewers can save and benefit from obtaining all their programming from one medium.¹⁹⁷

The programs on cinema and VCR, and in live arenas should not be clustered, because those sources do not offer a full line of programming. The programs exhibited on broadcast television should also not be clustered under current conditions. Even if television stations were to attempt to compete with one another on a cluster basis, the stations

190. See *supra* note 187, row 2.

191. See *supra* notes 140–46 and accompanying text.

192. See *supra* note 144 and accompanying text.

193. Table D segregates exhibited program types into two groups: those subject to price discrimination (due to exclusion mechanisms) and those not subject to it (due to their media's susceptibility to arbitrage, as in videocassettes, or due to the lack of an exclusion mechanism, as in broadcast television). All exhibited program types on a single row that are shaded belong in a single market. Note that the market segregation here is much the same as that achieved by segregating the market into runs. See *supra* notes 185–187 and accompanying text. However, note that the market for network broadcasters and independent broadcasters (columns F and G) is different under temporal price discrimination and the price discrimination discussed here. These exhibitors obtain programming in different runs (the network run versus later syndication) and are thus subject to temporal price discrimination. See *supra* note 186. However, they have no exclusion mechanism and thus cannot engage in pure price discrimination. See *supra* note 144 and accompanying text.

194. See *supra* notes 98–101, 147 and accompanying text.

195. See Table E.

196. See Connor, *MDS Television in the Eighties*, 6 *Comm. & the L.* 45–46 (Feb. 1984).

197. See *supra* notes 148–63 and accompanying text.

[TABLE D]

Program Types	Media							
	A Cinema	B VCR	C Cable	D Satellite	E Other Pay-TV	F Network Broadcaster	G Indp't Broadcaster	H Live Arena
1 Religious	(x)	(x)	x	x	x	x	x	x
2 Music videos	(x)	x	x	x	x	x	x	(x)
3 Movies	x	x	x	x	x	x	x	
4 X-rated movies	x	x	x	x	x			(x)
5 Sports-nat'l		(x)	x	x	x	x	x	(x)
6 Sports-local		(x)	x			x	x	x
7 Prime time			x	x	x	x	x	
8 Network news			x	x	x	x		
9 Local news			x			x	x	

[TABLE E]

Program Types	Media							
	A Cinema	B VCR	C Cable	D Satellite	E Other Pay-TV	F Network Broadcaster	G Indp't Broadcaster	H Live Arena
1 Religious	(S)	(S)	x	x	x	(S)	(S)	(S)
2 Music videos	(S)	(S)	x	x	x	(S)	(S)	(S)
3 Movies	(S)	(S)	x	x	x	(S)	(S)	
4 X-rated movies	(S)	(S)	x	x	x			(S)
5 Sports-nat'l		(S)	x	x	x	(S)	(S)	(S)
6 Sports-local		(S)	x			(S)	(S)	(S)
7 Prime time			x	x	x	(S)	(S)	
8 Network news			x	x	x	(S)		
9 Local news			x			(S)	(S)	

could not induce consumers to cluster by providing a single particularly good program because switching to another broadcast station is costless. Moreover, television stations do not compete with other media as a cluster because the other media either do not exhibit the clustered programs or are in a separate market because of price discrimination. Cable, satellite, and other pay-TV however, offer virtually all program types as well as one-stop shopping benefits, so their program types should be clustered. Thus, for cable and satellite systems, the product markets are a cluster of the program types that they offer;¹⁹⁸ on the table, each cluster is a vertical column.¹⁹⁹

Some individual products may compete despite any one-stop shopping benefits. For example, music videos and religious programs are offered by practically all the media, and *may* compete. If they do, then they should be removed from the vertical cluster markets and considered as separate, single-product markets²⁰⁰ identified as a single horizontal row on the table.²⁰¹

B. *Future Applications*

The full value of this model is not so much its capacity to define the product market for the current video marketplace as its ability to accommodate future changes. Because the model presented here is based on general principles, it can accommodate new program types, exhibition technologies, exclusion mechanisms, government regulations, and the specifics of local markets.

If a new program type is created,²⁰² the model requires that consumer demand for it be analyzed. If exhibitions of it on all media compete, it should be placed in its own market. If all exhibitions do not compete, then the market should be segmented according to step two and clustered according to step three.

The model also responds to the variety of programming that the media exhibit. If, in a hypothetical world, the media that do not price discriminate—for example, cinema, VCR, and broadcast television—

198. Cf. *United States v. Times Mirror Co.*, 274 F. Supp. 606, 617–18 (C.D. Cal. 1967), *aff'd*, 390 U.S. 712 (1968) (daily newspapers as a cluster market separate from other media).

199. Table F combines the cluster market approach with the temporal price discrimination analysis, see *supra* note 187, and pure price discrimination analysis, see *supra* note 195. The program types within the shaded bars are not subject to any price discrimination, so all shaded bars on a single row belong in the same market. Program types within the unshaded horizontal bars are subject to temporal price discrimination and are segmented according to the analysis of note 187, *supra*.

200. See *supra* notes 179–80 and accompanying text.

201. See Table G.

202. New program types have been created that straddle existing categories. Music videos combine the audio content and length of a radio selection with visual content resembling television advertising or motion pictures. The call-in show on television combines radio call-in shows with television talk shows.

[TABLE F]

Program Types	Media							
	A Cinema	B VCR	C Cable	D Satellite	E Other Pay-TV	F Network Broadcaster	G Indp't Broadcaster	H Live Arena
1 Religious	(x)	(x)	x	x	x	x	x	x
2 Music videos	(x)	x	x	x	x	x	x	(x)
3 Movies	x	x	x	x	x	x	x	
4 X-rated movies	x	x	x	x	x			(x)
5 Sports-nat'l		(x)	x	x	x	x	x	(x)
6 Sports-local		(x)	x			x	x	x
7 Prime time			x	x	x	x	x	
8 Network news			x	x	x	x		
9 Local news			x			x	x	

Annotations:
 - Dashed boxes around columns C, D, and E are labeled "competing clusters".
 - Shaded horizontal bars across rows 1, 2, 5, 6, 8, and 9 are labeled "individual program type competition".
 - A shaded box around row 4 is labeled "individual program type competition segregated into runs".

[TABLE G]

Program Types	Media							
	A Cinema	B VCR	C Cable	D Satellite	E Other Pay-TV	F Network Broadcaster	G Indp't Broadcaster	H Live Arena
1 Religious	(x)	(x)	x	x	x	x	x	x
2 Music videos	(x)	x	x	x	x	x	x	(x)
3 Movies	x	x	x	x	x	x	x	
4 X-rated movies	x	x	x	x	x			(x)
5 Sports-nat'l		(x)	x	x	x	x	x	(x)
6 Sports-local		(x)	x			x	x	x
7 Prime time			x	x	x	x	x	
8 Network news			x	x	x	x		
9 Local news			x			x	x	

Annotations:
 - Dashed boxes around columns C, D, and E are labeled "competing clusters".
 - Horizontal bars with 'x' in boxes above rows 3, 4, 5, 6, 7, and 9 are labeled "individual program type competitor".
 - Shaded boxes with 'x' in rows 5, 6, 8, and 9 are also labeled "individual program type competitor".

exhibited all program types,²⁰³ then broadcast television could be considered a cluster market in relation to those media.²⁰⁴ Broadcast stations, however, would not be considered a cluster when competing with one another, because changing stations is costless.²⁰⁵

The analysis also applies to new media.²⁰⁶ When a new medium is introduced, the demand for programs on it, its effect on the demand for programs on other media, its cost, price, and exclusion mechanisms must be analyzed. The model can then be applied.

New exclusion mechanisms change the possibilities for price discrimination,²⁰⁷ and are accounted for in the second step of the model. If a medium currently unable to exclude arbitrage or free viewing develops a new exclusion mechanism, the market definition will be different. For example, if arbitrage of videocassettes could be prevented, then VCRs would be included in the price discrimination market with cable, satellite and other pay-TV, but the remaining analysis would not change.

The model can also adapt to different government regulations—both of programming content and of technology. For example, it could recognize broadcast television as a multichannel cluster exhibitor if a single firm were allowed to own and operate multiple broadcast stations in the same viewing area.²⁰⁸

Because of the model's flexibility and its grounding in general principles, it can accommodate differing local conditions. The model successfully differentiates an urban, well-supplied market, like that postulated in the tables above, from under-supplied markets. For example,

203. For example, assume that cinemas exhibited all the program types that currently appear on broadcast television, such as live news, sitcoms, talk shows and so forth.

204. This is because consumers incur costs in choosing one medium or the other, for example, by driving to the cinema. See *Telecommunications in Transition*, supra note 3, at 361. However, depending upon the locale, these costs could be so small that clustering could be unwarranted.

205. See supra note 160 and accompanying text.

206. For example, potential new media include DBS satellite service, see supra note 20, high-definition television, see National Ass'n of Broadcasters, *New Technologies Affecting Radio & Television Broadcasting* 20-21 (1981), and digital cable systems, see Baer, *Telephone and Cable Companies*, in *Video Media Competition* 187-95, 201-03, 205-11 (E. Noam ed. 1985).

207. For example, if cable and satellite viewers were given an access number or magnetic-stripe card that could be used to operate any descrambler, arbitrage would be possible, and price discrimination impossible. Conversely, cinemas and live arenas could use exclusion mechanisms to facilitate price discrimination. For example, to prevent arbitrage, cinemas or live arenas could stamp hands rather than issue tickets, or print the buyer's credit card number on the tickets. See R. Blair & D. Kaserman, *Anti-trust Economics* 262 (1985). Similarly, if pay-per-view pricing is introduced, in which pay-TV subscribers pay to watch individual programs rather than buying a monthly subscription, see Waterman, supra note 21, at 231, 233, 237, the model can respond by applying the bundling analysis to program types.

208. See Wildman & Owen, supra note 107, at 262; supra note 160; see also Noam, supra note 9, at 10 ("controversial implication").

the model can distinguish between urban areas, where several multichannel media could compete by complex bundling schemes using a large number of channels and variety of program types, and remote rural locations, where the only choice could be to rent videocassettes by mail or to subscribe to a price-discriminating satellite TV service.

CONCLUSION

Markets for the exhibition of video programming should be defined in terms of program types and media and not in terms of either alone. The definition should start with a focus on program types. Second, the definition should consider the effect of characteristics of exhibition media upon consumer behavior. Specifically, programs exhibited on media able to price discriminate should be treated differently from those on media unable to price discriminate. Finally, programs sold together should be grouped into a cluster market. This three-step approach to product market definition protects today's marketplace against anticompetitive exercises of market power, and is flexible enough to accommodate future developments in a rapidly changing area.

Harry Boadwee