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ARTICLES

RETHINKING THE COMMITMENT TO FREE, LOCAL TELEVISION

*Christopher S. Yoo**

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ABSTRACT

Television policy has been viewed historically as posing an irreconcilable conflict between static and dynamic efficiency. Static efficiency requires that the price for television programming be set at marginal cost, which in the case of television programming is essentially zero. Dynamic efficiency dictates that the price be set high enough to allow the program to generate sufficient revenue to cover its fixed costs. Truly optimal (i.e., first-best) pricing was regarded as impossible, with any pricing decision necessarily reducing to a tradeoff between these two considerations. In this Article, Professor Yoo combines the insights of public good economics and monopolistic competition theory to advance a new approach to the regulation of television that brings these two seemingly contradictory forces into alignment. He then explores this framework by using it to evaluate one of the most longstanding and central commitments of U.S. television policy—the promotion and preservation of free, local television—which he argues is better viewed as being comprised of four subcommitments. Application of this framework reveals that these subcommitments have actually had the effect of impeding rather than promoting free, local television. Abandonment of these subcommitments would likely cause the quantity, quality, and diversity of television programming to increase. The analysis also shows how attempts to foster free, local television have induced secondary distortions in markets for other spectrum-based communications and has slowed the deployment of new technologies, such as third-generation wireless devices.

INTRODUCTION

Congress, the Supreme Court, and the Federal Communication Commission (FCC) have long recognized the critical role that television plays in providing the news, entertainment, and public affairs programming upon which our society depends.¹ In recent years, the industry has undergone a

¹ See, e.g., Cable Television Consumer Protection and Competition Act of 1992, Pub. L. No. 102-385, § 2(a)(11), 106 Stat. 1460, 1461 (finding that television “continue[s] to be an important source of local news and public affairs programming . . . critical to an informed electorate”); *Turner Broad. Sys., Inc. v. FCC*, 520 U.S. 180, 194 (1997) (recognizing that television “is an important source of information to many Americans . . . by tradition and use for decades now it has been an essential part of the national discourse on subjects across the whole broad spectrum of speech, thought, and expression”); *Turner Broad. Sys., Inc. v. FCC*, 512

fairly radical transformation. It has played a starring role in a number of the recent megamergers and spinoffs that have buffeted the communications marketplace.² Even more important is the emergence of new television technologies that promise to revolutionize the U.S. media environment. After years of somnolence, direct broadcast satellite (DBS) systems,³ such as DirecTV and the Dish Network, have emerged as significant media platforms offering innovative programming options and greatly increasing the competitiveness of the overall industry. In addition, broadcasters are in the process of deploying digital television, with over 563 stations now operational.⁴ And looming over the entire industry is the prospect of video-on-demand provided over the Internet. Together these technologies promise to transform the way that U.S. households receive information, which in turn will have a dramatic impact on democratic processes and economic efficiency alike.

Somewhat surprisingly, however, the drastic changes in the technological and business environment surrounding television have yet to effect corresponding changes in the regulatory approach taken by Congress and the FCC. Quite the contrary, television policy has continued to adhere to the same core commitment that has governed the industry since its infancy: the

U.S. 622, 663 (1994) (acknowledging that television “‘is demonstrably a principal source of information and entertainment for a great part of the Nation’s population’”) (quoting *United States v. Southwestern Cable Co.*, 392 U.S. 157, 177 (1968)); Review of Comm’n’s Regulations Governing Television Broad., Report & Order, 14 F.C.C.R. 12,903, 12,912 ¶ 18 (1999) (finding that television is “‘the primary source of news and entertainment programming for Americans” and “play[s] a leading role in shaping democratic debate and cultural attitudes”).

² The most significant mergers include Time Warner’s acquisition of Turner Broadcasting System and the subsequent acquisition of that combined entity by America Online, AT&T’s acquisition of the cable properties owned by TCI and MediaOne and the subsequent sale of those properties to Comcast, Disney’s acquisition of ABC, Viacom’s acquisition of CBS, EchoStar’s failed bid for DirecTV, and Vivendi’s pending sale of its media properties to Universal.

³ DBS was first envisioned by science fiction writer Arthur C. Clarke in 1945. Arthur C. Clarke, *Extra-Terrestrial Relays: Can Rocket Stations Give World-Wide Radio Coverage?*, WIRELESS WORLD, Oct. 1945, at 305. The FCC would not authorize DBS service until 1982. See Application of Satellite Television Corp. for Authority to Construct an Experimental Direct Broad. Satellite Sys., Memorandum Opinion & Order, 91 F.C.C.2d 953 (1982). DBS would not be commercially deployed until 1994. See Annual Assessment of the Status of Competition in Mkt. for Delivery of Video Programming, Third Annual Report, 12 F.C.C.R. 4358, 4377-78 ¶ 40 (1997).

⁴ Fed. Communications Comm’n, DTV Stations on the Air (Oct. 15, 2003), at <http://www.fcc.gov/mb/video/files/dtvonair.html>.

promotion and preservation of free, local television.⁵ This regulatory inertia cannot be explained by widespread satisfaction with the status quo. A long line of high-profile commentators from a wide variety of perspectives have issued a steady stream of criticism condemning the quality and diversity of television programming that has emerged under the current regime as wholly inadequate.⁶

These developments have convinced me that a comprehensive reevaluation of the commitment to free, local television is long overdue. In particular, I propose reevaluating this commitment in light of two economic features commonly thought to distinguish the market for television programming from markets for more conventional goods. The first is the fact that television programming exhibits the lack of rivalry associated with public goods. The second is the fact that the market for television programming is comprised of differentiated products. Although I am not the first to explore the intersection between these two approaches,⁷ no previous work has taken into account the full complexity of either approach or explored the full range of policy options available.

⁵ See, e.g., Cable Television Consumer Protection Act of 1992, Pub. L. No. 102-385, § 2(a)(16), 106 Stat. 1460, 1462 (identifying preservation of "the economic viability of free local broadcast television" as one of the statute's goals); *Turner*, 520 U.S. at 191 (identifying "preserving the benefits of free, over-the-air local broadcast television" as an important governmental interest); *Turner*, 512 U.S. at 662 (same); H.R. REP. NO. 887, Part 2, 100th Cong., 2d Sess. 26 (1988) (regulating satellite television so that it "do[es] not undermine the base of free local television service upon which the American people continue to rely"); Amendment of Subpart L, Part 91, to Adopt Rules & Regulations to Govern the Grant of Authorizations in Bus. Radio Serv. for Microwave Stations to Relay Television Signals to Community Antenna Systems, First Report and Order, 38 F.C.C. 683, 699-700 ¶¶ 44-48 (1965) (justifying cable regulation by the need to preserve free, local television).

⁶ See, e.g., BEN BAGDIKIAN, *THE MEDIA MONOPOLY* 220-21 (1987); C. EDWIN BAKER, *ADVERTISING AND A DEMOCRATIC PRESS* 44-70 (1994); CASS R. SUNSTEIN, *DEMOCRACY AND THE PROBLEM OF FREE SPEECH* 59-65 (paperback ed. 1995); Ronald K.L. Collins & David M. Skover, *The First Amendment in an Age of Paratroopers*, 68 TEX. L. REV. 1087, 1093-1107 (1990); Reed Hundt, *The Public's Airwaves: What Does the Public Interest Require of Television Broadcasters?*, 45 DUKE L.J. 1089 (1996); Newton N. Minow, Address to the National Association of Broadcasters (May 9, 1961), in NEWTON M. MINOW & CRAIG L. LAMAY, *ABANDONED IN THE WASTELAND* 185-96 (1995); Ralph Nader & Claire Riley, *Oh, Say Can You See: A Broadcast Network for the Audience*, 5 J.L. & POL. 1, 24-46, 55 (1988).

⁷ Of particular note is the work of C. EDWIN BAKER, *MEDIA, MARKETS AND DEMOCRACY* 20-40 (2002). Although we reach widely divergent conclusions, his analysis will undoubtedly be of help to anyone interested in these issues. For other leading analyses integrating public good economics and monopolistic competition, see STEPHEN SHMANSKE, *PUBLIC GOODS, MIXED GOODS, AND MONOPOLISTIC COMPETITION* 134-47, 160-64 (1991); Michael Spence & Bruce Owen, *Television Programming, Monopolistic Competition, and Welfare*, 91 Q.J. ECON. 103 (1977).

A more complete understanding of the insights provided by public good economics and product differentiation theory helps to explain why previous attempts to promote free, local television have proven so ineffectual. Indeed, it reveals how current policy has exacted a terrible toll on all types of television programming. The commitment to localism has prevented television providers from realizing the available economies of scale, while attempts to foster free television have reduced the responsiveness of the market by depriving viewers of the ability to use prices to signal the intensity of their preferences. Equally problematic is the manner in which current policy has stifled the emergence of competition from new television platforms and impeded providers' ability to promote both static and dynamic efficiency through price discrimination. The net effect is not only a reduction in the total amount of television programming, but also a degradation in its quality and diversity. Furthermore, the key decisions in promoting free, local television have had the collateral consequence of forestalling the development of new nontelevision communications technologies, such as third-generation wireless devices (3G), that depend upon the electromagnetic spectrum as their means of transmission.

What emerges is an analytical model of considerable generality that has implications for a number of other fields.⁸ It should also be of interest to anyone interested in television policy from an economic perspective. Even those who reject economic analysis as the basis for defining the *ends* of television policy will still appreciate the importance of understanding what economic analysis can teach us about the relative efficacy of the various *means* for effecting the ends chosen. Ignoring the economic underpinnings of the various policy instruments available can drastically increase the costs associated with the remedial measures chosen. Even worse, it can even cause government intervention to have the perverse effect of frustrating the very goals sought to be promoted.

Part I of this Article introduces the basic economics of product differentiation and public goods. Although there are other ways to model product differentiation, this Article builds on the principles of monopolistic

⁸ My argument should have considerable applicability to all kinds of intellectual property, because most intellectual property goods are similarly nonrival and differentiated. For an argument applying this model to copyright law, see Christopher S. Yoo, *Copyright and Product Differentiation*, 79 N.Y.U. L. REV. (forthcoming 2004).

competition first advanced by Edward Chamberlin⁹ in order to facilitate the combination of insights provided by product differentiation with the analysis of public goods. Part II evaluates the applicability of the analysis that I develop to the market for television programming.

Part III employs the economic model to evaluate past efforts to promote free, local television. It begins by introducing the major television technologies and traces the role that the commitment to free, local television has played in shaping regulatory policy with respect to each. In particular, I argue that the overarching commitment to free, local television should be disaggregated into four, more discrete subcommitments:

- (1) the preference for local programming over national programming,
- (2) the preference for free television over pay television,
- (3) the preference for incumbent television providers over new entrants and emerging television technologies, and
- (4) the preference for single-channel television technologies over multi-channel television technologies.

I then employ the basic economic principles developed in Part I to critique each of these subcommitments. The analysis indicates that adherence to these subcommitments has been a policy disaster that has reduced the quantity, quality, and diversity of television programming.

Part IV explores the secondary distortions that the commitment to free, local television has imposed on emerging technologies, paying particular attention to the impact on 3G. It concludes that the commitment has further harmed overall welfare by imposing static inefficiencies in the pricing of related markets and by imposing dynamic inefficiencies by delaying and forestalling the emergence of new communications technologies.

⁹ EDWARD CHAMBERLIN, *THE THEORY OF MONOPOLISTIC COMPETITION* (7th ed. 1956).

I. UNDERSTANDING THE ATYPICAL ECONOMICS OF PUBLIC GOODS AND MONOPOLISTIC COMPETITION

Deciphering why previous efforts to promote free, local television have had the perverse effect of stripping the market of local programming and of degrading the overall quantity, quality, and diversity of television programming requires an appreciation of two qualities that cause the economic analysis of the market for television programming to deviate from the principles suggested by standard neoclassical economics. The first is that television programming exhibits a quality known as “lack of rivalry” commonly associated with public goods. The second is that the market for television programming involves differentiated products that do not serve as perfect substitutes for one another.

Section A opens by providing a description of the standard model of perfect competition that will serve as the baseline case for comparison. Section B describes the economic complications that arise when a product exhibits the characteristics of a public good. Section C reviews the insights provided by monopolistic competition theory. Section D explores the welfare implications of the interaction of these two concepts, paying particular attention to the standard argument that the welfare calculus necessarily requires striking a balance between the opposing forces of static and dynamic efficiency. Section E extends the existing theories and explores the extent to which price discrimination can resolve this seemingly intractable dilemma.

A. Perfect Competition Among Undifferentiated Products as a Baseline Case

The discussion of how public good economics and product differentiation can lead to market failure requires an appreciation of the ways that it deviates from the standard model of perfect competition. Therefore, at the risk of some tedium,¹⁰ this section sketches the basic model of perfect competition.

A perfectly competitive market is generally assumed to consist of a large number of producers selling undifferentiated products for purchase by a large number of consumers. In addition, entry and exit by producing firms is assumed to be easy. Under this model, consumers and producers use prices to

¹⁰ The analysis that follows can be found in any basic textbook on microeconomics. Those familiar with the basic theory of perfect competition may prefer to skip directly to Part I.B.

reveal the intensity of their preferences. The fact that a consumer is willing to pay a particular price for a product indicates that consuming the product would provide that consumer with benefits that equal or exceed the price paid for it. The prices at which all consumers would be willing to purchase that product can be aggregated and represented by an industry demand curve, which, in accordance with the principle of diminishing marginal returns, is presumed to be downward sloping. Conversely, the fact that a particular producer is willing to sell a product at a particular price reveals that the price charged equals or exceeds the marginal cost of producing an additional unit. The costs incurred by producers can be aggregated into an industry supply curve, which, again in accordance with the principle of diminishing marginal returns, is presumed to be upward sloping.

1. Short-Run and Long-Run Equilibrium Under Perfect Competition

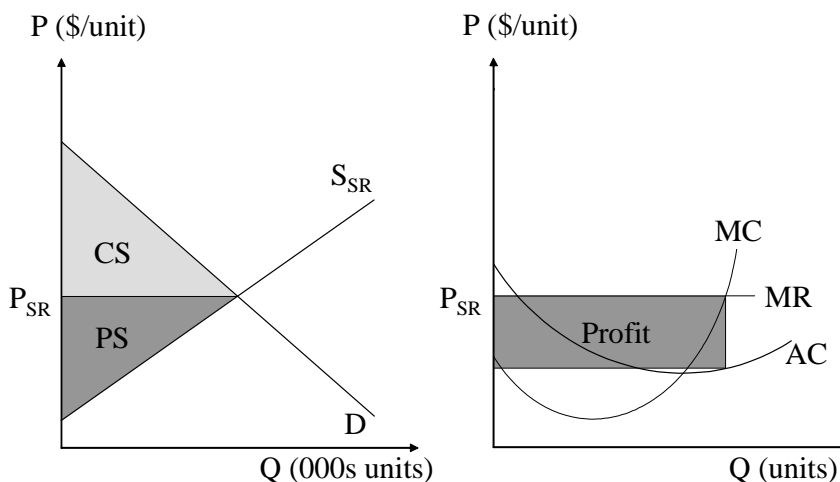
Equilibrium price and quantity are established at the industry level where the industry demand curve intersects with the industry supply curve. If the industry produces at a level that falls short of the equilibrium quantity, there will necessarily be consumers who are willing to pay more for the product than it costs to make it. This in turn induces the existing firms to expand their production and sell to these customers. As this occurs, the firms' costs rise, and the benefits derived by the additional purchasers fall. As quantity increases, the spread between the two narrows until all of the unsatisfied demand is met, which occurs when the benefits derived by the marginal consumer no longer exceed the costs to the marginal producer.

The equilibrium price in turn determines the behavior of individual firms. Under this model, individual firms are assumed to be trying to maximize their profits. A firm seeking to maximize its profits will sell additional units of the product so long as the benefits it derives from doing so exceed the costs. In other words, it will expand its production until it reaches the point where its marginal cost curve intersects with its marginal revenue curve.

Because perfect competition assumes that there are a large number of producers each selling undifferentiated products, any firm that attempts to charge a price that exceeds the prices charged by its competitors will immediately lose all of its sales, as its customers transfer their purchases to other producers offering the same product at a lower price. Individual firms are thus said to be "price takers" who lack any "power over price," because they must accept the prices dictated by the overall market and cannot raise

their prices without losing their entire market share. As a result, the marginal revenue curve confronting individual firms is simply a horizontal line drawn at equilibrium price set at the industry level.

Figure 1
Short-Run Equilibrium Under Perfect Competition

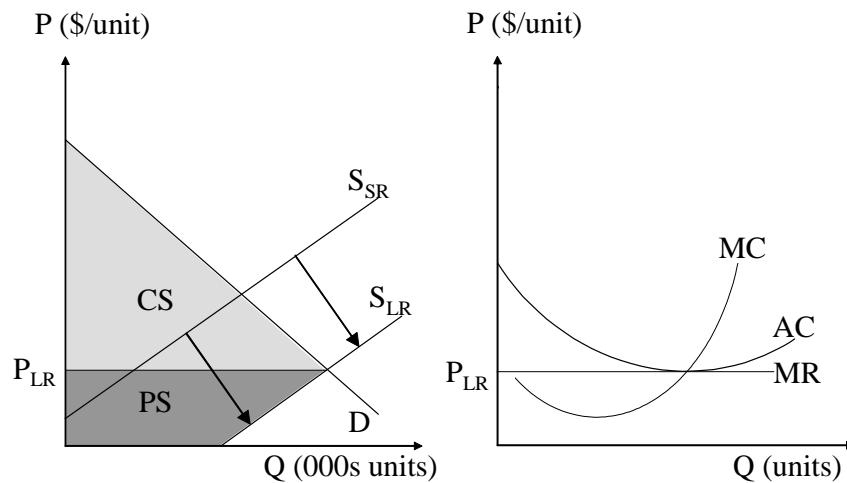


Perfect competition also presumes that the relevant cost curves are U-shaped. Production of most goods requires the incurrence of both fixed and variable costs. At relatively low volumes, the existence of fixed costs yields significant returns to scale as those fixed costs are spread over increasingly large volumes. Technological economies of scale also generally cause variable costs initially to decline as the quantity produced increases. Each of these effects cause both the average cost curve (AC in Figure 1) and the marginal cost curve (MC in Figure 1) to slope downward when production volumes are low, and the presence of fixed costs initially causes the average cost curve to lie above the marginal cost curve.

As production increases, the impact of the amortization of fixed costs on average cost decays exponentially. With respect to variable costs, the principle

of diminishing marginal returns eventually exhausts all of the available economies of scale. In addition, when consumption by different individuals is rivalrous (i.e., consumption by one person necessarily reduces the supply available to others), the demand for scarce factors of production causes the variable costs associated with producing additional quantities to rise. After production reaches a certain level, the emerging diseconomies of scale dominate the available economies of scale, and the marginal cost curve begins to curve upward. Once the increase in marginal costs more than offsets the ever-decreasing downward pressure caused by the amortization of fixed costs, the average cost curve begins to curve upward as well, after which point it lies below the marginal cost curve. The marginal cost curve necessarily intersects the average cost curve's lowest point.

Figure 2
Long-Run Equilibrium Under Perfect Competition



If the equilibrium price lies below a firm's average cost curve, the firm will go out of business and exit the market. As a result, under this model, firms

only produce output at levels in which the average cost curve lies at or below the marginal cost curve, and every producer is necessarily able to generate sufficient revenue to cover all of the costs associated with producing the goods.

If the equilibrium price lies above the firm's average cost curve, basic principles of profit maximization suggest that the firm will increase its production until marginal cost equals the equilibrium price. To the extent that the equilibrium price exceeds the firm's average costs at the level of production chosen by a particular firm, the firm may earn some economic profits in the short run. In the absence of any barriers to entry, the presence of these economic profits eventually attracts other producers into the market. The arrival of these new producers causes the market supply curve to shift outward, which in turn causes the equilibrium price to drop. Such entry occurs until the firms participating in the industry no longer earn any profits. When this point is reached, all firms produce where average cost is at its minimum.¹¹

2. *The Welfare Characteristics of the Equilibrium Under Perfect Competition*

The long-run equilibrium under perfect competition has a number of socially beneficial characteristics that have particular significance for the analysis presented in this Article. The first is the manner in which the equilibrium maximizes both productive and allocative efficiency. Productive efficiency is achieved when a particular good is produced using the fewest resources. Allocative efficiency is achieved when the existing goods are allocated to those buyers who value them the most (i.e., are willing to pay the most for them).¹² Because both of these approaches take the goods to be produced as given and simply focus on the proper distribution of the goods on both the supply side and demand side respectively, they can both be subsumed within the concept of static efficiency.

¹¹ Conversely, if the price established by the interaction of supply and demand causes the incumbent firms to lose money (i.e., if equilibrium price falls below average cost), one would expect firms to exit the market. This in turn causes the supply curve to shift backward and the equilibrium price to rise until it allows the firms participating in the market to cover their average costs. Again, this occurs at the point where average costs are the lowest, which is the point that maximizes allocative efficiency.

¹² For an accessible discussion of the difference between productive and allocative efficiency, see Joseph F. Brodley, *The Economic Goals of Antitrust: Efficiency, Consumer Welfare, and Technological Process*, 62 N.Y.U. L. REV. 1020, 1025-27 (1987).

Because the long-run equilibrium occurs at the point that minimizes the average costs of each firm, perfectly competitive markets can be said to achieve productive efficiency. In addition, the equilibrium under perfect competition also maximizes allocative efficiency by allowing sales to every consumer who would derive net benefits from doing so (i.e., whenever the benefits that they would derive from consuming the good would equal or exceed the costs of producing an additional unit of the good). It should be noted that this allocative efficiency requires that firms set price along the marginal cost curve, which in turn requires that the firms' marginal revenue curve coincide with a horizontal line positioned at the equilibrium price. In other words, firms must be price takers. If that is not true, marginal revenue will no longer accurately reflect the benefits to the marginal consumer. As a result, the price mechanism will not bring the marginal benefits to consumers and the marginal costs of producers into balance.

The absence of supra-competitive profits over the long run is also significant. As discussed above,¹³ the absence of profits follows directly from the assumption that there are no barriers to entry. So long as that is the case, free entry by new competitors dissipates any supra-competitive profits that may exist in the short run. Because both the long-run and short-run equilibria occur at a point on or above the average cost curve, it is necessarily true that the equilibrium price will be sufficient for producing firms to cover both their fixed and variable costs.

Finally, the equilibrium maximizes both consumer and total surplus. Consumer surplus is created whenever consumers find bargains. It is the excess value that they are able to enjoy whenever the price they actually pay falls below the maximum price they would be willing to pay (called their "reservation price"). Conversely, producer surplus is the excess value enjoyed by producers whenever they are able to sell their products at prices that exceed their costs of producing the product. The sum of the value created for both consumers and producers (i.e., consumer surplus + producer surplus) is called the total surplus.

Because firms in perfectly competitive markets compete solely on the basis of price, some form of surplus represents an appropriate welfare criterion for perfectly competitive markets. There is considerable disagreement, however,

¹³ See *supra* p. 1590.

over whether the goals of competition policy should be defined in terms of total surplus (which would focus on the net benefits to all of society) or consumer surplus (which would focus on the net benefits to consumers). Economists generally view the maximization of total surplus as the preferred measure of economic performance.¹⁴ Under this perspective, generation of the highest level of social benefits that could possibly be created by a particular product is all that matters. Although transfer of surplus from consumers to producers may have important distributional consequences,¹⁵ it has no impact on efficiency.¹⁶ Other commentators have argued that the competition policy should maximize consumer welfare.¹⁷ The debate between these two measures of welfare remains unresolved.¹⁸ In fact, one can find authority supporting either perspective.¹⁹

The equilibrium reached under perfect competition obviates the need to resolve this dispute. By setting price and quantity at the point where the demand and supply curves intersect, the equilibrium simultaneously allows every consumer who would derive net benefits from consuming a product and every producer who would derive net benefits from producing a product to do so. As a result it maximizes both consumer and total surplus. Producing at any quantity less than the equilibrium quantity would reduce consumer surplus by preventing some consumers from purchasing the product even though they would derive net benefits from doing so. In addition, it would reduce producer

¹⁴ See, e.g., Spence & Owen, *supra* note 7, at 104; Oliver E. Williamson, *Economies as an Antitrust Defense: The Welfare Tradeoffs*, 58 AM. ECON. REV. 18 (1968).

¹⁵ In asserting that wealth transfers are competitively neutral, I follow the Marshallian tradition of holding income effects constant. I recognize that acknowledging income effects may give wealth transfers greater significance from a welfare standpoint. For a useful discussion comparing these two approaches, see HAL VARIAN, MICROECONOMIC ANALYSIS 160-68 (3d ed. 1992).

¹⁶ See, e.g., F.M. SCHERER & DAVID ROSS, INDUSTRIAL MARKET STRUCTURE AND ECONOMIC PERFORMANCE 24-25 (3d ed. 1990); Jerry Hausman & Howard Shelanski, *Economic Welfare and Telecommunications Regulation: The E-Rate Policy for Universal-Service Subsidies*, 16 YALE J. ON REG. 19, 33 (1999); Gregory J. Werden, *An Economic Perspective on the Analysis of Merger Efficiencies*, ANTITRUST, Summer 1997, at 12, 14.

¹⁷ See, e.g., Robert H. Lande, *Wealth Transfers as the Original and Primary Concern of Antitrust: The Efficiency Interpretation Challenged*, 34 HASTINGS L.J. 65 (1982).

¹⁸ See Brian A. Facey et al., *The Canadian Competition Tribunal Gets It Right*, ANTITRUST, Fall 2000, at 70, 70 & n.2 (noting the debate between consumer and total surplus perspectives); Mark R. Patterson, *Coercion, Deception, and Other Demand-Increasing Practices in Antitrust Law*, 66 ANTITRUST L.J. 1, 41 n.186 (1997) (same).

¹⁹ See Werden, *supra* note 16, at 13-14 (noting the existence of cases supporting the use of total surplus while also noting that the 1997 revision of the Horizontal Merger Guidelines leaned toward consumer surplus).

surplus by preventing some producers from selling their products notwithstanding the existence of unsatisfied buyers willing to purchase them. Together these reductions in surplus are known as “deadweight loss.”

B. Nonrivalry and the Economics of Public Goods

The model of perfect competition sketched above is firmly ensconced as the foundation of economic analysis. It is, however, based on a number of assumptions that tend not to hold in many real-world markets. One key feature for our purposes is that perfect competition theory fails to provide a useful model for products that exhibit the characteristics of a public good, the analysis of which is most strongly associated with the work of Nobel Laureate Paul Samuelson.²⁰

1. The Definition of a Public Good

The most common definition of a public good posits that public goods possess two distinctive qualities: the “lack of excludability,” which occurs when producers cannot restrict the benefits provided by their products only to those consumers who are willing to pay for them, and the “lack of rivalry,” which occurs when consumption by one person does not subtract from the supply available for consumption by others.²¹ One oft-cited example of a public good is national defense, which is simultaneously nonexcludable, in that national defense cannot be provided to one household without also providing it to all others in the same geographic area, and nonrivalrous, in that one

²⁰ Paul A. Samuelson, *Aspects of Public Expenditure Theories*, 40 REV. ECON. & STAT. 332, 335-36 (1958) [hereinafter Samuelson, *Aspects*]; Paul A. Samuelson, *Diagrammatic Exposition of a Theory of Public Expenditure*, 37 REV. ECON. & STAT. 350 (1955) [hereinafter Samuelson, *Diagrammatic Exposition*]; Paul A. Samuelson, *The Pure Theory of Public Expenditure*, 36 REV. ECON. & STAT. 387 (1954) [hereinafter Samuelson, *Pure Theory*]. For a useful overview of public good economics, see William H. Oakland, *Theory of Public Goods*, in 2 HANDBOOK OF PUBLIC ECONOMICS 486 (Alan J. Auerbach & Martin Feldstein eds., 1987). For a more extended and technical treatment, see RICHARD CORNES & TODD SANDLER, *THE THEORY OF EXTERNALITIES, PUBLIC GOODS, AND CLUB GOODS* (2d ed. 1996).

²¹ The concepts of nonrivalry and nonexcludability appear as distinct concepts in Samuelson's work. Samuelson, *Aspects*, *supra* note 20, at 335. This terminology appears to originate with R.A. Musgrave, *Provision for Social Goods*, in PUBLIC ECONOMICS 124, 126 (Julius Margolis & Henri Guitton eds., 1969). It now appears in many textbooks on microeconomics, public economics, and law and economics. See, e.g., DAVID A. BESANKO & RONALD R. BRAEUTIGAM, MICROECONOMICS 749 (2002); ROBERT COOTER & THOMAS ULEN, LAW AND ECONOMICS 42, 106, 126 (3d ed. 2000); CORNES & SANDLER, *supra* note 20, at 8-9; ROBERT S. PINDYCK & DANIEL L. RUBINFELD, MICROECONOMICS 638 (1989); JOSEPH E. STIGLITZ, ECONOMICS OF THE PUBLIC SECTOR 87, 99-103 (1986).

household can enjoy the benefits provided by the protection without affecting the ability of any neighboring household to do so as well.²² Another commonly cited example are lighthouses, which are said to be nonexcludable, in that it is impossible to provide the services of the lighthouse to one ship without providing it to all, and nonrivalrous, in that consumption of the warning services by one ship has no effect on the availability of warning services to other ships.²³

Theoretical developments since that time have placed increasing pressure on this classic definition of a pure public good. Although nonexcludability does tend to give rise to the collective action problems associated with free riding,²⁴ the seminal works by Ronald Coase²⁵ and Garrett Hardin²⁶ suggest that the government could eliminate many of these problems through the use of well defined property rights rather than through more intrusive forms of regulatory intervention.²⁷ As a result, a number of public good theorists have questioned whether nonexcludability is a necessary part of the definition of a public good.²⁸ Indeed, Samuelson himself suggested as much.²⁹

²² See, e.g., PINDYCK & RUBINFELD, *supra* note 21, at 638; STIGLITZ, *supra* note 21, at 100, 102; Samuelson, *Aspects*, *supra* note 20, at 334.

²³ See, e.g., DENNIS W. CARLTON & JEFFREY M. PERLOFF, *MODERN INDUSTRIAL ORGANIZATION* 82 (3d ed. 2000); PAUL A. SAMUELSON, *ECONOMICS* 159 n.1 (6th ed. 1964); STIGLITZ, *supra* note 21, at 102. For a classic critique of the lighthouse as an example of the need for government intervention, see Ronald H. Coase, *The Lighthouse in Economics*, 17 J.L. & ECON. 357 (1974), reprinted in *FAMOUS FABLES OF ECONOMICS* 32-48 (Daniel F. Spulber ed., 2002). See also David E. Van Zandt, *The Lessons of the Lighthouse: "Government" or "Private" Provision of Goods*, 23 J. LEGAL STUD. 47 (1993).

²⁴ In fact, many microeconomic texts discuss public goods solely in terms of the problems associated with free riding. See, e.g., ANDREU MAS-COLELL ET AL., *MICROECONOMIC THEORY* 362 (1995); PINDYCK & RUBINFELD, *supra* note 21, at 641.

²⁵ See R.H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1 (1960); see also Coase, *supra* note 23, at 375 (recounting the history of private provision of lighthouses in Great Britain in which government involvement was limited to the establishment and enforcement of property rights in the lighthouse).

²⁶ Garrett Hardin, *The Tragedy of the Commons*, 162 *SCIENCE* 1243 (1968).

²⁷ James M. Buchanan & Milton Z. Kafoglis, *A Note on Public Goods Supply*, 53 *AM. ECON. REV.* 403 (1963); see also SHMANSKE, *supra* note 7, at 17-20 (observing that many public goods are in fact excludable and that property rights can often be developed to solve nonexcludability problems). It should be noted that situations involving goods that create negative externalities are not necessarily symmetrical with situations involving goods that create positive externalities, because it is difficult to conceive of a legal regime that would give the recipient of the external benefit the legal right to force the person creating the benefit to increase consumption of the activity that generates the external benefits. Oakland, *supra* note 20, at 513.

²⁸ See, e.g., SHMANSKE, *supra* note 7, at 7; David J. Brennan, *Fair Price and Public Goods: A Theory of Value Applied to Retransmission*, 22 *INT'L REV. L. & ECON.* 347, 350 (2002); J.G. Head, *Public Goods and Public Policy*, 17 *PUB. FIN.* 197, 215 (1962); Oakland, *supra* note 20, at 487.

²⁹ SAMUELSON, *supra* note 23, at 159 n.1; Samuelson, *Aspects*, *supra* note 20, at 335.

It is thus far from clear whether nonexclusion can be properly regarded as an essential part of the theory of public goods. Fortunately, the argument presented in this Article does not depend upon resolution of this dispute, as it is the economic implications stemming from the lack of rivalry that carry the greatest implications for television.

2. *Static Efficiency and Declining Average Costs*

The lack of rivalry changes the cost structure of public goods in ways that cause market outcomes to deviate significantly from the results indicated by the standard model of perfect competition. As noted earlier,³⁰ the cost curves for firms engaged in perfect competition are U-shaped, as depicted in Figures 1 and 2, in that they initially slope downward before eventually sloping upward. Once the average cost curve begins sloping upward, it necessarily lies below the marginal cost curve, and any firm setting price along the marginal cost curve necessarily generates sufficient revenue to break even.

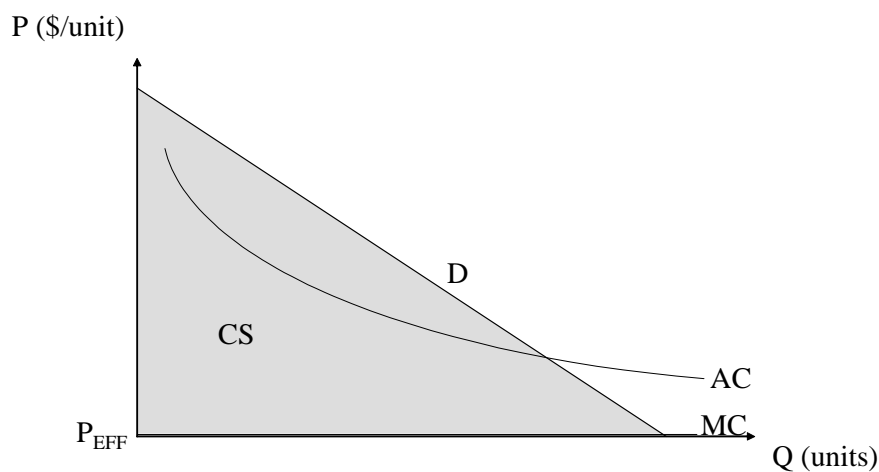
A different situation obtains when goods are nonrivalrous. Because consumption by one person does not affect the supply available for consumption by others, providing the product to an additional person does not cause variable costs to increase. Under such conditions, variable costs have no effect on marginal cost whatsoever, and the sole determinant of marginal cost is the amortization of fixed costs. As a result, the classic analyses of public goods assumed that the variable costs of producing another unit of output are zero and constant.³¹ This assumption does not reduce the generality of the analysis, as cases involving pure nonrivalry have been shown to be indistinguishable from cases when marginal costs are nonzero so long as they are sufficiently small relative to fixed cost.³²

³⁰ See *supra* pp. 1588-90.

³¹ See, e.g., James M. Buchanan, *Public Goods in Theory and Practice: A Note on the Minasian-Samuelson Debate*, 10 J.L. & ECON. 193, 195 (1967); Head, *supra* note 28, at 213; Jora R. Minasian, *Television Pricing and the Theory of Public Goods*, 7 J.L. & ECON. 71, 74 (1964); Samuelson, *Aspects*, *supra* note 20, at 335.

³² WILLIAM J. BAUMOL ET AL., *CONTESTABLE MARKETS AND THE THEORY OF INDUSTRY STRUCTURE* 301-02 (rev. ed. 1988).

Figure 3
Efficient Pricing of a Nonrival Product



This causes average cost to decline across all volumes, as the fixed costs are amortized over increasingly large volumes.³³ The presence of constantly declining average costs carries with it two relevant implications. First, it creates inexhaustible economies of scale that naturally lead nonrival goods to seek the broadest market possible.³⁴ Indeed, if the product is a uniform commodity, the presence of constantly declining average costs inevitably leads markets involving nonrival goods to become natural monopolies,³⁵ making it

³³ See Head, *supra* note 28, at 211-15; Samuelson, *Aspects*, *supra* note 20, at 335.

³⁴ See BAKER, *supra* note 7, at 226.

³⁵ See, e.g., WILLIAM W. SHARKEY, *THE THEORY OF NATURAL MONOPOLY* 47 (1982); SHMANSKE, *supra* note 7, at 26-27, 193 n.5 (collecting sources); C. Edwin Baker, *Giving the Audience What It Wants*, 58 OHIO ST. L.J. 311, 411 (1997); Head, *supra* note 28, at 211-15; Samuelson, *Aspects*, *supra* note 20, at 335; see also CORNES & SANDLER, *supra* note 20, at 348-49 (noting that for pure public goods, “[t]he entire population is in a single provision association”); Dagobert L. Brito & William H. Oakland, *On the Monopolistic Provision of Excludable Public Goods*, 70 AM. ECON. REV. 691, 691 (1980) (noting that “scale economies in . . . production

appropriate to model demand,³⁶ average cost, and marginal cost at the industry level. In addition, any attempt to limit the size of the market that any firm can reach can only serve to force production below equilibrium levels. This has the inevitable effect of making the products sold by that firm more expensive. It also increases the minimum volume needed for the firm to be viable.

Second, the fact that the average cost curve slopes downward throughout its entire range gives rise to an intractable pricing problem. Recall that pricing along the marginal cost curve represents one of the basic criteria for maximizing allocative efficiency.³⁷ The problem stems from the fact that the marginal cost curve always lies below the average cost curve. As a result, marginal cost pricing is economically infeasible, because any price set along the marginal cost curve will not allow the firm to cover its costs. Indeed, if marginal costs are zero as suggested by public goods theory and depicted in Figure 3, pricing along the marginal cost curve would lead firms to charge nothing at all for their products.³⁸ Although this price would maximize allocative efficiency by allowing every person who would derive net benefits from consuming a product to do so, it would also prevent the producer from generating any revenue whatsoever. Consequently, the producers would be unable to recover the fixed costs needed to create their products in the first place.³⁹

Allowing producers of nonrivalrous goods to generate sufficient revenue to cover fixed costs necessarily requires permitting them to charge a positive price for their products. If left to their own devices, producing firms will act as monopolists and produce at the level where marginal revenue equals marginal cost, as depicted in Figure 4.⁴⁰ Unfortunately, charging a positive price creates

as well as a uniqueness arising because of locational considerations" would lead the provision of many public goods "[i]f left in the private sector . . . to be characterized by monopoly elements").

³⁶ As a technical matter, it would be more accurate to represent consumer-side effects with a marginal rate of substitution curve (MRS) rather than a demand curve. Samuelson, *Diagrammatic Exposition*, *supra* note 20, at 353-54. The eventual integration of this model with monopolistic competition theory obviates the need to parse the similarities and differences between these two types of curves.

³⁷ See *supra* p. 1591.

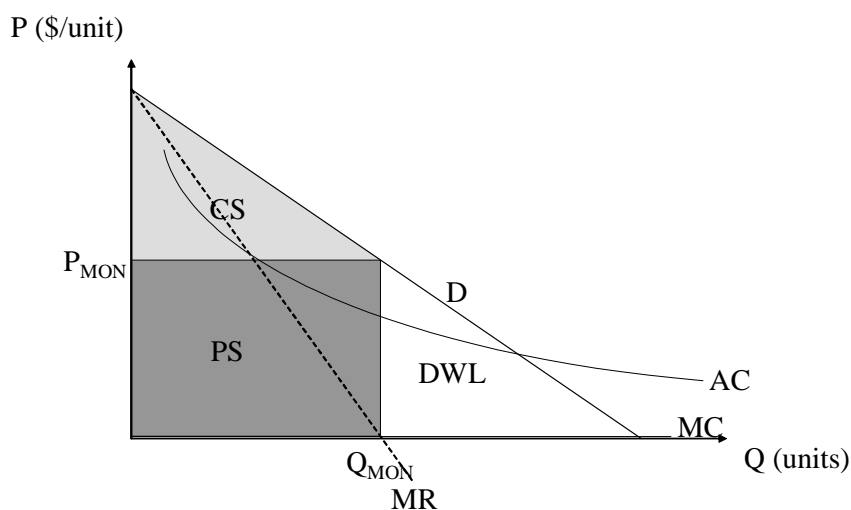
³⁸ Samuelson, *Aspects*, *supra* note 20, at 335; see also BAKER, *supra* note 7, at 9.

³⁹ These polar cases provide a particularly effective illustration of the pricing problem. That said, the basic problem is general and is not limited to these restrictive assumptions. So long as average cost is decreasing, the average cost curve will lie above the marginal cost curve even if marginal cost is nonconstant and nonzero. As a result, marginal cost pricing will be impossible. See BAUMOL ET AL., *supra* note 32, at 18-22.

⁴⁰ For a more detailed discussion of monopoly pricing, see *infra* notes 52-53 and accompanying text.

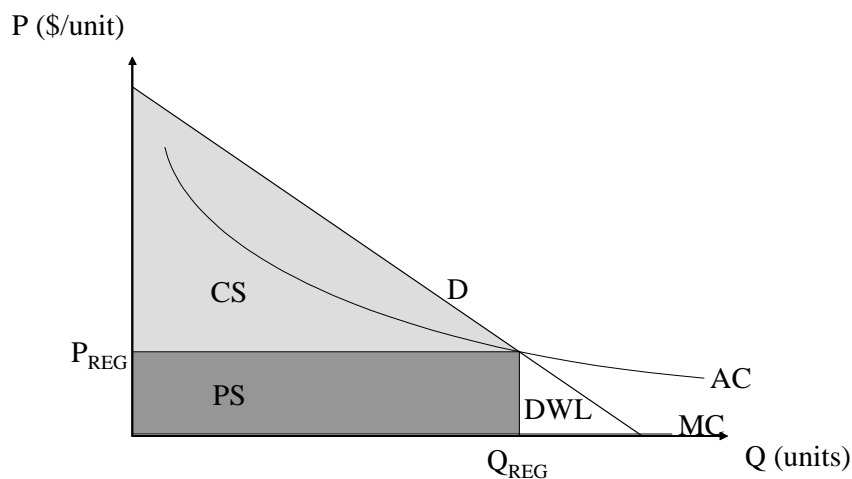
deadweight loss by denying some consumers access to the product even though the benefits that they would derive from consuming it would exceed the marginal cost of allowing them to do so. Moreover, to the extent that equilibrium price exceeds average cost, it permits the producing firm to earn supra-competitive profits. The natural monopoly characteristics created by a downward sloping average cost curve dictate that such profits would be sustainable over the long run.

Figure 4
 Monopoly Pricing of a Nonrival, Differentiated Product



Consumer surplus would be maximized and profits would be eliminated if regulators were to turn to the device usually employed in declining-cost industries and require that prices be set along the average cost curve. This approach would also reduce, but not eliminate, deadweight loss. The fact that the average cost curve lies above the marginal cost curve prevents its complete elimination.

Figure 5
Regulated Pricing of a Nonrival, Differentiated Product



The basic principle of marginal cost pricing thus suggests that any price charged for a nonrival good is too high from the standpoint of allocative or static efficiency.

3. *The Unresolved Conundrum of Dynamic Efficiency*

Taken to its logical extreme, this line of reasoning suggests that the optimal policy from the standpoint of static efficiency would be for the nonrival good to be priced at marginal cost (i.e., at zero). The resulting revenue shortfall could be covered through a system of publicly financed subsidies⁴¹ of the type first conceived by Pigou.⁴²

⁴¹ See, e.g., SAMUELSON, *supra* note 23, at 159 n.1; Brennan, *supra* note 28, at 351; Samuelson, *Aspects*,

This analysis has been criticized for begging an important question: by taking the existing supply of nonrival goods as given and simply focusing on the most efficient way to produce and allocate that good, it fails to provide an endogenous basis for determining which and how many goods should be produced in the first place.⁴³ In other words, setting price as close to marginal cost as possible maximizes static efficiency without shedding any light on considerations of dynamic efficiency.

The suggestion that the government could use subsidies to determine which goods should be produced is similarly problematic. What would make sense is to calibrate the subsidy to reflect the aggregation of individuals' preferences for the public good. The problem is that any system of taxation that is calibrated in such a manner will itself create substantial distortions.⁴⁴ Furthermore, as Samuelson himself recognized, calibration of such a subsidy would require the government to obtain accurate information about the utility that every person would derive from every possible product.⁴⁵ Such a task has been criticized as insuperable even with respect to rivalrous goods. Both tasks become even more intractable when nonrivalrous goods are involved, because the possibility that another consumer might fund the fixed costs needed to create the good makes it even less likely that any consumer would accurately reveal his or her true preferences.⁴⁶

supra note 20, at 335-36; Spence & Owen, *supra* note 7, at 122. Samuelson later emphasized that he was simply using the example to illustrate the intractability of the pricing problem and did not intend to suggest that was the preferred policy outcome. Paul A. Samuelson, *Public Goods and Subscription TV: Correction of the Record*, 7 J.L. & ECON. 81, 81-82 (1964).

⁴² A.C. PIGOU, *A STUDY IN PUBLIC FINANCE* 30-34 (3d ed. 1947).

⁴³ Minasian, *supra* note 31, at 73, 79; *see also* Brennan, *supra* note 28, at 354-55 (noting Samuelson's tendency to focus on static efficiency at the expense of dynamic efficiency); Janusz Ordover & William Baumol, *Antitrust Policy and High-Technology Industries*, 4 OXFORD REV. ECON. POL'Y 13, 14, 32 (1988) (noting the conflict between static and dynamic efficiency).

⁴⁴ *See* A.B. Atkinson & N.H. Stern, *Pigou, Taxation and Public Goods*, 41 REV. ECON. STUD. 119 (1974); Joseph E. Stiglitz & P.S. Dasgupta, *Differential Taxation, Public Goods, and Economic Efficiency*, 38 REV. ECON. STUD. 151 (1971). *See generally* Alan J. Auerbach, *The Theory of Excess Burden and Optimal Taxation*, in 1 HANDBOOK OF PUBLIC ECONOMICS, *supra* note 21, at 61 (reviewing the literature).

⁴⁵ Samuelson, *Aspects*, *supra* note 20, at 336.

⁴⁶ Head, *supra* note 28, at 208-09; Oakland, *supra* note 20, at 513-14, 520; Samuelson, *Aspects*, *supra* note 20, at 336; Samuelson, *Diagrammatic Exposition*, *supra* note 20, at 355; Samuelson, *Pure Theory*, *supra* note 20, at 389. Demsetz challenged this conclusion by arguing that consumers of nonrivalrous goods are no less likely to disclose their preferences accurately than are consumers of rivalrous goods. Harold Demsetz, *The Private Production of Public Goods*, 13 J.L. & ECON. 293, 299, 303-04 (1970). Subsequent experimental work has confirmed that the free riding predicted by the theory does in fact occur, although at lower levels

C. *Product Differentiation and the Theory of Monopolistic Competition*

One can resolve this unanswered question of dynamic efficiency by integrating public good economics with the insights of another intriguing and unusual approach to economic analysis known as “monopolistic competition.”⁴⁷ First advanced by Edward Chamberlin⁴⁸ and extended by subsequent scholars, including most notably by Avinash Dixit, Joseph Stiglitz, and Michael Spence,⁴⁹ monopolistic competition retains the key assumptions of the standard model of perfect competition while relaxing the assumption that all products are undifferentiated.⁵⁰ Relaxation of this assumption allows

than might have been expected. *See generally* DOUGLAS D. DAVIS & CHARLES A. HOLT, EXPERIMENTAL ECONOMICS 317-80 (1993) (reviewing this literature); John O. Ledyard, *Public Goods: A Survey of Experimental Research*, in HANDBOOK OF EXPERIMENTAL ECONOMICS 111 (John H. Kagel & Alvin E. Roth eds., 1995) (same).

⁴⁷ For an excellent survey of the literature on monopolistic competition, see Curtis Eaton & Richard G. Lipsey, *Product Differentiation*, in 1 HANDBOOK OF INDUSTRIAL ORGANIZATION 723, 728-34, 759-65 (Richard Schmalensee & Robert D. Willig eds., 1989). Useful discussions of monopolistic competition theory can be found in most leading textbooks on microeconomics and industrial organization. *See, e.g.*, BESANKO & BRAEUTIGAM, *supra* note 21, at 584-89; CARLTON & PERLOFF, *supra* note 23, at 201-15; JEFFREY CHURCH & ROGER WARE, INDUSTRIAL ORGANIZATION 369-76 (2000); CLEMENT G. KROUSE, THEORY OF INDUSTRIAL ECONOMICS 128-32, 179-80, 198-214 (1990); PINDYCK & RUBINFELD, *supra* note 21, at 421-26; JEAN TIROLE, THE THEORY OF INDUSTRIAL ORGANIZATION 298-300 (1988); HAL VARIAN, MICROECONOMIC ANALYSIS 92-98 (2d ed. 1984).

⁴⁸ *See* CHAMBERLIN, *supra* note 9; *see also* JOAN ROBINSON, THE ECONOMICS OF IMPERFECT COMPETITION (1933) (offering a similar analysis).

⁴⁹ *See* Avinash K. Dixit & Joseph E. Stiglitz, *Monopolistic Competition and Optimum Product Diversity*, 67 AM. ECON. REV. 297 (1977); Michael Spence, *Product Differentiation and Welfare*, 66 AM. ECON. REV. 407, 408 (1976) [hereinafter Spence, *Product Differentiation*]; Michael Spence, *Product Selection, Fixed Costs, and Monopolistic Competition*, 43 REV. ECON. STUD. 217, 234 (1976) [hereinafter Spence, *Product Selection*].

⁵⁰ It should be noted that monopolistic competition theory represents only one of several established methods for analyzing competition among differentiated products. Another line of economic research has built on a seminal article authored by Harold Hotelling to offer models in which producers compete by positioning their products at particular locations in a product space. *See* Harold Hotelling, *Stability in Competition*, 39 ECON. J. 41 (1929). Two lines of commentary have emerged applying these principles to television programming. The better established of the two limited the product space by dividing various television stations into pre-identified categories of program formats. This greatly simplified the welfare calculus by allowing it to be determined by voting. *See, e.g.*, Jack H. Beebe, *Institutional Structure and Program Choices in Television Markets*, 91 Q.J. ECON. 15 (1977); Peter O. Steiner, *Program Patterns and Preferences, and the Workability of Competition in Radio Broadcasting*, 66 Q.J. ECON. 194 (1952). A second line employed models that allowed particular programs to vary across the product space in a manner more consistent with Hotelling's original conception. *See, e.g.*, Harold J. Barnett & Edward Greenberg, *TV Program Diversity—New Evidence and Old Theories*, 61 AM. ECON. REV. 89 (1971); Eli M. Noam, *A Public and Private-Choice Model of Broadcasting*, 55 PUB. CHOICE 163 (1987); Alessandro Vaglio, *A Model of the Audience for TV Broadcasting: Implications for Advertising Competition and Regulation*, 42 INT'L REV. ECON. & BUS. 33

monopolistic competition to explore the effect of a ubiquitous feature of our economy. For example, cars come in a wide range of styles and combine features in ways that are not immediately comparable. Restaurants vary widely in terms of cuisine, pricing, atmosphere, service, and quality. Even different brands of commodities such as bread, soap, and soft drinks differ in ways that lead people to prefer particular brands over others.

Allowing for the possibility of product differentiation changes the economic analysis in profound ways. What is most interesting for our purposes is the ease with which the insights of monopolistic competition can be combined with those of public good economics. The resulting combination offers a unified framework that permits a richer understanding of the economics underlying products exhibiting both of these qualities. In addition, the combined framework yields a possible resolution to the conflict between static and dynamic efficiency that proved intractable under public goods theory.

1. Short-Run and Long-Run Equilibrium Under Monopolistic Competition

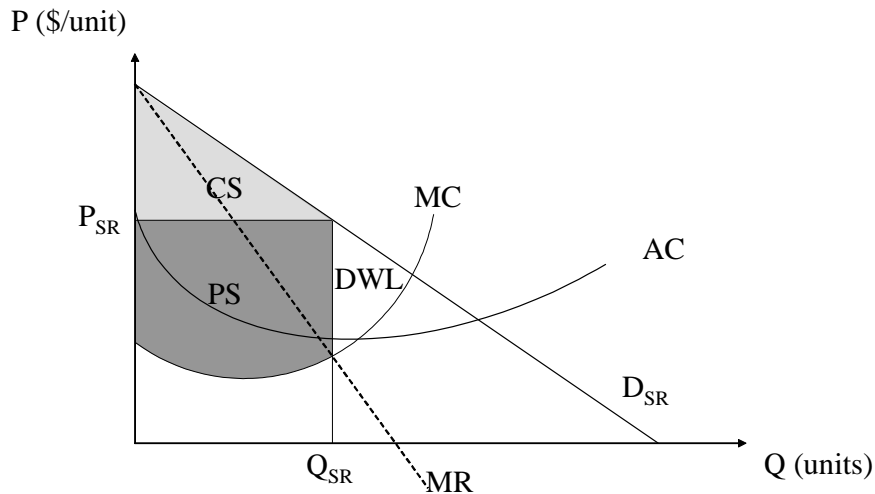
Under Chamberlin's classic formulation, all products in a monopolistically competitive industry serve as imperfect substitutes in equal competition with one another. The fact that the substitution among these products is imperfect allows individual firms to raise their prices without losing all of their sales to their rivals. As a result, product differentiation prevents the market from devolving into a natural monopoly just because average costs are decreasing. The differences in customer preferences can allow multiple declining cost firms to survive by targeting different segments of the overall customer base.⁵¹

(1995); David Waterman, *Diversity and Quality of Information Products in a Monopolistically Competitive Industry*, 4 INFO. ECON. & POL'Y 291 (1990); Steven S. Wildman, *A Note on Measuring Surplus Attributable to Differentiated Products*, 33 J. INDUS. ECON. 123 (1984). The difficulty of integrating these analyses into a framework that also reflects public good economics has led me to rely on monopolistic competition theory as the method for modeling competition between differentiated products. I do not mean to suggest that I regard spatial models as unimportant. On the contrary, it is my hope to offer a more comprehensive analysis of these models in later work. For my initial thoughts on the first of these two lines of scholarship, see Christopher S. Yoo, *Copyright and Democracy: A Cautionary Note*, 53 VAND. L. REV. 1933, 1936-42 (2000).

⁵¹ Edward Chamberlin's work provides the seminal analysis of how competition among differentiated products can yield an equilibrium in which multiple declining-cost firms exist. See CHAMBERLIN, *supra* note 9. See also WILLIAM F. BAXTER ET AL., *RETAIL BANKING IN THE ELECTRONIC AGE* 101-20 (1977). For applications of this principle to the television industry, see BRUCE M. OWEN, *THE INTERNET CHALLENGE TO TELEVISION* 32 (1999), and Thomas W. Hazlett, *Private Monopoly and the Public Interest: An Economic*

Product differentiation also causes the equilibrium to deviate from the equilibrium reached under perfect competition in a number of interesting ways. These deviations result from the fact that firms selling differentiated products are no longer price takers who face perfectly elastic (i.e., horizontal) demand and marginal revenue curves. Instead they possess some degree of power over price, with the extent of that power determined by the degree of substitutability among the products.

Figure 6
Short Run Equilibrium Under Monopolistic Competition



Analysis of the Cable Television Franchise, 134 U. PA. L. REV. 1335, 1355-56, 1368-70 (1986). This is the supply-side analog to the manner in which customer heterogeneity can mitigate the demand-side economies of scale resulting from network economic effects. See Joseph Farrell & Garth Saloner, *Standardization and Variety*, 20 ECON. LETTERS 71 (1986); Michael L. Katz & Carl Shapiro, *Systems Competition and Network Effects*, 8 J. ECON. PERSP. 93, 106 (1994); S.J. Liebowitz & Stephen E. Margolis, *Should Technology Choice Be a Concern of Antitrust Policy?*, 9 HARV. J.L. & TECH. 283, 292 (1996). See generally Daniel F. Spulber & Christopher S. Yoo, *Access to Networks: Economic and Constitutional Connections*, 88 CORNELL L. REV. 885 (2003) (discussing this literature); Christopher S. Yoo, *Vertical Integration and Media Regulation in the New Economy*, 19 YALE J. ON REG. 171, 272, 280-81 (2002) (same).

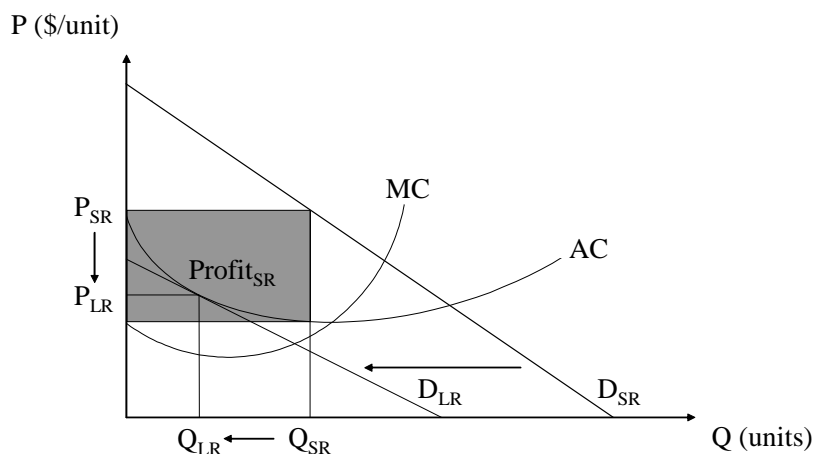
The fact that monopolistically competitive firms each face downward sloping demand curves indicates that equilibrium price and quantity are modeled at the firm, rather than the industry, level. It also causes the marginal revenue curve for firms selling differentiated products to lie somewhere below the demand curve. The intuition underlying this result is quite simple. A firm that already is charging the maximum possible for a given level of production can only attract new customers by lowering its price. If the firm could offer the lower price only to new customers without also having to offer that price to its existing customers, the marginal revenue curve would coincide with the demand curve over the relevant range. However, most firms have trouble reducing prices for new customers without also reducing prices for their existing customers. Any revenue gained by moving farther down the demand curve must be offset by the revenue lost by giving the lower price to existing customers. If that is the case, the marginal revenue curve is represented by the demand curve minus the revenue lost by offering the price reduction to the existing customers.⁵² This causes the marginal revenue curve to lie below the demand curve.⁵³

Like any firm seeking to maximize its profits, a firm selling a differentiated product increases its production until the marginal revenue it obtains from selling an additional unit no longer exceeds the marginal cost of producing the additional unit (i.e., where the marginal revenue curve intersects the marginal cost curve). Having identified the profit maximizing level of production, the firm then charges the maximum that it can receive for that quantity, which is represented by where that quantity falls along the demand curve faced by that firm. Because the price charged by the firm is not set along the marginal cost curve, monopolistic competition necessarily gives rise to some degree of deadweight loss.

⁵² This analysis changes somewhat if the firm is able to lower the prices charged to customers who place a lower value on the product without offering the same price discount to all of its customers, including those who value the product the most highly. I discuss below the effect that price discrimination can have on the analysis *infra* Part I.E.

⁵³ In fact, when the demand function for a particular product is linear, the marginal revenue curve is represented by a straight line with twice the slope of the demand curve intersecting the vertical axis at the same point as the demand curve. See SCHERER & ROSS, *supra* note 16, at 21 n.13 (offering a simple proof of this relationship).

Figure 7
Long-Run Equilibrium Under Monopolistic Competition



One of the distinctive features of the short-run equilibrium is that some firms engaged in monopolistic competition can earn supra-competitive profits in the short run, in the event that the demand curve facing the firm lies above the average cost curve (depicted by the shaded area in Figure 7). The possibility of free entry posited under monopolistic competition ensures that any such profits should not persist in the long run. As was the case under the standard model of perfect competition,⁵⁴ the presence of supra-competitive profits attracts entry by new firms. Because the classic model of monopolistic competition presumes that firms are in equal competition with one another, entry by new firms affects incumbents symmetrically and causes their demand

⁵⁴ See *supra* p. 1590.

curves to shift backwards uniformly until the demand curve is tangent to the average cost curve.⁵⁵

Because the principle of diminishing marginal returns requires that the demand curve be downward sloping, this long-run equilibrium necessarily occurs where the average cost curve is also downward sloping and above the marginal cost curve. As a result, the seminal analyses of classic Chamberlinian monopolistic competition have assumed that marginal costs are constant, which increases mathematical tractability without losing the key characteristics of both the average and marginal cost curves.⁵⁶ This renders the shape of the cost curves contained in the key monopolistic competition models identical in shape to the cost curves for nonrival goods. This simplifying assumption does not cause any loss of generality because the important aspects of the monopolistic competition equilibrium would remain unchanged even if the marginal cost curve were assumed to have the more typical U-shape.⁵⁷

Another key difference between the equilibrium reached under monopolistic competition and the equilibrium reached under public good economics is the absence of supra-competitive profits. Unlike under public good economics, the fact that products produced by different firms are imperfect rather than perfect substitutes allows additional firms to enter the market. As was the case under perfect competition,⁵⁸ such entry will occur until all supra-competitive profits are dissipated.

There are, however, a couple of noteworthy caveats to the zero-profit result under monopolistic competition. The first occurs when firms must incur a large, indivisible fixed cost to enter the market. The “lumpiness” caused by large fixed costs can give rise to what has become known as the “integer problem,” in which n firms might earn small profits while $n+1$ firms would run losses. In such cases, the equilibrium would consist of n firms each earning

⁵⁵ See, e.g., CHAMBERLIN, *supra* note 9, at 83-85. Interestingly, contestability theory suggests that actual entry need not occur for prices to remain at competitive levels. So long as entry and exit are easy, potential competition can discipline price just as effectively as actual competition. See BAUMOL ET AL., *supra* note 32, at 288-301.

⁵⁶ See, e.g., Dixit & Stiglitz, *supra* note 49, at 299; Spence, *Product Differentiation*, *supra* note 49, at 411.

⁵⁷ CARLTON & PERLOFF, *supra* note 23, at 208; see also Spence, *Product Differentiation*, *supra* note 49, at 409 (using the constantly declining cost case as analogous to the decreasing average cost equilibrium under monopolistic competition).

⁵⁸ See *supra* pp. 1590-91.

some degree of sustainable profits. If n is sufficiently large, any such profits would be relatively small.⁵⁹

The zero-profit result also depends in large part on the symmetry assumption, which posits that the differentiated product offered by any particular firm is engaged in equal competition with all similar products offered by other firms.⁶⁰ The symmetry assumption thus ensures that new entrants will take business equally from all of the incumbent firms until no firm earns profits.⁶¹ Although such an assumption may be appealing when product differentiation is spurious, such as might occur if created by brand-image advertising, it is less appealing when product differentiation results from real differences in product attributes.⁶² When the latter is the case, one would expect that some products would serve as better substitutes than others. As a result, it may be more realistic to assume that a new entrant will not take business equally from all incumbent firms, but will instead compete more with some businesses than others. Under this view, each product can be conceived as occupying a certain position along a scale, with any particular product participating more with those products that are close by and less with those that are farther off.⁶³ In this way, asymmetric preferences create the possibility of the emergence of localized competition, which in turn gives rise to the possibility that the integer problem could arise with respect to subsegments of the market rather than just with respect to the market as a whole. This could result in the emergence of “overlapping oligopolies” each earning supra-competitive profits that entry by new firms is unable to dissipate.⁶⁴

⁵⁹ Eaton & Lipsey, *supra* note 47, at 733-34, 749. The seminal statement was offered by Nicholas Kaldor, *Market Imperfections and Excess Capacity*, 2 *ECONOMICA* 33, 42-43 (1935).

⁶⁰ The seminal analysis was again offered by Kaldor, *supra* note 59, at 38-39. Chamberlin ultimately accepted this criticism. Edward H. Chamberlin, *Monopolistic Competition Revisited*, 18 *ECONOMICA* 343 (1951).

⁶¹ See *supra* pp. 1590-91.

⁶² Eaton & Lipsey, *supra* note 47, at 734.

⁶³ Kaldor, *supra* note 59, at 38. This approach is similar to the location models mentioned above, *supra* note 50.

⁶⁴ G.C. Archibald et al., *Address Models of Value Theory*, in *NEW DEVELOPMENTS IN THE ANALYSIS OF MARKET STRUCTURE* 3, 29 (Joseph E. Stiglitz & G. Frank Mathewson eds., 1986); Kaldor, *supra* note 59, at 39. Note that this approach does not allow for the type of clean segregation that would justify treating any one segment of the overall range of product offerings as a discrete market. This is because, although relaxation of the symmetry assumption does suggest that products compete more strongly with their near neighbors, it does presume that a weaker form of competition will continue to exist with their more distant neighbors. It is this overlapping nature of localized competition that inhibits treating each segment as a separate market. The extent to which this is true will depend on the degree of product differentiation.

There are, however, considerations that mitigate some of the concerns associated with the existence of sustainable profits. Such profits would be minimized in “large economies,” in which each subsegment of the overall market is populated by a relatively large number of firms. When this occurs, each subsegment is sufficiently competitive to drop any profits to de minimis levels and to drive prices fairly close to marginal cost. The sustainability of profits thus depends on the factors that tend to make economies large, i.e., relatively weak product differentiation and fixed costs that are small relative to the overall size of the market.⁶⁵

2. *Static Efficiency and the Proper Allocation of Goods That Are Produced*

Given the similarity of the relevant demand and cost curves, it should come as no surprise that goods in monopolistic competition experience the same types of allocative inefficiency as that associated with public goods. Like nonrival goods, monopolistically competitive goods face downward sloping demand curves, albeit for different reasons.⁶⁶ Because such firms tend to set price above marginal cost, they will inevitably incur some degree of deadweight loss. If the number of firms is sufficiently numerous, the demand curve facing each firm should be relatively flat and the deadweight losses relatively small.

Monopolistic competition also gives rise to productive efficiency loss. As noted earlier, monopolistically competitive markets reach long-term equilibrium at the point where the demand curve is tangent to the average cost curve. The fact that the principle of diminishing marginal returns requires that the demand curve be downward sloping necessarily implies that this equilibrium will occur where the average cost curve is downward sloping as

⁶⁵ Oliver D. Hart, *Monopolistic Competition in a Large Economy with Differentiated Commodities*, 46 *REV. ECON. STUD.* 1 (1979); Larry E. Jones, *The Efficiency of Monopolistically Competitive Equilibria in Large Economies: Commodity Differentiation with Gross Substitutes*, 41 *J. ECON. THEORY* 356 (1987); see also B. Curtis Eaton & Myrna Holtz Wooders, *Sophisticated Entry in a Model of Spatial Competition*, 16 *RAND J. ECON.* 282 (1985) (deriving similar results in a spatial competition model in the tradition of Hotelling).

⁶⁶ The presence of constantly decreasing average costs inevitably causes markets for nonrival goods to become natural monopolies that, like any monopoly, have power over price. See *supra* note 35 and accompanying text. In the case of monopolistic competition, the downward slope of the demand curve results from the assumption that all competing products serve as imperfect rather than perfect substitutes for one another. See *supra* note 51 and accompanying text.

well. Thus, unlike perfectly competitive markets, which reach long-term equilibrium at the point at which average costs are minimized, monopolistically competitive markets do not minimize average cost.⁶⁷ This indicates the presence of unexploited gains from trade that would allow the same products to be produced with fewer resources if the total number of firms were reduced and the firms that remained in the market expanded production.⁶⁸ As a result, many theorists have concluded that monopolistically competitive industries operate with “excess capacity” stimulated by excess entry.⁶⁹ Any attempt to restrict the size of the market commanded by any particular firm would only cause these inefficiencies to worsen.

In addition, the fact that monopolistically competitive markets reach equilibrium on the declining portion of the average cost curve gives rise to the same pricing problem identified with respect to nonrival goods.⁷⁰ Because the presence of declining average costs necessarily implies that the marginal cost curve lies below the average cost curve, any price that maximizes total surplus would necessarily prevent the producing firm from covering its costs. Conversely, any price that allows the firm to break even would necessarily impose some degree of deadweight loss.⁷¹

3. *Dynamic Efficiency and the Number of Goods Produced*

As noted earlier,⁷² the key problem associated with the analysis of deadweight loss and marginal cost pricing is that it focuses solely on static efficiency without taking dynamic efficiency into account. By taking the existence of the relevant goods as given and focusing on the proper allocation of those goods, this approach fails to provide a way to determine the amount of resources that should be devoted to the production of the goods in the first place. The perspective of monopolistic competition allows a particularly

⁶⁷ See, e.g., CHAMBERLIN, *supra* note 9, at 104-10.

⁶⁸ The situation is somewhat different for nonrival goods. Because the cost curves for monopolistically competitive firms are U-shaped, producing at minimum average cost is feasible. The fact that the average cost curves associated with nonrival goods are constantly declining makes such an outcome impossible. In addition, the fact that nonrival goods tend to be natural monopolies eliminates any possibility of gains from trade resulting from having one firm benefit another firm by reducing production.

⁶⁹ See, e.g., CHAMBERLIN, *supra* note 9, at 104-10.

⁷⁰ See *supra* Part I.B.2.

⁷¹ Spence, *Product Differentiation*, *supra* note 49, at 408-09.

⁷² See *supra* Part I.B.3.

insightful characterization of this concern. In recognizing that each product can in essence constitute its own market, monopolistic competition implicitly recognizes that more than one way exists to increase total surplus. Not only can surplus increase through the reduction of deadweight loss with respect to any one product; it can also increase through the creation of additional products.

In addition to providing a useful way to reconceptualize this problem, attempts by monopolistic competition theorists to solve the problem of optimal diversity offer a potential metric for measuring dynamic efficiency. The maximization of total surplus requires the production of a product whenever the total benefits created by it exceed the total costs needed to produce it. The total benefit created by any one product is represented by the area under the demand curve that it faces. In the case of nonrival goods, marginal cost is zero, and the only relevant costs are the fixed costs associated with producing the good. Therefore, subject to an important caveat that will be discussed later,⁷³ the maximization of total surplus requires that a good be produced whenever the area under the demand curve exceeds the fixed costs associated with production. Monopolistic competition theorists have pointed out that this condition would be satisfied in equilibrium if each firm were able to capture the entire surplus created by the goods it produces. Any slippage in the firm's ability to capture the entire surplus causes some number of surplus-enhancing products not to be produced.⁷⁴ The smaller the proportion of the total surplus captured by producers, the more severe this effect becomes.

The point can be illustrated with the following example. Assume the existence of two products that each create \$10 million in benefits. The first would require the incurrence of \$3 million in fixed costs, and the second would require the incurrence of \$6 million in fixed costs. Assume further that, in accordance with Samuelson's vision, the unit price is set relatively close to marginal cost so that the product generates only \$1 million in revenue. From the standpoint of maximizing total surplus, society would be better off if both of these products were created, because the total benefits associated with

⁷³ See *infra* notes 83-84 and accompanying text.

⁷⁴ Spence, *Product Differentiation*, *supra* note 49, at 407-08; Spence, *Product Selection*, *supra* note 49, at 218-20, 224, 230; Spence & Owen, *supra* note 7, at 110-11; see also Dixit & Stiglitz, *supra* note 49, at 297; Roger W. Koenker & Martin K. Perry, *Product Differentiation, Monopolistic Competition, and Public Policy*, 12 BELL J. ECON. 217, 226 (1981).

creating each would exceed the costs of doing so. Because the \$1 million in revenue captured by the producer is insufficient to cover fixed costs associated with creating either product, neither will be produced despite the fact that production of each one would be socially beneficial.

The situation changes if the firm is allowed to set prices so that it maximizes its own profits. Assuming linear demand and zero marginal costs, the producing firm is able to capture half of the total benefits created by its product. In that event, each product could generate \$5 million in revenue. This would be sufficient to cover the \$3 million in fixed costs needed to produce the first product, and therefore, the first product would be produced. The \$5 million in revenue would be insufficient to cover the \$6 million needed to produce the second product. This second product will not be created unless the producer is able to capture at least sixty percent of the total benefits created.⁷⁵

The severity of this effect is thus likely to weigh particularly heavily against products with high fixed costs, because the presence of such costs increases the proportion of the total surplus that must be captured if the product is to break even.⁷⁶ It also appears that this effect will have a particularly strong impact on products with steep inverse demand functions.⁷⁷ As Figure 8 illustrates,⁷⁸ producers of products that face demand curves that are convex to the origin are able to capture a smaller percentage of the total surplus than are producers of products facing demand curves that are concave to the origin, even when the total benefits created by each product are identical. Because these products are typically those whose benefits are concentrated in a

⁷⁵ This example reveals the flaw with the regulated pricing solution depicted in Figure 5. Maximizing consumer surplus inevitably reduces the amount of surplus appropriated by producers. Thus, although it promotes static efficiency, it detracts from dynamic efficiency and reduces the total variety of products further below optimum.

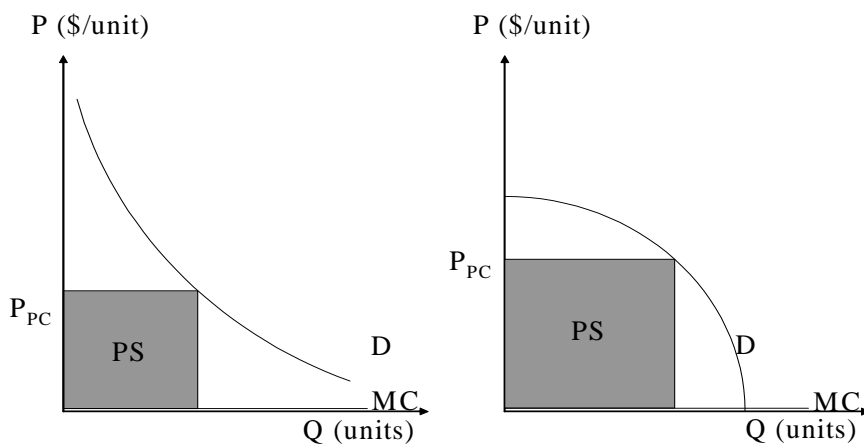
⁷⁶ Spence, *Product Selection*, *supra* note 49, at 224.

⁷⁷ Spence, *Product Differentiation*, *supra* note 49, at 409-10; Spence, *Product Selection*, *supra* note 49, at 224, 230; Spence & Owen, *supra* note 7, at 111-12; *see also* Dixit & Stiglitz, *supra* note 49, at 307 (identifying the same effect and arguing that it explains why the market is biased against opera relative to football).

⁷⁸ Figure 8 is adapted from BRUCE M. OWEN & STEVEN S. WILDMAN, VIDEO ECONOMICS 112 figs.4.5 & 4.6 (1992), and Spence, *Product Differentiation*, *supra* note 49, at 409 fig.1.

relatively small group of consumers with particularly intense preferences, these products have been dubbed “special interest” or “minority taste” products.⁷⁹

Figure 8
Bias Against Special Interest Products



Put another way, producers are unable to appropriate two different types of surplus. The first is the triangular-shaped area located to the right of the producer surplus, which represents the deadweight loss identified by the previous discussion of nonrival goods. The second is the triangular-shaped area located above the producer surplus, which represents the amount of the surplus currently captured by consumers.

Conceiving the problem in this manner reveals how dynamic efficiency differs from static efficiency. Static efficiency would be satisfied as long as the

⁷⁹ See Spence & Owen, *supra* note 7, at 111-12; see also Spence, *Product Differentiation*, *supra* note 49, at 410; Spence, *Product Selection*, *supra* note 49, at 225.

deadweight loss were eliminated. It does not matter if it were appropriated by either producers or consumers. It also does not matter if consumers retain the surplus represented by the triangular-shaped area above the producer surplus. Dynamic efficiency similarly requires the elimination of deadweight loss. The key difference is that it requires producers, not consumers, to be the ones to appropriate the surplus generated through the elimination of deadweight loss. It also requires that the surplus represented by the triangular-shaped area above the producer surplus currently captured by consumers be transferred to producers. Anything less would leave the producer unable to appropriate part of the surplus created by its products and would cause a surplus-increasing product not to be created.

This result differs profoundly from the situation that obtains under perfect competition. Because perfectly competitive markets reach equilibrium at a point where the average cost curve is nondecreasing, policymakers need not concern themselves with whether producers capture enough surplus to cover their fixed costs of production.⁸⁰ Under perfect competition, the transfer of surplus from consumers to producers has no impact on total surplus.⁸¹ In contrast, when markets reach equilibrium on the downward sloping portion of the average cost curves, as occurs under monopolistic competition and in the case of nonrivalrous goods, transfer of surplus from consumers to producers is far from immaterial. It instead becomes a necessary condition for promoting dynamic efficiency.⁸² In addition, it lacks even distributional consequences in the long run, because free entry will dissipate any profits that initially accrue to the producer. Any rents initially captured by producers will eventually accrue to the benefit of consumers in the form of increased product diversity.

Interestingly, there is another consideration that tends to mitigate any shortfall resulting from the producers' inability to appropriate the entire surplus. The argument that an additional product should be created whenever the total surplus it creates exceeds the fixed costs associated with creating it implicitly presupposes that the entire surplus captured by the new entrant consists of incremental surplus generated by consumers who were not

⁸⁰ See *supra* p. 1588.

⁸¹ See *supra* note 16 and accompanying text.

⁸² For a related argument, see Steven S. Wildman & Bruce M. Owen, *Program Competition, Diversity, and Multichannel Bundling in the New Video Industry*, in VIDEO MEDIA COMPETITION 244, 266 (Eli M. Noam ed., 1985).

previously purchasing other products. It is quite possible, however, that some of the surplus captured by the new product will not result from attracting new customers into the market, but rather from stealing customers from incumbent producers. To the extent that the surplus captured by the new entrant results from the transfer of surplus from other firms already in the market, it does not represent an increase in total surplus, but rather simply a transfer of surplus from one producer to another. The problem is that firms seeking to maximize profits will enter without regard for whether the surplus results from incremental sales or mere cannibalization.⁸³ The inability to distinguish between the two causes some entry to be profitable even when the addition of another product does not generate sufficient benefits to cover the additional fixed costs. The result is the stimulation of excess entry, which in turn causes the wasteful incurrence of fixed costs.⁸⁴

The balance between these two forces is well illustrated by a metaphor coined by Nobel Laureate Michael Spence, who suggested that a monopolistically competitive industry could be analogized to a pie.⁸⁵ Introduction of a new product simultaneously expands the pie and causes it to be sliced into more pieces, with the addition of a slice creating additional costs (i.e., the fixed costs of creating a new product). The desirability of adding a slice depends on whether the increase in the size of the pie exceeds the costs of adding the slice.

The dynamic efficiency of the monopolistic equilibrium thus depends on a balance of two opposing factors. On the one hand, the producers' inability to capture the entire surplus tends to cause products not to be produced even when doing so would increase total surplus. On the other hand, the fact that the surplus captured by any one firm includes both incremental surplus generated by new sales and surplus cannibalized from other suppliers tends to encourage excess entry.⁸⁶ Whether the total number of products offered

⁸³ Koenker & Perry, *supra* note 74, at 226-27; Spence, *Product Differentiation*, *supra* note 49, at 410; Spence, *Product Selection*, *supra* note 49, at 230-31. This tendency is illustrated even more clearly by spatial competition models. For an overview, see Yoo, *supra* note 50, at 1936-42.

⁸⁴ Spence, *Product Differentiation*, *supra* note 49, at 410; Spence, *Product Selection*, *supra* note 49, at 230-31. This provides an analytical explanation for the excess capacity result noted above. See *supra* note 69 and accompanying text. It also corresponds to the analysis of differentiated public goods that are subject to congestion. See Oakland, *supra* note 20, at 504-05.

⁸⁵ Spence, *Product Differentiation*, *supra* note 49, at 410.

⁸⁶ Interestingly, a person who values diversity for its own sake would not be concerned by this tradeoff.

exceeds or falls short of surplus-maximizing levels cannot be determined a priori.⁸⁷ The most that can be said is that the market tends to provide too much product diversity when product differentiation is weak relative to scale economies and too little when the opposite is true.⁸⁸ Whether there is too much or too little product diversity is ultimately determined, as an empirical matter, by which of these two effects dominates.

D. *The Complexity of the Welfare Tradeoffs*

The foregoing discussion has led a number of scholars to frame the welfare analysis of nonrival goods as a conflict between static and dynamic efficiency.⁸⁹ Static efficiency concerns about setting price at marginal cost counsel in favor of lowering price as close to zero as possible. Dynamic efficiency concerns about the appropriation of total surplus point in the other direction and instead support allowing producers to increase prices until they maximize their profits. To these scholars, the policy decision is a simple matter of calibrating price so that it balances these two irreconcilable considerations. If they have drawn any conclusions at all, they have simply suggested that to the extent that dynamic efficiency gains can be sustained indefinitely, the powers of compounding strongly suggest that long-run dynamic considerations should dominate any short-run static ones.⁹⁰

Diversity would be maximized by allowing the producer to capture the entirety of the surplus. Although this would cause efficiency losses resulting from excessive duplication of fixed costs, such a consideration would give a person who wanted to promote diversity *simpliciter* little pause.

⁸⁷ G.C. Archibald, *Chamberlin Versus Chicago*, 29 REV. ECON. STUD. 2, 6-14 (1961); see also Eaton & Lipsey, *supra* note 47, at 751.

⁸⁸ Koenker & Perry, *supra* note 74, at 226-27; Spence, *Product Differentiation*, *supra* note 49, at 408, 410-13; Spence, *Product Selection*, *supra* note 49, at 233-34.

⁸⁹ Brennan, *supra* note 28, at 355; Ordover & Baumol, *supra* note 43, at 14, 32; Gideon Parchomovsky & Peter Siegelman, *Towards an Integrated Theory of Intellectual Property*, 88 VA. L. REV. 1455, 1500-01 (2002); F.M. Scherer, *Antitrust, Efficiency, and Progress*, 62 N.Y.U. L. REV. 998, 1018 (1987).

⁹⁰ Brennan, *supra* note 28, at 355; Ordover & Baumol, *supra* note 43, at 14, 32; see also 3 PHILLIP AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶ 720a, at 255 & n.3 (2d ed. 2000); Phillip Areeda, *Antitrust Law as Industrial Policy: Should Judges and Juries Make It?*, in ANTITRUST, INNOVATION, AND COMPETITIVENESS 29, 31 (Thomas M. Jorde & David J. Teece eds., 1992); Kenneth J. Arrow, *Economic Welfare and the Allocation of Resources for Invention*, in NAT'L BUREAU OF ECON. RESEARCH, THE RATE AND DIRECTION OF INVENTIVE ACTIVITY 609, 617 (1962); Frank H. Easterbrook, *Ignorance and Antitrust*, in ANTITRUST, INNOVATION, AND COMPETITIVENESS, *supra*, at 119, 122; Einer Elhauge, *Why Above-Cost Price Cuts to Drive Out Entrants Are Not Predatory—And the Implications for Defining Costs and Market Power*, 112 YALE L.J. 681, 781 (2003); Donald F. Turner, *Basic Principles in Formulating Antitrust and Misuse Constraints on the Exploitation of Intellectual Property Rights*, 53 ANTITRUST L.J. 485, 485 (1985).

Although this would appear to be a fairly straightforward tradeoff, upon closer inspection it becomes clear that the proper welfare calculus is somewhat more involved. When the possibility of cannibalization is acknowledged, the implications for dynamic efficiency become ambiguous, because it is equally possible that the number of products produced in equilibrium will either exceed or fall short of the optimum.

In addition, determining the welfare implications for differentiated products is considerably more complicated than determining the welfare implications under perfect competition. When products are undifferentiated, firms can only compete in terms of price and quantity. As a result, the welfare calculus is relatively simple and focuses solely on the extent to which the price charged diverges from buyers' and sellers' reservation prices as reflected in total surplus. Allowing for product differentiation adds an additional level of complexity to the welfare calculus. In such a world, firms also compete in terms of how close a particular product comes to an individual consumer's ideal combination of product attributes, which is a factor that is not represented in the conventional two-dimensional space of price and quantity depicted in the figures above.

It thus remains possible that any reductions in total surplus resulting from inefficient pricing may be offset in whole or in part by welfare gains derived from satisfying consumers' taste for variety and vice versa. Consequently, modern theorists have largely abandoned the simplistic conclusions that argued that the excess capacity and deadweight loss endemic to monopolistic competition indicated that such markets were inherently inefficient.⁹¹ Instead, modern scholars have now acknowledged that any welfare implications are ambiguous and that losses may or may not be offset in whole or in part by welfare gains derived by the availability of a wider range of products.⁹² Most analyses stop short of resolving the issue, however. Determining whether the equilibrium configuration maximizes welfare would require a welfare function that identifies the relative utility that individuals derive from each dimension of

⁹¹ See *supra* Part I.C.2.

⁹² See Robert L. Bishop, *Monopolistic Competition and Welfare Economics*, in *MONOPOLISTIC COMPETITION THEORY: STUDIES IN IMPACT* 251 (Robert E. Kuenne ed., 1967); Dixit & Stiglitz, *supra* note 49, at 301-02; Spence, *Product Differentiation*, *supra* note 49, at 411. For an application of this argument to television programming, see Spence & Owen, *supra* note 7, at 110-13.

competition. Needless to say, an infinite number of such functions can be derived that would support any number of conclusions.

Fortunately, monopolistic competition theory makes it possible to combine both static and dynamic efficiency concerns into a single, total surplus calculation that represents a useful proxy for total welfare. Indeed, if utility is linear in the composite commodity, maximization of welfare and maximization of total surplus are one and the same.⁹³ Even more interestingly, monopolistic competition theory suggests the existence of a policy instrument that can address the problems of both static and dynamic efficiency simultaneously. The skeleton key that promises to unlock both of these contradictory forces is one of the classic solutions to both deadweight loss and nonappropriability: price discrimination.

E. Price Discrimination as a Way to Maximize Both Static and Dynamic Efficiency

The use of a device known as price discrimination may allow markets to increase static and dynamic efficiency simultaneously. In many cases, producers can only employ linear, single-part pricing in which every potential consumer is offered the same price. Under price discrimination, producers use multi-part pricing to charge different prices to different consumers. One of the most familiar examples of price discrimination occurs when airlines charge different amounts to various passengers flying in the same class of service. It functions by identifying passengers who are likely to be more price-sensitive (such as vacation travelers) and charging them less, while identifying other passengers who are likely to be less price-sensitive (such as business travelers) and charging them more.

Ever since the pioneering work of A.C. Pigou⁹⁴ and Joan Robinson,⁹⁵ policymakers and regulatory authorities have viewed price discrimination with considerable suspicion, regarding it as evidence of market power.⁹⁶

⁹³ Eaton & Lipsey, *supra* note 47, at 729 (citing Spence, *Product Differentiation*, *supra* note 49, at 408-09).

⁹⁴ A.C. PIGOU, *THE ECONOMICS OF WELFARE* (1932).

⁹⁵ ROBINSON, *supra* note 48.

⁹⁶ See *Eastman Kodak Co. v. Image Technical Servs., Inc.*, 504 U.S. 451, 498-99 (1992) (Scalia, J., dissenting); *U.S. Steel Corp. v. Fortner Enters., Inc.*, 429 U.S. 610, 617 (1977); 2 PHILLIP AREEDA & DONALD F. TURNER, *ANTITRUST LAW* ¶ 5.14, at 342 (1978). For an example applying this reasoning to the television

Monopolistic competition reveals that such concerns may well be overstated. The power over price necessary to support price discrimination may simply reflect the fact that the relevant market involves differentiated products, because all products competing within such markets face downward sloping demand curves even when confronted with competition.⁹⁷ Furthermore, the ability to price discriminate may simply reflect the existence of joint costs shared among different purchasers that are inevitable when consumption is nonrival.⁹⁸

The model developed in this Article offers another reason for adopting a more hospitable stance toward price discrimination. When single-part pricing is the only policy option available, static and dynamic efficiency become opposing considerations that must be traded off. Price discrimination can obviate the need to mediate the conflict between these two competing forces. Far from being an indicator of anticompetitive behavior, price discrimination may be a necessary condition for the maximization of total surplus.

industry, see Harry Boadwee, Note, *Product Market Definition for Video Programming*, 86 COLUM. L. REV. 1210, 1219-25 (1986).

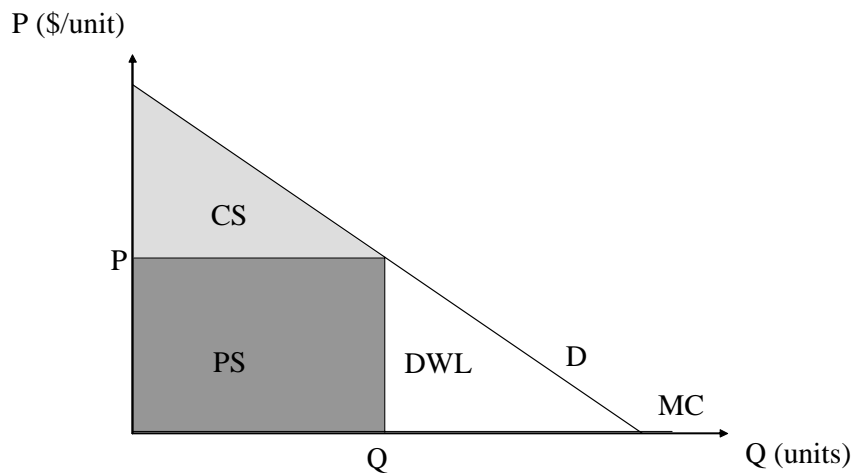
⁹⁷ The seminal contribution on competitive price discrimination is Daniel F. Spulber, *Non-Cooperative Equilibrium with Price Discriminating Firms*, 4 ECON. LETTERS 221 (1979). For subsequent work, see DANIEL F. SPULBER, REGULATION AND MARKETS 544-48 (1989); Mark Armstrong & John Vickers, *Competitive Price Discrimination*, 32 RAND J. ECON. 579 (2001); Severin Borenstein, *Price Discrimination in Free-Entry Markets*, 16 RAND J. ECON. 380, 381, 394 (1985); Kenneth S. Corts, *Third-Degree Price Discrimination in Oligopoly: All-Out Competition and Strategic Commitment*, 29 RAND J. ECON. 306 (1998); Peter C. Coyte & C. Robin Lindsey, *Spatial Monopoly and Spatial Monopolistic Competition with Two-Part Pricing*, 55 ECONOMICA 461 (1988); Thomas J. Holmes, *The Effects of Third-Degree Price Discrimination in Oligopoly*, 79 AM. ECON. REV. 244 (1989); Michael L. Katz, *Price Discrimination and Monopolistic Competition*, 52 ECONOMETRICA 1453 (1984); Benjamin Klein, *Market Power in Antitrust: Economic Analysis After Kodak*, 3 SUP. CT. ECON. REV. 43, 74-78 & nn.59-60 (1993); Daniel F. Spulber, *Competition and Multiplant Monopoly with Spatial Nonlinear Pricing*, 25 INT'L ECON. REV. 425 (1984); Daniel F. Spulber, *Spatial Nonlinear Pricing*, 71 AM. ECON. REV. 923 (1981); and Lars Stole, *Nonlinear Pricing and Oligopoly*, 4 J. ECON. & MGMT. STRATEGY 529 (1995). For recent surveys, see Elhauge, *supra* note 90, at 732-43, and LARS A. STOLE, PRICE DISCRIMINATION IN COMPETITIVE ENVIRONMENTS (Univ. of Chi. Grad. Sch. of Bus. Working Paper, Nov. 7, 2001) (forthcoming in the new HANDBOOK OF INDUSTRIAL ORGANIZATION), available at <http://gsbls.uchicago.edu/papers/hio.html>. For discussions in the context of antitrust law, see *Symposium on Competitive Price Discrimination*, 70 ANTITRUST L.J. 593 (2003).

⁹⁸ When joint costs are being divided among multiple purchasers, it is rational for a producer to take into account different purchasers' price elasticities when setting prices, thereby reflecting the same considerations that go into Ramsey and Lindahl pricing. See Demsetz, *supra* note 46, at 301-02; Michael E. Levine, *Price Discrimination Without Market Power*, 19 YALE J. ON REG. 1 (2002). But see Paul A. Samuelson, *Contrast Between Welfare Conditions for Joint Supply and for Public Goods*, 51 REV. ECON. & STAT. 26, 26 (1969) (arguing that the theory of public goods was analogous to the theory of joint production).

1. Perfect Price Discrimination

To see how price discrimination helps maximize total surplus, it is important to recall that any single-part pricing scheme (such as the one depicted in Figure 9) necessarily gives rise to two forms of efficiency loss. The first is the impairment of static efficiency represented by the market's failure to cover the triangular area located to the right of the producer surplus. Because neither producers nor consumers are able to capture this surplus, it is properly regarded as a deadweight loss. The second is the impairment of dynamic efficiency associated with the producers' inability to capture the consumer surplus represented by the triangular area in the upper corner of the demand curve.

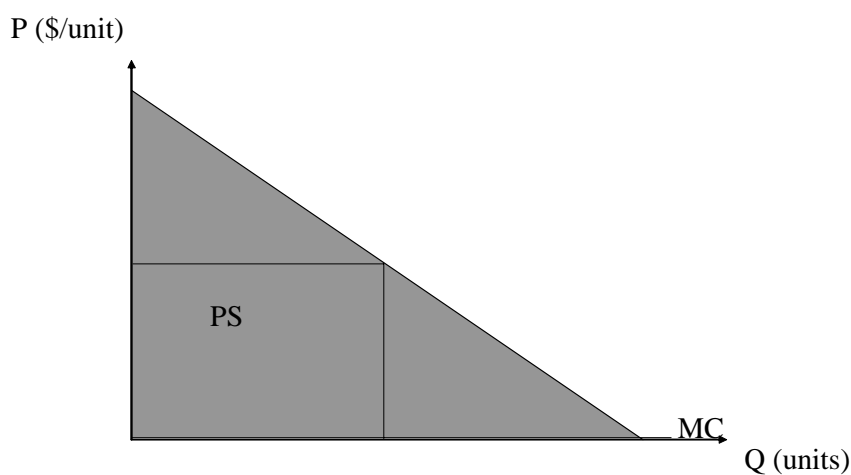
Figure 9
Single-Part Pricing of Nonrivalrous Product Under
Monopolistic Competition



The ideal case is known as perfect, or first-degree, price discrimination. Under perfect price discrimination, the producer is able to charge each consumer the maximum that consumer is willing to pay. Figure 10 illustrates

how perfect price discrimination would simultaneously solve the problems associated with static and dynamic efficiency.⁹⁹ It would promote static efficiency by eliminating the deadweight loss in the lower right corner of the area under the demand curve. By allowing firms to charge each customer the absolute maximum amount that they would be willing to pay, the firm is able to offer lower prices to new customers without having to suffer the decrease in revenue associated with offering the same discount to its existing customer base. As a result, the firm is able to expand its production until every person who values the product more than marginal cost is able to consume it.¹⁰⁰

Figure 10
Perfect Price Discrimination



⁹⁹ Note that the graphical representation is identical to Figure 4, except that producers rather than consumers capture the entire surplus.

¹⁰⁰ See Buchanan, *supra* note 31, at 195; Demsetz, *supra* note 46, at 301-03; Spence & Owen, *supra* note 7, at 121-22; Earl A. Thompson, *The Perfectly Competitive Production of Collective Goods*, 50 REV. ECON. STAT. 1, 3-5 (1968).

At the same time, perfect price discrimination allows producing firms to appropriate the surplus located in the upper corner under the demand curve that was previously captured by consumers. Because perfect price discrimination allows producers to capture the entire surplus, there is no slippage between the total benefits created by the product and the revenue available to cover the fixed costs associated with creating it.¹⁰¹ Perfect price discrimination also eliminates the bias against special interest goods with steep inverse demand functions.¹⁰²

Stated in terms of the numerical example discussed above,¹⁰³ assume that a range of products exists that each generates \$10 million in benefits and that requires anywhere from \$1 to just under \$10 million in fixed costs to create. The principles of surplus maximization would imply that society would be better off if all of these products were produced. As noted earlier, a firm facing a linear demand employing single-part pricing would only be able to capture fifty percent of the total surplus created by its product. As a result, every product that costs more than \$5 million to create would not exist even though producing them would increase total surplus. The situation changes if the producer can use multi-part pricing to increase the proportion of the total surplus that it captures. The degree of slippage will be reduced, but not eliminated, if price discrimination allows it to capture seventy-five percent of the total surplus, because doing so would allow all products that cost less than \$7.5 million to be produced, but would still exclude those products that cost between \$7.5 million and \$10 million. Only if producers are able to employ perfect price discrimination to capture the entire surplus created by their products would every surplus-enhancing product be created.

2. *Imperfect Price Discrimination*

Perfect price discrimination would thus appear to be a panacea designed to cure the reductions in total surplus identified above (subject to the caveat discussed above of the possibility of excess entry induced by cannibalization).¹⁰⁴ The problem is that perfect price discrimination is a practical impossibility. It requires knowing the maximum amount each

¹⁰¹ See Spence, *Product Selection*, *supra* note 49, at 218-20.

¹⁰² See *supra* notes 77-79 and accompanying text.

¹⁰³ See *supra* pp. 1611-12.

¹⁰⁴ See *supra* notes 83-85 and accompanying text.

consumer would be willing to pay for the product, which is information that would be impossible to ascertain accurately.¹⁰⁵ Perfect price discrimination becomes even more problematic when nonrivalrous goods are involved. Because viewers realize that, once created, the programming can be provided to everyone without incurring any additional costs, they have no incentive to give anyone an accurate indication of their true preferences in the hope that some other person would be willing to finance the first copy costs.¹⁰⁶

As a result, producers who seek to mitigate welfare losses in this manner must resort to some form of imperfect price discrimination that, while unable to extract the maximum price from each and every customer, is able to sort customers into groups that place different values on the products and to charge higher prices to those groups who place a higher value on the goods.¹⁰⁷

Imperfect price discrimination can reduce the efficiency losses caused by deadweight loss by making it possible for the producer to expand production by offering discounts to some consumers who would not purchase the product at the price the producer would charge were it limited to charging a single price. Admittedly, it is theoretically possible that imperfect price discrimination would cause the deadweight loss to grow by causing overall production to decrease.¹⁰⁸ The general consensus is that imperfect price discrimination is more likely to have the former effect than the latter.¹⁰⁹

¹⁰⁵ See, e.g., Paul A. Samuelson, *Pitfalls in the Analysis of Public Goods*, 10 J.L. & ECON. 199, 201, 203 (1967).

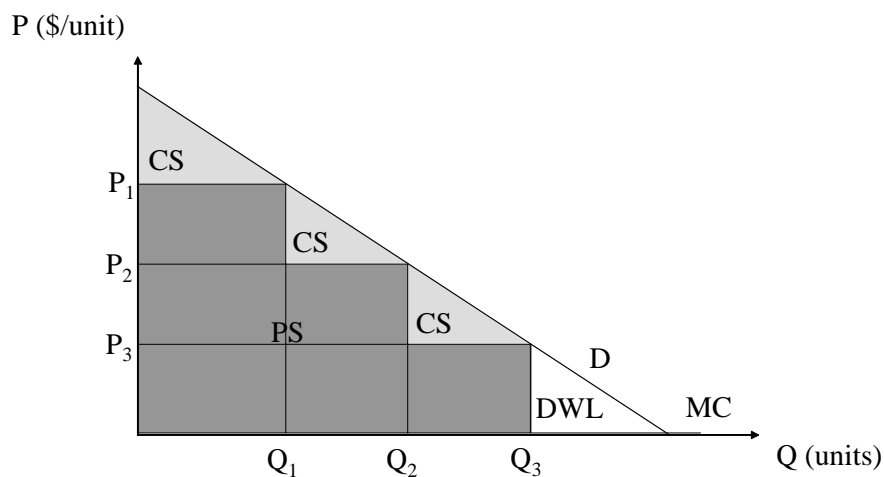
¹⁰⁶ Demsetz, *supra* note 46, at 303; Samuelson, *Aspects*, *supra* note 20, at 334, 336; Samuelson, *supra* note 105, at 201, 203-04; Samuelson, *Pure Theory*, *supra* note 20, at 388-89.

¹⁰⁷ The classic analysis offered by Pigou divides imperfect price discrimination into two classes. In second-degree price discrimination, the producer holds out certain purchase options designed to appeal differently to different classes of customers and allows customers' individual purchasing decisions to sort themselves into the appropriate group. The key element in second-degree price discrimination is that all buyers have the opportunity to purchase in any of the available options. In third-degree price discrimination, the producer again holds out certain purchase options, but instead only makes one option available to any particular purchaser. As a result, that buyer has the choice of purchasing the proffered option or forgoing purchasing altogether. See PIGOU, *supra* note 94, at 275-89.

¹⁰⁸ See, e.g., Michael L. Katz, *Non-Uniform Pricing, Output and Welfare Under Monopoly*, 50 REV. ECON. STUD. 37, 51 (1983); Richard Schmalensee, *Output and Welfare Implications of Monopolistic Third-Degree Price Discrimination*, 71 AM. ECON. REV. 242 (1981); Jun-ji Shih et al., *A General Analysis of the Output Effect Under Third-Degree Price Discrimination*, 98 ECON. J. 149, 152-54 (1988).

¹⁰⁹ See, e.g., RICHARD G. LIPSEY ET AL., *ECONOMICS* 241 (8th ed. 1987); SCHERER & ROSS, *supra* note 16, at 495.

Figure 11
Imperfect Price Discrimination



Placed in the concrete context of the airline example discussed above,¹¹⁰ the airlines' ability to use the Saturday-night stay requirement to distinguish price-sensitive leisure travelers from price-insensitive business travelers can help reduce the deadweight loss associated with nonmarginal cost pricing. It brings the airlines' output closer to efficient levels by allowing them to offer to the former group fares that are closer to marginal cost without having to suffer the decrease in revenue that would result from having to offer the same discount to the latter group as well. The result is that price discrimination allows flights to carry more passengers. This has the effect of allowing a greater percentage of the passengers who would derive net benefits from taking the flight to do so. This brings output closer to surplus-maximizing levels,

¹¹⁰ See *supra* p. 1619.

which in turn allows the creation of additional flights that would not otherwise exist.¹¹¹

To the extent that it also allows producers to raise prices for infra-marginal customers, imperfect price discrimination will also reduce the reductions in total surplus caused by the producing firm's inability to appropriate the entire surplus created by its product. The net effect would be to increase both static and dynamic efficiency. The bias against special interest goods¹¹² would still exist, although it would be substantially mitigated.

Thus, far from being an indicator of a policy problem in need of redress, price discrimination can help bring the total number and distribution of goods produced closer to the optimum in terms of both static and dynamic efficiency.¹¹³ By definition, however, imperfect price discrimination does not allow producers to capture the entire surplus created by their products. This will be offset to some degree by the tendency toward excess entry stimulated by the fact that some of the surplus captured is simply the transfer of surplus from other producers rather than incremental surplus generated by sales to new customers.¹¹⁴

¹¹¹ It should be noted, however, that there is one way in which the airline example deviates from the model developed in this Article. In contravention of the free-entry assumption embodied in monopolistic competition, the lack of availability of airport landing slots can make the addition of new flights expensive or impossible. This in turn changes the equilibrium in ways that allow the existing firms to earn supra-competitive profits and to operate at different points along the average cost curve than permitted under monopolistic competition. The airline example is thus offered only to illustrate how charging different prices to different groups of customers can allow producers to capture a greater percentage of the surplus.

¹¹² See *supra* notes 77-79 and accompanying text.

¹¹³ See Spence, *Product Selection*, *supra* note 49, at 218-20.

¹¹⁴ See *supra* notes 83-84 and accompanying text. Not everyone supports the idea of making it easier for television providers to price discriminate. For example, although C. Edwin Baker recognizes that facilitating price discrimination promises to improve economic welfare, he warns that it will benefit those media most susceptible to price discrimination, such as television, to the relative detriment of those media which are less susceptible to price discrimination, such as print. BAKER, *supra* note 7, at 37-40. I find Baker's worries to be unfounded. The fact that print may not benefit from price discrimination to the same extent as television does not provide a justification for refusing to use all the available means for improving the efficiency of television. Even if the effects are uneven across media, facilitating price discrimination still creates economic benefits with respect to television while simultaneously reducing the magnitude of the regulatory intervention with respect to print.

Baker suggests that the differential impact of price discrimination nonetheless remains a concern because the increased efficiency of television will allow it to crowd out print. *Id.* at 38. This argument necessarily presumes that newspapers and television serve as substitutes for one another and that consumers will not respond to the relative changes in price by increasing or decreasing their purchases of any other goods. The problem is that courts that have considered the issue have typically not regarded television and print to be

3. Price Discrimination and Free Entry

Application of price discrimination in the context of monopolistic competition does raise an interesting theoretical conundrum. Specifically, the free-entry assumption embodied in the classic model of monopolistic competition poses serious questions about the sustainability of any price discrimination scheme. If free entry is possible, it is likely that other firms will enter and offer products that will destroy the market power that is necessary for any system of price discrimination to work. The resulting competition for those customers threatens to destroy the ability to capture surplus by creating price competition that beats price down to marginal cost.

The solution to this conundrum lies with the relaxation of the assumption that products are homogenous. As noted earlier,¹¹⁵ introducing product differentiation can give each firm power over price sufficient to price discriminate. This is particularly the case if one relaxes the symmetry assumption and allows for the possibility that differentiated products compete more strongly with some products than with others.¹¹⁶

substitutes for one another. See H. Peter Nesvold, Note, *Communication Breakdown: Developing an Antitrust Model for Multimedia Mergers and Acquisitions*, 6 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 781, 824-31 (1996) (collecting cases). This perspective is echoed in the complaints appearing in the literature that consumers rely almost entirely on television as their sole source of information, which suggests that it would be difficult, if not impossible, to induce them to turn to other sources. See Owen Fiss, *The Censorship of Television*, 93 NW. U. L. REV. 1215, 1216-17 (1999); Cass R. Sunstein, *Television and the Public Interest*, 88 CAL. L. REV. 499, 529-31 (2000).

It should be acknowledged, however, that the FCC has at times suggested that newspapers may act as substitutes for television. See, e.g., Inquiry into Section 73.1910 of the Comm'n's Rules & Regulations Concerning the Gen. Fairness Doctrine Obligations of Broad. Licensees, Report, 102 F.C.C.2d 142, 217-20 ¶¶ 123-28 (1985); Amendment of Section 73.3555 [formerly Sections 73.35, 73.240, & 73.636] of the Comm'n's Rules Relating to Multiple Ownership of AM, FM and Television Broad. Stations, Report and Order, 100 F.C.C.2d 17, 25-27 ¶¶ 25-30, 54 ¶ 108 (1984); Amendment of Sections 73.35, 73.240, & 73.636 of the Comm'n's Rules Relating to Multiple Ownership of AM, FM & Television Broad. Stations, Notice of Proposed Rulemaking, 95 F.C.C.2d 360, 387 ¶ 45 (1983); see also Nesvold, *supra*, at 841 (noting that the Justice Department has argued that newspapers and television serve as substitutes for one another).

To the extent that this is true, it would substantially weaken the argument for intervention, since anyone unable to obtain carriage via television should have available a large number of other effective media options. In addition, because consumers purchase a wide range of products beyond print and television, the tangential effects resulting from the greater efficiency of television markets would be dispersed over a broader range of purchasing decisions rather than being concentrated in the print industry.

¹¹⁵ See *supra* note 97 and accompanying text.

¹¹⁶ Borenstein, *supra* note 97, at 380, 387-89, 394.

* * *

The overall thrust of these results is profound. It transforms the fundamental policy problem from a world in which static and dynamic efficiency must be traded off one against the other into one in which simultaneous promotion of both metrics of efficiency is possible. Unlike under perfect competition, the transfer of surplus from consumers to producers is anything but neutral. On the contrary, some degree of transfer appears to be a necessary condition for efficiency. Furthermore, such transfers do not raise the distributional concerns that occur in other contexts. This is because free entry will dissipate any supra-competitive profits earned by producers. Indeed, over the long run the existence of such profits will eventually accrue to the benefit of consumers in the form of increased product variety.

There are admittedly a number of considerations that may cause the resulting equilibrium to fall short of the optimum. Some productive inefficiency inevitably results from the fact that the equilibrium under monopolistic competition does not minimize average cost. The deadweight losses that follow from the fact that demand is downward sloping make some degree of allocative inefficiency endemic. To the extent that fixed costs are high and product differentiation is strong, some firms may be able to earn sustainable profits, which in turn will create some degree of static inefficiency as price is forced farther from marginal cost. The impossibility of perfect price discrimination suggests that there may be some tendency toward systematic underproduction. At the same time, the fact that the surplus captured by a new entrant may include business cannibalized from existing producers can impair dynamic efficiency by inducing excess entry. How close it will come to the optimum is an empirical question that depends on the structure of demand, the relative efficacy of the mechanism for price discrimination, the magnitude of the fixed costs, and the degree of product differentiation. The ultimate resolution of the policy issue will thus depend upon a second-best comparison of the outcome under the approach I am suggesting and the outcome that will result under the other possible solutions to the problem. As we shall see, the available empirical evidence suggests that the approach I am proposing will come closer to the efficient solution than the alternative institutional solutions embodied in current television policy.

II. APPLYING PUBLIC GOOD ECONOMICS AND MONOPOLISTIC COMPETITION TO TELEVISION PROGRAMMING

The integrated model that I have developed thus offers the promise of reconciling the divergent efficiency considerations that other analyses have found so insoluble. This Part will examine the fit between the model and the market for television programming. Section A will examine how well television programming fits with the definition of nonrival good.¹¹⁷ Section B will evaluate the fit between the market for television programming and monopolistic competition. Section C modifies the classic approach taken in these analyses by arguing in favor of using networks rather than individual programs as the proper unit of analysis.

A. *Television Programming as a Nonrival Good*

As Samuelson noted, at first blush television programming appears to represent a classic example of a public good.¹¹⁸ As is the case with any information good, the production of television programming requires the incurrence of significant up-front, fixed costs (often termed “first copy costs”). In addition, once those first copy costs have been incurred, the costs associated with transmitting the program to viewers approach zero and do not vary with audience size. The combination of positive fixed costs and zero marginal costs thus gives television programming all of the characteristics of a nonrival good. It is of no consequence that eighty-five percent of U.S. households receive their television programming via cable, DBS, or some other multi-channel video program distributor (MVPD) technology that is fully excludable.¹¹⁹ Nor

¹¹⁷ For preliminary discussions of this effect, see Yoo, *supra* note 51, at 213-17, 232-37; Christopher S. Yoo, *The Rise and Demise of the Technology-Specific Approach to the First Amendment*, 91 GEO. L.J. 247, 275-77 (2003).

¹¹⁸ Samuelson, *Aspects*, *supra* note 20, at 335. For other scholars identifying television programming as a nonrival good, see, for example, BAKER, *supra* note 7, at 8-10; BESANKO & BRAEUTIGAM, *supra* note 21, at 749-50; STANLEY M. BESEN ET AL., MISREGULATING TELEVISION 22, 25, 164 (1984); BRUCE M. OWEN, ECONOMICS AND FREEDOM OF EXPRESSION 18-20 (1975); OWEN & WILDMAN, *supra* note 78, at 23-38, 131-35; Buchanan, *supra* note 31; Demsetz, *supra* note 46; Jora R. Minasian, *Public Goods in Theory and Practice Revisited*, 10 J.L. & ECON. 205 (1967); Minasian, *supra* note 31, at 74; and Ordover & Baumol, *supra* note 43, at 14 n.4.

¹¹⁹ Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, Ninth Annual Report, 17 F.C.C.R. 26,901, 26,975, app. B, tbl.B-1 (2002) [hereinafter Ninth Annual Report on Television Competition].

does it matter that the development of scrambling technology has even rendered broadcast television programming fully excludable.¹²⁰ As noted above,¹²¹ the relevant features of this analysis do not turn on the ability or inability to exclude anyone from the benefits of any product. The mere fact that television programming is nonrival in consumption is sufficient by itself to bring it into conformity with the analysis I am advancing.¹²²

The classic solution to the problem of lack of rivalry discussed above combines pricing the product at zero and having the government make a direct payment to the producer of the nonrival good sufficient to fund its creation.¹²³ The interesting wrinkle with respect to television is the availability of over-the-air broadcasting as a means for distribution. The availability of this option created the possibility that much of the funding might be provided by advertising revenue. This would allow television programs to continue to be efficiently priced while possibly obviating the need for subsidies.

This section evaluates the extent to which advertising support represents an efficient solution to the problems of nonrivalry. Subsection 1 examines the extent to which advertising-supported television is in fact efficiently priced. Subsection 2 explores whether the marginal costs of producing an additional unit of television programming are really zero.

1. *The Problem of Equating Advertising Support with Efficient Pricing*

Samuelson's case in favor of advertising-supported television hinges on the assertion that advertising-supported television allows for first-best pricing from the standpoint of static efficiency. As discussed above,¹²⁴ this follows from the

¹²⁰ Samuelson, *Aspects*, *supra* note 20, at 335; *see also, e.g.*, BESANKO & BRAEUTIGAM, *supra* note 21, at 750; PINDYCK & RUBINFELD, *supra* note 21, at 638; Head, *supra* note 28, at 207. It should be noted that some commentators have focused on noneconomic externalities. They in turn argue that the fact that television programming creates benefits to the democratic process that are not fully captured by viewers leads to the systematic underproduction of certain types of programming. BAKER, *supra* note 7, at 41-62; SUNSTEIN, *supra* note 6, at 19-20, 73-74. Discussion of these arguments exceeds the scope of this Article. For my critique of attempts to justify the regulation of television in terms of its impact on the democratic process, see Yoo, *supra* note 117, at 306-46.

¹²¹ *See supra* notes 24-29 and accompanying text.

¹²² Samuelson, *Aspects*, *supra* note 20, at 335; *see also* SAMUELSON, *supra* note 23, at 159 n.1.

¹²³ *See supra* note 42 and accompanying text.

¹²⁴ *See supra* pp. 1588-89.

basic allocative principle that price should be equated with marginal cost. A closer inspection reveals reasons to question the accuracy of this assertion.

As noted earlier, previous analyses posited that advertising-supported television was “free” and thus avoided the deadweight loss associated with charging a positive price. Upon further inquiry, it is far from clear that this claim is true. On the contrary, there are two countervailing considerations that raise serious doubts as to whether advertising-supported television is in fact efficiently priced. On the one hand, these analyses failed to take into account that advertising-supported television is not “free,” because the audience must in effect pay for programming through willingness to watch advertisements.¹²⁵ Although such transactions obviously do not involve cash payments, a more comprehensive economic analysis would treat the imposition of advertising as endogenous to the model and regard the nuisance aspects of advertising as extracting an implicit price from viewers that can create deadweight loss.¹²⁶ On the other hand, advertising contains content that may have beneficial value that is distinct from the program itself,¹²⁷ demonstrated most dramatically by the existence of infomercials and home shopping networks, which in essence constitute programming devoted entirely to advertising.¹²⁸ The fact that advertising can create benefits as well as extract implicit prices makes the effective price associated with advertising support ambiguous. It may be too high or too low. Only in the unlikely event that these two effects exactly offset each other would it be proper to regard advertising-supported television as efficiently priced.

¹²⁵ There is another way that “free” television is not truly free. The broadcast industry’s ability to offer its programs without exacting direct payments is the direct product of the regulatory decision not to require television stations to pay for their spectrum, because without such an arrangement it is unlikely that advertising support would be sufficient to cover all of the expenses. As I will discuss later, dedicating this spectrum to broadcasting has the secondary effect of making other spectrum-based technologies more expensive. In a real sense, then, viewers pay for free television indirectly by facing higher prices for cellular telephony and other spectrum-based technologies. See *infra* Part IV.

¹²⁶ For examples of more recent analyses that attempt to incorporate direct cash payments and the implicit price associated with advertising support into a single, integrated pricing model, see Suchan Chae & Daniel Flores, *Broadcasting Versus Narrowcasting*, 10 INFO. ECON. & POL’Y 41, 45-46 (1998); Claus Thustrup Hansen & Søren Kyhl, *Pay-Per-View Broadcasting of Outstanding Events: Consequences of a Ban*, 19 INT’L J. INDUS. ORG. 589, 590 (2001); and Wildman & Owen, *supra* note 82, at 264-72.

¹²⁷ See Chae & Flores, *supra* note 126, at 52-53 (recognizing that advertising provides benefits to viewers at the same time that its nuisance value exacts an implicit price).

¹²⁸ See THOMAS G. KRATTENMAKER & LUCAS A. POWE, JR., REGULATING BROADCAST PROGRAMMING 135 (1994).

As a result, the policy choice between advertising-supported and pay television is more properly framed not as a choice between first-best, efficient pricing and second-best, inefficient pricing, but rather as a choice between second-best pricing schemes. In addition, acknowledging that both mechanisms potentially involve second-best pricing arrangements allows for consideration of mixed regimes in which the networks generate revenue through both advertising and direct payments.¹²⁹ Taking all of these complexities into account reveals the latent ambiguities lurking beneath the tidy logic supposedly supporting exclusive reliance on advertising support. In fact, once all of these considerations are taken into account, it becomes theoretically conceivable that reliance on advertising support could lead to too much program diversity as well as too little.¹³⁰

2. *The Dangers of Assuming That Marginal Costs Are Zero*

Equally questionable is Samuelson's assumption that the marginal cost of distributing television programming to additional viewers is zero. Such an assumption should be approached with some caution, because positing constant marginal costs makes the economies of scale inexhaustible. As a result, unless this assumption is empirically valid, the constantly decreasing average costs may be nothing more than an artifact of the assumptions built into the model.

A closer analysis provides good reason to question this assumption. It appears to have been based on the fact that the costs incurred by a local broadcast station were constant regardless of whether the audience consisted of one hundred or one hundred thousand viewers. It does not necessarily hold with respect to cable, because the extension of cable to additional households does require the incurrence of significant costs. In addition, this reasoning ignores the fact that television distribution takes place in two stages, not one. Specifically, transmitting television programming requires that programs be transmitted from the network to the local broadcast affiliate or cable headend

¹²⁹ See *id.* at 54-55; Wildman & Owen, *supra* note 82, at 253-55. The possibility is also mentioned without much elaboration in Minasian, *supra* note 31, at 77, and Spence & Owen, *supra* note 7, at 124.

¹³⁰ See SIMON P. ANDERSON & STEPHEN COATE, MARKET PROVISION OF PUBLIC GOODS: THE CASE OF BROADCASTING 3, 6, 16-19 (NBER Working Paper 7513, Jan. 2000) (offering a formal model indicating that reliance on advertising support may lead to too much as well as too little program diversity), available at <http://www.nber.org/papers/w7513>.

before it can be transmitted to homes. When this initial distribution stage was accomplished through microwave relay systems, it was difficult to argue that the marginal cost of conveying television programming to additional viewers was in fact zero. Rather, it would be more appropriate to view the cost function as a step function, in which no costs are associated with adding a single marginal viewer, but substantial costs may be involved in adding a block of viewers.

Technological developments have largely mitigated both of these concerns. First, the buildout of the cable infrastructure is now largely complete, with cable now passing over ninety-seven percent of all U.S. television households.¹³¹ This has caused the marginal costs associated with adding an additional viewer to drop precipitously.¹³² In addition, satellites have replaced microwave relay systems as the primary means for distributing programs from networks to local broadcast stations and cable headends.¹³³ Because satellites tend to be able to reach relatively large geographic areas without any appreciable increase in cost, the shift to satellite distribution effectively eliminates the marginal costs associated with the two-stage transmission of television programming.

In any event, the possibility that marginal costs may be nonzero does not substantially change the results. As noted earlier,¹³⁴ the same analysis applies without loss of generality so long as marginal costs remain below average costs. The available empirical evidence indicates that that tends to be the case for television.¹³⁵

¹³¹ See Ninth Annual Report on Television Competition, 17 F.C.C.R. 26,901, 26,910 ¶ 19, 26,911 tbl.1 (2002). The FCC noted that the manner in which this number is calculated is not without controversy and cautioned that it is more reliable as a trend indicator than as an absolute assessment. Even under the more conservative measures, cable still passes over seventy-eight percent of U.S. households. *Id.* at 26,910 ¶ 17.

¹³² Hazlett, *supra* note 51, at 1348 (citing *Omega Satellite Prods. v. City of Indianapolis*, 694 F.2d 119, 126 (7th Cir. 1982)).

¹³³ BESEN ET AL., *supra* note 118, at 10; OWEN & WILDMAN, *supra* note 78, at 20, 54, 197.

¹³⁴ See *supra* note 32 and accompanying text.

¹³⁵ See Bruce M. Owen & Peter R. Greenhalgh, *Competitive Considerations in Cable Television Franchising*, 4 CONTEMP. POL'Y ISSUES 69, 76-78 (1986) (reporting empirical results indicating that marginal costs fall below average costs); see also DAVID WATERMAN & ANDREW A. WEISS, *VERTICAL INTEGRATION IN CABLE TELEVISION* 61 (1997) (reporting estimates that in 1992 programming costs represented seventy-four percent of cable networks' total operating expenditures).

B. The Applicability of Monopolistic Competition Theory to Television

Television programming would also seem to make a good fit with monopolistic competition theory. Indeed, so good is the fit that Spence's seminal analysis invited readers to regard it as a particularly trenchant example of a monopolistically competitive good.¹³⁶ Spence subsequently joined with Bruce Owen, who is perhaps the leading authority on the economics of the television industry, to offer some initial thoughts applying monopolistic competition to the television industry. Although Spence and Owen were able to offer some initial analyses of the welfare impact of their theories,¹³⁷ they never empirically validated the applicability of their models to television, nor did they explore the relative efficacy of the various means of price discrimination available to the television industry. A reexamination and extension of their work thus seems to be in order.

The relevant products are clearly differentiated. Although there is some degree of substitution among programs, viewers do not regard them as perfect substitutes for one another and clearly have preferences for some programs over others. In addition, the substitution appears to be driven more by real differences in product attributes than by spurious product differences. Consequently, it appears more appropriate to analyze this market through the lens of the localized competition associated with asymmetric substitution than that of the equal competition associated with the symmetry assumption.

For the most part, moreover, the market for television programming also satisfies the requirement of monopolistic competition theory that entry by new products be relatively easy, although this observation is subject to a caveat. As I have laid out in more detail elsewhere,¹³⁸ the television programming

¹³⁶ Spence, *Product Differentiation*, *supra* note 49, at 408; *see also* Spence, *Product Selection*, *supra* note 49, at 234 (drawing conclusions under monopolistic competition theory with respect to television); Spence & Owen, *supra* note 7, at 106 (noting that "study of program selection under pay TV is formally indistinguishable from the analysis of product selection under monopolistic competition"). C. Edwin Baker also invokes monopolistic competition as a concept. A close inspection suggests that his work really focuses on the decreasing cost structure caused by the lack of rivalry rather than product differentiation, in which decreasing costs are a result of the model rather than an assumption. *See* BAKER, *supra* note 7, at 9-10, 22-24, 222-26.

¹³⁷ Spence, *Product Differentiation*, *supra* note 49, at 411-13; Spence & Owen, *supra* note 7, at 118-19.

¹³⁸ *See* Yoo, *supra* note 51, at 182-83, 220-21. For related arguments, *see* JONATHAN LEVY & FLORENCE SETZER, FED. COMMUNICATIONS COMM'N, MEASUREMENT OF CONCENTRATION IN HOME VIDEO MARKETS 39-

industry is best viewed as consisting of the same three-stage chain of production that exists with respect to most goods. The first stage is the manufacturing stage, in which the actual products to be sold are created. In the television industry, the manufacturing stage is occupied primarily by the movie studios. The second stage is the wholesale stage, occupied in the case of television by the networks, which acquire the rights to these products directly from manufacturers and assemble them into complete product packages. The third and final stage is occupied by retailers, who are responsible for final delivery of the products to end-users. In the case of television, the retail stage is occupied by local broadcast stations, cable operators, and DBS providers.

Entry into each of the first two stages of production appears to be easy. The factors of production needed at the manufacturing stage, i.e., talent and video production equipment, are readily available and already well organized to supply these same inputs to other industries.¹³⁹ Recent history has demonstrated the ease with which new firms can enter the wholesale stage. Over the last decade, the number of broadcast networks has grown to the point that A.C. Nielsen now collects data on what it regards to be the seven major broadcast networks (ABC, CBS, NBC, Fox, UPN, WB, and PaxTV). In recent decades, cable, DBS, and the other MVPDs have surpassed broadcasting as the primary means of receiving television programming, now serving over eighty-five percent of all U.S. television households.¹⁴⁰ The concomitant increase in channel capacity caused a spectacular proliferation of television networks offering a dizzying array of increasingly diverse programming. Since 1990, the number of television networks has skyrocketed from 70 to 308, with another 60 networks currently in the planning stages.¹⁴¹

Entry into the retail distribution stage is somewhat more constrained. This is a matter of some concern, because any imperfections in the markets for

40 (1982), and Lawrence J. White, *Antitrust and Video Markets: The Merger of Showtime and the Movie Channel as a Case Study*, in VIDEO MEDIA COMPETITION, *supra* note 82, at 338, 347-48.

¹³⁹ OWEN & WILDMAN, *supra* note 78, at 222. A notable exception is some sports programming which is both subject to widely divergent local preferences and which is protected against entry at the factor level by sports leagues. Two prominent examples are the battle between the New York Yankees and Cablevision as well as Comcast's attempts to use its control over the Philadelphia 76ers and Flyers to forestall the emergence of competing MVPDs.

¹⁴⁰ See *supra* note 119 and accompanying text.

¹⁴¹ See Ninth Annual Report on Television Competition, 17 F.C.C.R. 26,901, 26,959 ¶ 134, 26,960 ¶ 137 (2002); Yoo, *supra* note 51, at 231 & tbl.5.

inputs into television program production may cause surplus to be captured as rents at the factor level rather than being reinvested into programming.¹⁴² That said, recent technological developments have made entry into the retail distribution stage of the television industry easier than ever before. The number of broadcast stations has increased dramatically, with the number of over-the-air signals that reach the average U.S. household soaring from 3.9 to 13 between 1980 and 2000.¹⁴³ Cable television has emerged as the primary system for delivering television programming to the home, now being available to over ninety-seven percent of all U.S. households¹⁴⁴ and having captured sixty-five percent of all U.S. television households.¹⁴⁵

In addition, since its deployment in 1994, DBS has emerged as “one of the most successful new consumer electronics product introductions in history.”¹⁴⁶ Currently available to any household with a clear line of sight to the southern sky,¹⁴⁷ the most recent data collected by the FCC indicate that DBS has captured thirteen percent of all U.S. television households and twenty percent of the MVPD market,¹⁴⁸ surpassing the penetration levels identified by federal law as representing effective competition.¹⁴⁹ In addition, DBS subscribership has been growing at a rate roughly twenty times that of other MVPDs.¹⁵⁰

¹⁴² The possible retention of rents that may exist if factor markets are imperfect is analogous to the well-known “double marginalization” that can occur when successive levels of a chain of distribution are monopolistic or oligopolistic. See Joseph J. Spengler, *Vertical Integration and Antitrust Policy*, 58 J. POL. ECON. 347 (1950) (offering the seminal statement of this insight). Interestingly, the presence of imperfect factor markets arguably provides an efficiency justification for allowing greater vertical integration, because vertical integration would help ensure that such rents were available to finance the fixed costs. See Yoo, *supra* note 51, at 192-93, 213-14, 234-35.

¹⁴³ Yoo, *supra* note 51, at 212.

¹⁴⁴ See *supra* note 131 and accompanying text.

¹⁴⁵ Ninth Annual Report on Television Competition, 17 F.C.C.R. at 26,911 tbl.1.

¹⁴⁶ Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, Third Annual Report, 12 F.C.C.R. 4358, 4377-78 ¶ 40 (1997); accord Paul Farhi, *Dishing Out the Competition to Cable TV*, WASH. POST, Oct. 12, 1996, at H1 (calling DBS “the most successful new consumer electronics product ever marketed”).

¹⁴⁷ Yoo, *supra* note 51, at 208.

¹⁴⁸ Ninth Annual Report on Television Regulation, 17 F.C.C.R. at 26,975 tbl.B-1.

¹⁴⁹ 47 U.S.C. § 543(l)(1) (2000) (providing that a cable operator faces effective competition if another MVPD is available in at least fifty percent of the cable operator’s service area and if the MVPD actually serves at least fifteen percent of MVPD households in that area).

¹⁵⁰ See Yoo, *supra* note 51, at 208 tbl.1, 228-29.

In addition, the industry is in the process of deploying digital television, with 563 stations already transmitting a digital signal.¹⁵¹ It has long been apparent, moreover, that rather than using these digital channels to transmit a single stream of high definition television (HDTV), broadcasters could use the same amount of spectrum to multicast five or more signals of standard definition television (SDTV) at the same level of resolution currently used in analog television.¹⁵² Thus, although the retail level of the television industry remains rather concentrated, it does appear to be sufficiently competitive to justify the application of monopolistic competition theory.

C. Networks vs. Programs as the Proper Unit of Analysis

Public good and monopolistic competition theory would thus seem to provide apt frameworks for analyzing the market for television programming. This basic model would benefit from one additional refinement. Although they are not completely clear on this point, the leading authorities seem to analyze this market in terms of individual programs.¹⁵³ By taking individual programs as the proper unit of analysis, it posits that all transactions for programs occur in a spot market.

This presumption ignores the fact that television programs tend not to be distributed on an individual basis.¹⁵⁴ The reason that programs tend not to be offered individually stems from the fact that program producers are able to achieve substantial cost efficiencies by offering programs in integrated packages spanning extended blocks of time. Some of the efficiencies related to network distribution are technological. Currently networks distribute programs

¹⁵¹ See *supra* note 4 and accompanying text.

¹⁵² See, e.g., Carriage of Digital Broad. Signals, First Report & Order & Further Notice of Proposed Rulemaking, 16 F.C.C.R. 2598, 2621 n.158 (2001) (citing news reports indicating that FCC Commissioners and industry leaders became aware of the option to multicast SDTV as early as 1992); Richard E. Wiley, *The Challenge of Choice*, 47 FED. COMM. L.J. 401 (1994).

¹⁵³ See, e.g., Samuelson, *Aspects*, *supra* note 20, at 335; Spence & Owen, *supra* note 7, at 103.

¹⁵⁴ There are, of course, some notable exceptions. Recently released films, which tend to be valued higher than conventional television programs, are often initially offered individually on a pay-per-view basis. Another exception is syndication, in which individual shows are sold to stations on a city-by-city basis. Syndicated programming is dominated by reruns of television series that first appeared on network television (called "off-network syndication"). It also encompasses some programs produced specifically for syndication (called "first-run syndication"), including daytime talk shows (such as *Oprah* and *The Rosie O'Donnell Show*), certain game shows (such as *Jeopardy* and *Wheel of Fortune*), and certain original series (with the most successful example being *Star Trek: The Next Generation*).

to local broadcast stations via satellite. Because satellites tend to be able to reach relatively large geographic areas without any appreciable increase in cost, transmitting to large numbers of networked stations leads to dramatic reductions in the per-station costs of satellite transmission.¹⁵⁵

Other reasons that programs are typically distributed through networks are related to transaction costs. Filling a broadcast schedule requires an extraordinary number of transactions, with the weekly prime time schedule alone being comprised of forty-two half-hour slots. If all of the approximately two hundred television stations affiliated with the major networks were to attempt to fill their schedules in a spot market for particular programs, those stations would have to negotiate more than eight thousand transactions with program producers and complete tens of thousands more negotiations with advertisers. In addition, the transaction costs associated with assembling a broadcast schedule are further exacerbated by a phenomenon known as “adjacency effects,” which arise from the fact that the value of a particular program depends as much on the character of the programs broadcast immediately beforehand and afterward as it does on the character of the program itself. Local broadcast stations attempting to purchase programs in a spot market would confront a seemingly insuperable joint maximization problem, as the value of any particular program would depend upon the outcome of a large number of other negotiations. Network control of significant blocks of time substantially reduces the total number of transactions that must be consummated and vastly simplifies what might otherwise be a nearly intractable joint maximization problem. It also makes it easier to spread risk of program failure and provide greater flexibility in compensating advertisers should a particular program fail to do as well as expected.¹⁵⁶

¹⁵⁵ BESEN ET AL., *supra* note 118, at 10; OWEN & WILDMAN, *supra* note 78, at 20, 54, 197. A similar bias toward full-time networking existed prior to the advent of satellite distribution of television programming when programs were distributed primarily through wireline distribution systems or through networks of microwave relays. That bias was a result of regulatory policy, in that the FCC permitted AT&T, which held a monopoly over video interconnection services, to charge a higher rate to part-time than to full-time networks. The arrival of private microwave systems and purchasing of relay services by intermediaries eventually mitigated the bias inherent in this differential tariff. Ultimately the FCC required AT&T to establish a tariff that no longer discriminated between part-time and full-time networking. See BESEN ET AL., *supra* note 118, at 10-11.

¹⁵⁶ OWEN & WILDMAN, *supra* note 78, at 53-54; see also BESEN ET AL., *supra* note 118, at 6-7.

Furthermore, network distribution allows program producers to mitigate the danger of strategic behavior that arises whenever fixed-cost investments are required. The ideal situation for a particular television station arises when other stations cover all of the fixed costs associated with creating the network. Once a producer sinks the fixed costs needed to create a network, individual stations have the incentive to attempt to free ride on the willingness of other stations to bear the costs associated with creating and maintaining the network by holding out in an attempt to force the producer to charge no more than marginal cost.¹⁵⁷ Furthermore, to the extent that the quality of programs is difficult to determine *ex ante*, program producers face the problems associated with adverse selection, in which television stations attempt to take advantage of the better information available *post hoc* to accept only those programs that are the most profitable. Networks allow producers to eliminate these risks by providing them with a guaranteed national distribution system for the programs that they create.¹⁵⁸

These considerations suggest that the appropriate unit of analysis may be individual networks, rather than individual programs. Fortunately, such a shift would not cause any dramatic change in the relevant analysis. Fixed costs dominate variable costs in the same manner regardless of whether the problem is analyzed in terms of networks or programs, because after the fixed costs of assembling a package of network programming have been incurred, the marginal costs associated with distributing it to additional viewers remain low. As a result, shifting the unit of analysis from programs to networks may be made without causing any significant alteration to the core analysis.

III. ANALYZING THE COMMITMENT TO FREE, LOCAL TELEVISION THROUGH A PUBLIC GOOD AND MONOPOLISTIC COMPETITION LENS

In this Part, I would like to explore the insights provided by the economic analysis I have developed by applying it to what has perhaps represented the central commitment in U.S. television policy: the desire to protect free, local television. Although other policy considerations have emerged,¹⁵⁹ localism has

¹⁵⁷ See Yoo, *supra* note 51, at 194-200.

¹⁵⁸ See *id.* at 214-17.

¹⁵⁹ It should be noted that television policy has also focused on two other goals: the promotion of diversity and competition. The model advanced in this Article has significant implications for both of these

remained the touchstone underlying the regulatory approach adopted with respect to every television technology that has emerged since that time.¹⁶⁰

Upon closer inspection, it becomes clear that the overarching commitment to free, local television should be disaggregated into four, more discrete policy commitments. Specifically, these include:

- (1) the preference for local programming over national programming,
- (2) the preference for free television over pay television,
- (3) the preference for incumbent television providers over new entrants and emerging television technologies, and
- (4) the preference for single-channel television technologies over multi-channel television technologies.

Applying the economic analysis developed above helps to explain one of the great conundrums of television policy, which is why such longstanding attempts to promote free, local content have proven to be such a dismal failure.¹⁶¹ Careful application of the model reveals how each of these subcommitments has reduced the overall quantity, quality, and diversity of television programming and in the process made it increasingly difficult for free, local television to survive. If anything, it appears that U.S. television policy might well have been improved if Congress and the FCC had adopted precisely the opposite presumptions.

considerations as well. I plan to offer a more comprehensive analysis of these other two policies in later work. For my initial views of the FCC's attempts to promote competition in the television industry, see *infra* Part III.D.1 and Yoo, *supra* note 51, at 181-248. For an exploration of diversity-based justifications for television regulation, see Yoo, *supra* note 117, at 263-66, 306-46.

¹⁶⁰ See *infra* Part III.A.1.b-d.

¹⁶¹ Empirical studies indicate that broadcasting carries precious little local content. *E.g.*, Thomas W. Hazlett, *Digitizing "Must-Carry" Under Turner Broadcasting v. FCC (1997)*, 8 SUP. CT. ECON. REV. 141, 179-80 (2000); Eli M. Noam, *Public-Interest Programming by American Commercial Television*, in PUBLIC TELEVISION IN AMERICA 145, 173 (Eli M. Noam & Jens Waltermann eds., 1998); see also *supra* note 6 and accompanying text (documenting scholarly criticism of the diversity and quality of television content).

A. *Decreasing Average Costs and Economies of Scale: Locally Oriented vs. Nationally Oriented Programming*

The first policy subcommitment that I would like to examine is the attempt to promote locally oriented programming over nationally oriented programming. Subsection 1 introduces the basic television technologies and describes how the preference for local content has shaped the regulation of those technologies. Subsection 2 employs the analysis developed above to assess the economic impact of the commitment to local content. Subsection 3 then employs the analysis I develop to critique specific regulatory attempts to promote local content. My overall conclusion is that the commitment to locally oriented programming has reduced the overall quantity, quality, and diversity of television programming by preventing television networks from realizing the existing economies of scale made available by the lack of rivalry.

1. *The Regulatory Commitment to Locally Oriented Programming*

a. *Analog Broadcasting*

The commitment to locally oriented television programming first emerged when the FCC made its initial decisions with respect to conventional broadcast television.¹⁶² For example, it helped to shape one of the first major regulatory initiatives launched by the FCC known as the Chain Broadcasting Rules,¹⁶³ which were designed to limit the power of the triopoly of networks that had

¹⁶² See, e.g., *Nat'l Ass'n of Broadcasters v. FCC*, 740 F.2d 1190, 1198 (D.C. Cir. 1984) (recognizing that the FCC "historically has followed a policy of 'localism' as a sound means of promoting the statutory goal of efficient public service"); *Competition, Rate Deregulation & Comm'n's Policies Relating to Provision of Cable Television Serv.*, Report, 5 F.C.C.R. 4962, 5039-40 ¶ 149 (1990) (acknowledging that localism has been a driving force in FCC policy for the previous fifty years); *Satellite Delivery of Network Signals to Unserved Households for Purposes of Satellite Home Viewer Act*, Report & Order, 14 F.C.C.R. 2654, 2659 ¶ 11 (1999) ("Localism has been a central principle of broadcast policy since the Radio Act of 1927."); *Amendment of Subpart L, Part 91, to Adopt Rules & Regulations to Govern the Grant of Authorizations in Bus. Radio Serv. for Microwave Stations to Relay Television Signals to Cmty. Antenna Systems*, First Report & Order, 38 F.C.C. 683, 699-700 ¶¶ 44-48 (1965) [hereinafter *CATV First Report & Order*]; see also *Quincy Cable TV, Inc. v. FCC*, 768 F.2d 1434, 1439-40 (D.C. Cir. 1985) (concluding that one of the cardinal objectives of the FCC was "the development of 'a system of [free] local broadcasting stations,' such that 'all communities of appreciable size [will] have at least one television station as an outlet for local self-expression'" (quoting *United States v. Southwestern Cable Co.*, 392 U.S. 157, 174 (1968))).

¹⁶³ 47 C.F.R. § 73.658 (2003). See generally Yoo, *supra* note 51, at 181-219 (reviewing the Chain Broadcasting Rules).

come to dominate broadcasting.¹⁶⁴ Enactment of the rules was motivated in part by a desire to ensure that local stations retained control over programming decisions.¹⁶⁵ The Supreme Court invoked the same rationale when upholding the Chain Broadcasting Rules in *NBC v. United States*,¹⁶⁶ which remains the seminal case on broadcast regulation. In the words of the Court, “[l]ocal program service is a vital part of community life,” and the rules were needed to help ensure that stations stand “ready, able, and willing to serve the needs of the local community by broadcasting . . . outstanding local events.”¹⁶⁷

The desire to promote locally oriented content also underlies the principles followed by the FCC when allocating television frequencies to particular communities. The basic policy issue followed from the fact that only so many stations could operate within any geographic region without interfering with one another. On the one hand, the FCC could have established a handful of relatively high-power stations that reached large regions. This would have increased the number of signals that each household could receive, but would have restricted broadcast facilities to only the biggest cities. On the other hand, the FCC had the option of creating a large number of stations operating at relatively low power. This would allow the FCC to increase the number of communities that enjoyed the services of their own station. It also meant that any particular community would receive only a limited number of broadcast signals.

When it came time to establish the basic table of allocations that would govern television broadcasting, the FCC adopted the latter approach and allocated stations so as to ensure that as many communities as possible had at least one television station.¹⁶⁸ As the Supreme Court has noted,¹⁶⁹ the FCC did

¹⁶⁴ See FED. COMMUNICATIONS COMM’N, REPORT ON CHAIN BROADCASTING 30-34 (1941). Although initially developed for radio in 1941, it was extended to television shortly thereafter. See Amendment to Part 3 of the Comm’n’s Rules, 11 Fed. Reg. 33 (1946). The FCC has subsequently abolished the Chain Broadcasting Rules with respect to radio, so as a practical matter their only remaining relevance is with respect to television. See Review of the Comm’n’s Regulations Regarding Television Broad., Report & Order, 10 F.C.C.R. 4538, 4539 ¶ 5 (1995).

¹⁶⁵ See FED. COMMUNICATIONS COMM’N, *supra* note 164, at 63, 65, 66.

¹⁶⁶ 319 U.S. 190 (1943).

¹⁶⁷ *Id.* at 203.

¹⁶⁸ Amendment of Section 3.606 of Comm’n’s Rules & Regulations, Sixth Report & Order, 41 F.C.C. 148, 167-72 ¶¶ 63-82 (1952) [hereinafter Television Allocations Sixth Report & Order]. For a discussion of the impact that this allocation policy has on the level of competition in the television industry, see *infra* Part III.C.2.a.

so because it believed that placing television stations in a larger number of communities would provide “local outlets that will be responsive to local needs.”¹⁷⁰ In so ruling, the FCC rejected a proposal submitted by the nascent DuMont Network that would have made it more likely that a fourth television network would survive.¹⁷¹ This action was based in part on the belief that it was more important to maximize the number of communities receiving television allocations in order to ensure that “as many communities as possible should have the opportunity of enjoying the advantages that derive from having local outlets that will be responsive to local needs.”¹⁷²

In addition, localism concerns provided the foundation for many of the content-based requirements imposed on television broadcasters. For example, the commitment to localism was reflected in the licensing criteria applied by the FCC, which has long emphasized the importance of local ownership¹⁷³ and

¹⁶⁹ *Turner Broad. Sys., Inc. v. FCC*, 512 U.S. 622, 663 (1994) (“Congress designed this system of allocation to afford each community of appreciable size . . . an outlet for exchange on matters of local concern.”); *United States v. Southwestern Cable Co.*, 392 U.S. 157, 174 (1968) (recognizing that the FCC and Congress had historically pursued policies designed to ensure that “all communities of appreciable size [will] have at least one television station”) (quoting H.R. REP. NO. 87-1559, at 3 (1962)).

¹⁷⁰ *Television Allocations Sixth Report & Order*, 41 F.C.C. at 172 ¶ 79.

¹⁷¹ As explained later in greater detail, the number of networks is determined largely by the percentage of the country that could receive four broadcast signals. See *infra* notes 368-70 and accompanying text. The DuMont plans would have increased the population receiving four or more channels to nearly ninety-five percent and increased the percentage of the population receiving technically comparable signals to ninety-three percent—levels that would have greatly increased the feasibility of a fourth network. See Thomas L. Schuessler, *Structural Barriers to the Entry of Additional Television Networks: The Federal Communications Commission's Spectrum Management Policies*, 54 S. CAL. L. REV. 875, 891, 921-26, 929 tbl.10, 938-39 & tbl.16 (1981).

¹⁷² *Television Allocations Sixth Report & Order*, 41 F.C.C. at 171-72 ¶ 79.

¹⁷³ The FCC has long exhibited a preference for licensees who will participate full time in station operations, on the grounds that full-time managers are more likely to exhibit “greater sensitivity to an area’s changing needs, and to programming designed to serve these needs.” Policy Statement on Comparative Broad. Hearings, 1 F.C.C.2d 393, 395 (1965). The FCC indicated that value of the integration of ownership in management “is increased if the participating owners are local residents.” *Id.* at 396. The FCC further indicated that “residence in the principal community to be served will be of primary importance,” especially if it is for several years. *Id.* The D.C. Circuit struck down the integration of ownership and management as arbitrary and capricious. See *Bechtel v. FCC*, 10 F.3d 875, 878-86 (D.C. Cir. 1993); *Flagstaff Broad. Found. v. FCC*, 979 F.2d 1566, 1571 (D.C. Cir. 1992); *Bechtel v. FCC*, 957 F.2d 873, 881 (D.C. Cir. 1992). Congress subsequently enacted legislation that eliminated the FCC’s discretion over new licenses and severely limited its discretion with respect to renewals. See 47 U.S.C. § 309(k)-(l) (2000). For a review of the history of these regulatory provisions, see Yoo, *supra* note 117, at 256-60, and Lili Levi, *Not with a Bang but a Whimper: Broadcast License Renewal and the Telecommunications Act of 1996*, 29 CONN. L. REV. 243, 258-63, 275-77 (1996).

efforts to determine local tastes.¹⁷⁴ The FCC has also repeatedly emphasized that license holders bear an obligation to broadcast local content and that their willingness to do so will affect the likelihood that their licenses will be renewed.¹⁷⁵ While it was in force, the Fairness Doctrine required that television stations present news and programs devoted to public issues “of interest in the community served by the particular station.”¹⁷⁶

¹⁷⁴ Ascertainment of Cmty. Problems by Broad. Applicants, First Report & Order, 57 F.C.C.2d 418, 418-19 ¶¶ 4-5, 423 ¶ 18 (1976) (requiring that ascertainment be a continuous process and requiring that station personnel confer with a designated list of community leaders); Primer on Ascertainment of Cmty. Problems by Broad. Applicants, Report & Order, 27 F.C.C.2d 650, 656-58 ¶¶ 17-20 (1971) (adopting interim measures requiring license applicants to conduct “ascertainment” efforts by consulting with community leaders and members of the general public six months prior to the filing of the application); En Banc Programming Inquiry, Report & Statement, 44 F.C.C. 2303, 2316 (1960) (calling the “diligent, positive, and continuing effort by the licensee to discover and fulfill the tastes, needs, and desires of his community or service area” the “principal ingredient of the licensee’s obligation to operate his station in the public interest” and requiring the licensee to identify the measures taken to determine those tastes by canvassing the potential audience and consulting with community leaders) [hereinafter En Banc Programming Inquiry]. The FCC eliminated these ascertainment requirements in 1984. Revision of Programming & Commercialization Policies, Ascertainment Requirements, & Program Log Requirements for Commercial Television Stations, Report & Order, 98 F.C.C.2d 1076, 1098-1101 ¶¶ 47-54 (1984) [hereinafter Television Deregulation Order]. The agency is considering reinstating a weakened version of ascertainment. Standardized & Enhanced Disclosure Requirements for Television Broad. Licensee Pub. Interest Obligations, Notice of Proposed Rule Making, 15 F.C.C.R. 19,816, 19,826-27 ¶¶ 23-25 (2000) [hereinafter Pub. Interest Disclosure Requirements].

¹⁷⁵ See *Cowles Broad., Inc.*, 86 F.C.C.2d 993 (1981), *aff’d sub nom.* *Cent. Fla. Enters., Inc. v. FCC*, 683 F.2d 503 (D.C. Cir. 1982) (identifying service to the community of license as a consideration in determining whether a broadcast license should be renewed); Pub. Interest Disclosure Requirements, 15 F.C.C.R. at 19,816 ¶ 1, 19,818 ¶ 6 (noting that the public interest requires each television broadcaster to air programming responsive to the needs and interests of its community of license); Television Deregulation Order, 98 F.C.C.2d at 1091 ¶ 32 (same), *aff’d in part*, *Action for Children’s Television v. FCC*, 821 F.2d 741 (D.C. Cir. 1987); En Banc Programming Inquiry, 44 F.C.C. at 2314 (identifying “opportunity for local self-expression” and the “development and use of local talent” as “major elements usually necessary to meet the public interest”); see also 47 C.F.R. § 73.3526(e)(11)(i), (13) (2003) (requiring that broadcasters maintain lists of recent programs that have provided the station’s most significant treatment of community issues and local public service announcements). For earlier similar requirements, see, for example, Television Deregulation Order, 98 F.C.C.2d at 1078 nn.3-4 (reporting that between 1961 and 1973 the FCC applied a processing guideline allowing for expedited renewal for licensees that proposed devoting at least five percent of its schedule to local live programming), and FED. COMMUNICATIONS COMM’N, PUBLIC SERVICE RESPONSIBILITIES OF BROADCAST LICENSEES (1946) (emphasizing the importance of local live programming).

¹⁷⁶ Handling of Pub. Issues Under the Fairness Doctrine & the Pub. Interest Standards of the Communications Act, Fairness Report, 48 F.C.C.2d 1, 2 ¶ 3 (1974) (citing Report on Editorializing by Broad. Licensees, 13 F.C.C. 1246, 1249 (1949)). The FCC subsequently abolished the Fairness Doctrine. *Syracuse Peace Council, Memorandum Opinion & Order*, 2 F.C.C.R. 5043 (1987), *aff’d*, 867 F.2d 654 (D.C. Cir. 1989), *cert. denied*, 493 U.S. 1019 (1990).

The desire to promote local programming is also evident in the regulation of a new broadcast service known as low power television (LPTV) initiated in 1982. LPTV operates through micro-television stations that transmit at such low power that they do not interfere with existing full power stations. As a result, LPTV stations typically have a range of no more than twenty miles, which makes them inherently well suited to further the important service objective of providing local programming.¹⁷⁷ In addition, policymakers have regulated LPTV in a manner designed to promote locally oriented content still further. For example, LPTV stations can obtain free carriage on cable systems only if they can show that their programming “would address local news and information needs which are not being adequately served by full power broadcast stations.”¹⁷⁸ In addition, when Congress passed legislation strengthening the spectrum rights of LPTV stations in 1999, it did so only with respect to those stations that could demonstrate a commitment to locally produced programming.¹⁷⁹

Perhaps most tellingly, localism has become the primary justification for allowing television stations to use spectrum for free. Currently, broadcasters are the only spectrum users who do not have to pay for their licenses. Instead, television licensees receive six megahertz of spectrum for free, subject only to the requirement that they use their licenses in a manner that serves the “public interest, convenience, and necessity.”¹⁸⁰ Although policymakers appear to have initially based their decision to give away spectrum for free on their belief that market-oriented distribution of spectrum was impossible,¹⁸¹ in subsequent years they have based the decision to give away spectrum on the broadcaster’s

¹⁷⁷ Inquiry into the Future Role of Low Power Television Broad. & Television Translators in the Nat’l Telecomms. Sys., Final Rule, 47 Fed. Reg. 21,468, 21,470 ¶ 12 (1982). In contrast, full power stations typically have a range of up to eighty miles. See Establishment of a Class A Television Serv., Memorandum Opinion & Order on Reconsideration, 16 F.C.C.R. 8244, 8245-46 ¶ 2 & n.6 (2001). For additional discussion of LPTV regulation, see *infra* notes 376-82 and accompanying text.

¹⁷⁸ 47 U.S.C. § 534(h)(2)(B) (2000). For a more complete discussion of must-carry, see *infra* notes 190-201 and accompanying text.

¹⁷⁹ *Id.* § 336(f)(2)(A)(i) (limiting new “Class A” licenses to LPTV stations who could show that they broadcast an average of at least three hours of locally produced programming per week during the ninety-day period preceding the enactment of the statute).

¹⁸⁰ *Id.* §§ 307(c)(1), 309(a), 309(k)(1)(A).

¹⁸¹ See *NBC v. United States*, 319 U.S. 190, 216-17 (1943). See generally Yoo, *supra* note 117, at 260, 267-69, 348-49 (discussing controversy over whether Congress and the FCC understood that market allocation of broadcast licenses was possible); see also Thomas W. Hazlett, *Assigning Property Rights to Radio Spectrum Users: Why Did FCC License Auctions Take 67 Years?*, 41 J.L. & ECON. 529, 538-39 (1998) (same).

willingness to fulfill public interest obligations, including providing local programming.¹⁸² Estimates of the value of the spectrum given to conventional television broadcasters in return for these public interest obligations range from \$20 billion to \$132 billion.¹⁸³

b. Cable Television

The emphasis on localism also underlay the FCC's initial efforts to regulate cable television. In a classic example of the type of implicit cross subsidy that Richard Posner has aptly dubbed "taxation by regulation,"¹⁸⁴ the FCC attempted to promote local programming indirectly by imposing regulations on cable.¹⁸⁵ For example, the FCC attempted to promote local content directly by requiring cable operators to create original programming¹⁸⁶ and to "open[] . . .

¹⁸² See, e.g., *CBS, Inc. v. FCC*, 453 U.S. 367, 395 (1981) ("A licensed broadcaster is 'granted the free and exclusive use of a limited and valuable part of the public domain; when he accepts that franchise it is burdened by enforceable public obligations.'") (quoting *Office of Communication of United Church of Christ v. FCC*, 359 F.2d 994, 1003 (D.C. Cir. 1966) (Burger, J.)); *Red Lion Broad. Co. v. FCC*, 395 U.S. 367, 400-01 (1969) (justifying public interest obligations in part by the government's role in allocating frequencies); Hazlett, *supra* note 181, at 539-41. For arguments by FCC personnel justifying the imposition of localism requirements by the fact that television broadcasters receive their spectrum for free, see Hundt, *supra* note 6, at 1095-96; Reed Hundt & Karen Kornbluh, *Renewing the Deal Between Broadcasters and the Public: Requiring Clear Rules for Children's Educational Television*, 9 HARV. J.L. & TECH. 11, 16-19 (1996); Charles W. Logan, Jr., *Getting Beyond Scarcity: A New Paradigm for Assessing the Constitutionality of Broadcast Regulation*, 85 CAL. L. REV. 1687, 1725-34 (1997); and Gretchen Craft Rubin, *Quid Pro Quo: What Broadcasters Really Want*, 66 GEO. WASH. L. REV. 686, 688-90 (1998).

¹⁸³ See Ellen P. Goodman, *Digital Television and the Allure of Auctions: The Birth and Stillbirth of DTV Legislation*, 49 FED. COMM. L.J. 517, 533 (1997); Logan, *supra* note 182, at 1728; Rubin, *supra* note 182, at 694.

¹⁸⁴ Richard A. Posner, *Taxation by Regulation*, 2 BELL J. ECON. & MGMT. SCI. 22 (1971).

¹⁸⁵ See *Malrite T.V. of N.Y. v. FCC*, 652 F.2d 1140, 1144 (2d Cir. 1981) (noting that beginning in 1966 the FCC attempted to use cable regulation to promote localism).

¹⁸⁶ Amendment of Part 74, Subpart K of the Comm'n's Rules & Regulations Relative to Cmty. Antenna Television Sys., First Report & Order, 20 F.C.C.2d 201 (1969), *vacated sub nom. Midwest Video Corp. v. United States*, 441 F.2d 1322 (8th Cir. 1971), *rev'd*, 406 U.S. 649 (1972). Programs originated by cable operators were subject to the Fairness Doctrine and were subject to the same sponsorship identification and equal access to political broadcasting requirements applied to broadcasting. *Id.* at 218-22 ¶¶ 39-47. The FCC consistently justified its program origination rules by the importance of "fostering local programming designed to cater to local needs and interests." Amendment of Part 76, Subpart G, of the Comm'n's Rules & Regulations Relative to Program Origination by Cable Television Sys., Report & Order, 49 F.C.C.2d 1090, 1105 ¶ 32 (1974) [hereinafter Program Origination Repeal Order]; *accord* Amendment of Part 74, Subpart K, of the Comm'n's Rules & Regulations Relative to Cmty. Antenna Television Systems, Notice of Proposed Rulemaking and Notice of Inquiry, 15 F.C.C.2d 417, 421-22 ¶ 13 (1968) (mandated programming origination in order to "increas[e] the number of local outlets for community self-expression") [hereinafter CATV NPRM & NOI]; *Midwest Television, Inc.*, Decision, 13 F.C.C.2d 478, 505 ¶ 62 (1968) (same); see also *Midwest*

new outlets for local expression”¹⁸⁷ by devoting channels to public, educational, and governmental access.¹⁸⁸ The FCC and Congress also attempted to protect the locally oriented content indirectly by restricting cable operators’ ability to import broadcast signals from other markets.¹⁸⁹

Video, 406 U.S. at 668 (plurality opinion) (relying on the goal of “fostering local programming designed to cater to local needs and interests” to uphold the FCC’s jurisdiction to promulgate program origination requirements). The FCC later stayed and subsequently repealed this requirement. Program Origination Repeal Order, 49 F.C.C.2d at 1104-10 ¶¶ 31-45. Some municipal licensing authorities have continued to impose local origination requirements. See, e.g., *Chi. Cable Communications v. Chi. Cable Comm’n*, 879 F.2d 1540, 1549 (7th Cir. 1989) (holding that the encouragement of localism represents an important interest sufficient to justify upholding municipally imposed local origination requirement against due process, equal protection, and First Amendment challenges).

¹⁸⁷ Amendment of Part 74, Subpart K of Comm’n’s Rules & Regulations Relative to Cmty. Antenna Television Sys., Cable Television Report & Order, 36 F.C.C.2d 143, 190 ¶ 121 (1972) [hereinafter *Cable Television Report & Order*], *aff’d sub nom. ACLU v. FCC*, 523 F.2d 1344 (9th Cir. 1975); *accord* Amendment of Part 76 of Comm’n’s Rules & Regulations Concerning the Cable Television Channel Capacity & Access Channel Requirements of Section 76.251, Report & Order, 59 F.C.C.2d 294, 296 ¶ 8, 298 ¶¶ 14-15 (1976).

¹⁸⁸ The FCC first imposed these requirements in 1972. *Cable Television Report & Order*, 36 F.C.C.2d at 190-91 ¶¶ 122-24. Although these rules were originally supposed to go into effect in 1977, the FCC postponed their implementation. Amendment of Part 76 of the Comm’n’s Rules & Regulations Relative to Postponing or Canceling Mar. 31, 1977 Date by Which Major Mkt. Cable Television Sys. Existing Prior to Mar. 31, 1972, Must Be in Compliance with Section 76.251(a)(1)-(a)(8), Report & Order, 54 F.C.C.2d 207 (1975). The Supreme Court subsequently struck down the rules as being beyond the FCC’s jurisdiction. *FCC v. Midwest Video Corp.*, 440 U.S. 689 (1979). Congress ultimately obviated the Court’s jurisdictional concerns in 1984 by explicitly authorizing local franchising authorities to require applicants to provide public, educational, and governmental access channels. 47 U.S.C. § 531(a)-(b) (2000).

¹⁸⁹ The regulatory history of these provisions is rather tortuous. The FCC’s first step in restricting the importation of distant signals was to impose “network nonduplication” rules, which required cable operators to delete any programming that duplicated programming provided by a local network affiliate. *CATV First Report & Order*, 38 F.C.C. 683, 719-30 ¶¶ 93-127 (1965). The FCC then prohibited cable systems operating in the top one hundred major markets from importing signals from other markets without FCC approval on a case-by-case basis. Amendment of Subpart L, Part 91, to Adopt Rules & Regulations to Govern the Grant of Authorizations in Bus. Radio Serv. for Microwave Stations to Relay Television Signals to Cmty. Antenna Sys., Second Report & Order, 2 F.C.C.2d 725, 782 ¶ 141 (1966) [hereinafter *CATV Second Report & Order*]. The FCC reaffirmed the network nonduplication rules, but shortened it from the thirty-day window running from fifteen days before the network exhibition to fifteen days afterwards to a simple prohibition of same-day exhibition. *Id.* at 788-89 ¶ 156, 746-50 ¶¶ 49-58.

In 1968, the FCC began enforcing new interim rules requiring that cable systems in the top one hundred markets seeking to import distant signal obtain consent from the station originating the signal. *CATV NPRM & NOI*, 15 F.C.C.2d at 437 ¶ 51. The FCC later abandoned this approach in 1972 and instead authorized cable systems operating in the top one hundred markets to import up to two distant signals. *Cable Television Report & Order*, 36 F.C.C.2d at 171 ¶ 74, 177-78 ¶ 90. In so doing, the FCC also instituted “leapfrogging” rules, which required operators that imported distant signals to do so only from the closest available source. *Id.* at 179 ¶¶ 92-93. It also limited the network nonduplication rule to a ban on simultaneous transmission and created new “syndicated exclusivity” rules requiring cable operators who import distant signals to delete any

Most importantly, concerns about localism motivated the protracted campaign by the FCC and Congress to impose the so-called “must-carry” rules, which required cable operators to carry all television stations operating in their service area for free.¹⁹⁰ The FCC consistently based must-carry in part on the need to preserve the local content provided by television broadcasters.¹⁹¹ After the D.C. Circuit thwarted the FCC’s attempts to impose

syndicated programming to which a local station had acquired exclusive rights. *Id.* at 165 ¶ 60, 166 ¶¶ 62-64, 181 ¶ 98.

The FCC subsequently repealed the leapfrogging rules in 1976. Amendment of Subpart D of Part 76 of Comm’n’s Rules & Regulations with Respect to Selection of Television Signals for Cable Television Carriage (Leapfrog Rules): § 76.59(b)(1) & (2), 76.61(b)(1) & (2) & 76.63, Report & Order, 57 F.C.C.2d 625 (1975) [hereinafter Leapfrogging Rules Repeal Order]. It also repealed the distant signal and the syndicated exclusivity rules in 1980. Cable Television Syndicated Program Exclusivity Rules, Report & Order, 79 F.C.C.2d 663, 725-46 ¶¶ 148-91, 768-69 ¶¶ 241-43 (1980) [hereinafter Syndex Repeal Order], *aff’d sub nom.* Malrite T.V. of N.Y. v. FCC, 652 F.2d 1140 (2d Cir. 1981), *cert. denied*, 454 U.S. 1143 (1982). Eight years later, the FCC reversed course and reinstated the syndicated exclusivity rules. Amendment of Parts 73 & 76 of the Comm’n’s Rules Relating to Program Exclusivity in the Cable & Broad. Indus., Report & Order, 3 F.C.C.R. 5299 (1988), *aff’d sub nom.* United Video, Inc. v. FCC, 890 F.2d 1173, 1176 (D.C. Cir. 1989). The network nonduplication rules remain in force. 47 C.F.R. §§ 76.92, 76.101 (2003).

The FCC consistently based these carriage limitations in part on the need to preserve the local content provided by broadcasting. Syndex Repeal Order, 79 F.C.C.2d at 725-26 ¶¶ 148-50, 744 ¶ 185; Cable Television Syndicated Program Exclusivity Rules, Notice of Proposed Rule Making, 71 F.C.C.2d 1004, 1020 ¶¶ 45-46 (1979); Inquiry into Econ. Relationship Between Television Broad. & Cable Television, Report, 71 F.C.C.2d 632, 645 ¶ 33, 658 ¶ 68, 661 ¶ 72 (1979); Leapfrogging Rules Repeal Order, 57 F.C.C.2d at 627 ¶ 6; Cable Television Report & Order, 36 F.C.C.2d at 150 ¶ 15; CATV NPRM & NOI, 15 F.C.C.2d at 439 ¶ 56; CATV Second Report & Order, 2 F.C.C.2d at 770 ¶ 114, 775 ¶ 124(iii), 788-89 ¶ 155; CATV First Report & Order, 38 F.C.C. at 699 ¶ 45, 700 ¶ 48; *see also* United States v. Southwestern Cable Co., 392 U.S. 157, 174 (1968) (upholding the FCC’s jurisdiction to prohibit distant signal importation in part because of the need to preserve “outlet[s] for local self-expression”) (quoting H.R. REP. No. 87-1559, at 3 (1962)).

¹⁹⁰ The FCC foreshadowed the imposition of must-carry in the very first decision in which it asserted jurisdiction over cable systems. Carter Mountain Transmission Corp., 32 F.C.C. 459, 465 ¶ 17 (1962), *aff’d*, 321 F.2d 359 (D.C. Cir. 1963), *cert. denied*, 375 U.S. 951 (1963). The FCC later imposed must-carry on cable systems that received programming through microwave transmission, CATV First Report & Order, 38 F.C.C. at 705 ¶ 57, 716-17 ¶¶ 85-90, and extended must-carry to systems that retransmitted over-the-air television broadcasts, CATV Second Report & Order, 2 F.C.C.2d at 746 ¶¶ 48-49, 752-53 ¶ 66 (extending same rules to all cable systems). *See also* Cable Television Report & Order, 36 F.C.C.2d at 170-71 ¶ 74, 172-76 ¶¶ 78-87 (reaffirming must-carry); Implementation of Provisions of Cable Communications Policy Act of 1984, 50 Fed. Reg. 18,637 (1985) (same).

¹⁹¹ *See, e.g.*, Inquiry into Econ. Relationship Between Television Broad. & Cable Television, Report, 71 F.C.C.2d 632, 645 ¶ 33, 658 ¶ 68, 661 ¶ 72 (1979); Cable Television Report & Order, 36 F.C.C.2d at 150 ¶ 15; CATV NPRM & NOI, 15 F.C.C.2d at 439 ¶ 56; CATV Second Report & Order, 2 F.C.C.2d at 770 ¶ 114, 775 ¶ 124(iii), 788-89 ¶ 155; CATV First Report & Order, 38 F.C.C. at 699 ¶ 45, 700 ¶ 48; *see also* *Southwestern Cable*, 392 U.S. at 174 (upholding the FCC’s jurisdiction to impose must-carry in part on the need to preserve “outlet[s] for local self-expression”) (quoting H.R. REP. No. 87-1559, at 3).

must-carry as a regulatory matter,¹⁹² Congress intervened with legislation erecting a new regulatory scheme. This scheme required all full-power local broadcast stations to decide every three years whether they wished to be governed by a “retransmission consent” regime,¹⁹³ which allowed them to negotiate with cable operators over the terms and conditions of carriage, or by “must carry,”¹⁹⁴ which required the cable operators to provide carriage for free.¹⁹⁵

Congress attached a series of findings to the must-carry legislation emphasizing that importance of preserving television broadcasting as the source of “the local origination of programming”¹⁹⁶ and of “local news and public affairs programming.”¹⁹⁷ The findings also emphasized that without must-carry, the ability of local broadcasters “to originate quality local programming w[ould] be seriously jeopardized.”¹⁹⁸

The emphasis on localism was further underscored by two provisions authorizing the FCC to extend must-carry beyond local full power stations. These provisions authorized the extension of must-carry to low power stations that the FCC determined “would address local news and informational needs which are not being adequately served by full power television broadcast stations.”¹⁹⁹ They also authorized the FCC to include stations operating outside of a community if justified by “the value of localism” as indicated by the provision of “coverage or other local service to such community” or “news coverage of issues of concern to such community or . . . carriage . . . of

¹⁹² The D.C. Circuit sustained a constitutional challenge to the FCC’s first attempt to impose must-carry. *Quincy Cable TV, Inc. v. FCC*, 768 F.2d 1434 (D.C. Cir. 1985). The FCC reinstated must-carry as a transitional measure, only to see it invalidated once again by the D.C. Circuit. Amendment of Part 76 of the Comm’n’s Rules Concerning Carriage of Television Broad. Signals by Cable Television Sys., Report & Order, 1 F.C.C.R. 864 (1986), *vacated sub nom.* *Century Communications Corp. v. FCC*, 835 F.2d 292 (D.C. Cir. 1987), *cert. denied*, 486 U.S. 1032 (1988).

¹⁹³ 47 U.S.C. § 325(b)(1)(A) (2000).

¹⁹⁴ *Id.* §§ 325(b)(1)(B), 534.

¹⁹⁵ *Id.* § 325(b)(3).

¹⁹⁶ Cable Television Consumer Protection & Competition Act of 1992, Pub. L. No. 102-385, § 2(a)(10), 106 Stat. 1460, 1461.

¹⁹⁷ *Id.* § 2(a)(11), 106 Stat. at 1461; *see also id.* § 2(a)(8)(B), 106 Stat. at 1461 (finding that “public television is a local community institution . . . that provides public service programming that is responsive to the needs and interests of the local community”).

¹⁹⁸ *Id.* § 2(a)(16), 106 Stat. at 1462.

¹⁹⁹ 47 U.S.C. § 534(h)(2)(B).

sporting and other events to the community.”²⁰⁰ The Supreme Court relied heavily on the preservation of locally oriented content in its landmark *Turner Broadcasting* decision upholding must-carry against a First Amendment challenge.²⁰¹

c. DBS

Localism concerns also underlay the manner in which Congress and the FCC have regulated DBS systems, such as DirecTV and the Dish Network.²⁰² Initially, the FCC imposed only minimal regulation on DBS and in particular declined to subject DBS to access requirements designed to ensure that its programming would be responsive to community interests.²⁰³ In so ruling, the FCC emphasized the importance of allowing a new service to experiment with service offerings as well as technical and organizational characteristics.²⁰⁴ It also rejected arguments that the introduction of DBS would harm existing broadcasters by exposing them to greater competition, would reduce the availability of free television service, and would reduce the amount and quality of locally produced programming. The FCC concluded that the prospect of providing television service to rural areas then unserved by broadcasting and cable, the increase in variety of programming throughout the country, and the potential for offering services not previously available, such as high definition television, stereophonic sound, and dual language sound tracks, justified the deployment of DBS.²⁰⁵ The D.C. Circuit sustained the FCC’s actions,

²⁰⁰ *Id.* § 534(h)(1)(C).

²⁰¹ *See, e.g., Turner Broad. Sys., Inc. v. FCC*, 520 U.S. 180, 192-93 (1997) (upholding must-carry because of the government interest in “increasing the number of outlets for community self-expression” and “ensuring the continuation of the local origination of broadcast programming”) (internal quotations omitted); *see also id.* at 234, 244 (O’Connor, J., dissenting) (noting that the government justified must-carry in part by the need to preserve “programming that is ‘responsive’ to the needs of the local community”) (citing Brief for Federal Appellees 13, 30).

²⁰² For useful reviews of the history of DBS, see Howard A. Shelanski, *The Bending Line Between Conventional “Broadcast” and Wireless “Carriage,”* 97 COLUM. L. REV. 1048, 1062-68 (1997), and Richard L. Weber, Note, *Riding on a Diamond in the Sky: The DBS Set-Aside Provision of the 1992 Cable Act*, 40 WM. & MARY L. REV. 1795, 1797-1800, 1806-10, 1813-27 (1999).

²⁰³ Inquiry into the Dev. of Regulatory Policy in Regard to Direct Broad. Satellites for the Period Following the 1983 Regional Admin. Radio Conference, Report & Order, 90 F.C.C.2d 676, 714 ¶¶ 99-100 (1982) [hereinafter DBS Order], *aff’d in relevant part sub nom. Nat’l Ass’n of Broadcasters v. FCC*, 740 F.2d 1190 (D.C. Cir. 1984).

²⁰⁴ *Id.* at 707-08 ¶ 81.

²⁰⁵ *Id.* at 686-87 ¶ 32, 689-92 ¶¶ 38-44; Inquiry into the Dev. of Regulatory Policy in Regard to Direct Broad. Satellites for the Period Following 1983 Regional Admin. Radio Conference, Notice of Proposed

concluding that “the Act does not entrench any particular system of broadcasting: existing systems . . . have no entitlement that permits them to deflect competitive pressure from innovative and effective technology.”²⁰⁶

This attitude of regulatory forbearance would ultimately prove short lived. The first change arose through copyright law. Although the Copyright Act of 1976 had resolved questions surrounding cable operators’ ability to retransmit broadcast signals,²⁰⁷ it did not resolve whether DBS and other satellite carriers would be able to do the same.²⁰⁸ As a result, Congress addressed the issue directly by enacting the Satellite Home Viewer Act of 1988 (SHVA).²⁰⁹ The SHVA limited satellite transmission of broadcast signals to “unserved households” that could not receive acceptable signals from their local network affiliates through stationary rooftop antennas.²¹⁰ By limiting the scope of this provision to unserved households, the SHVA had the effect of barring satellite providers from carrying programming provided by ABC, CBS, NBC, and Fox to any household capable of receiving those networks over the air.

Congress based its actions in part on the desire to “promote[] localism”²¹¹ by preserving the role of the local television station in “decid[ing] which network programs are locally broadcast” and in ensuring the availability of “local news and other programs of special interest to its local audience.”²¹² Congress also authorized the FCC to initiate proceedings to extend to DBS the

Policy Statement & Rulemaking, 86 F.C.C.2d 719, 735-41 ¶¶ 43-59 (1981).

²⁰⁶ *Nat’l Ass’n of Broadcasters*, 740 F.2d at 1198. The D.C. Circuit did vacate the FCC’s actions in one respect. It held the FCC’s attempt to exempt DBS from regulations imposed on broadcasters under Title III of the Communications Act of 1934 was inconsistent with the FCC’s previous decisions with respect to subscription television. *Id.* at 1199-1206 (vacating DBS Order, 90 F.C.C.2d at 708-11 ¶¶ 83-90). The FCC cured the inconsistency not by altering its decision with respect to DBS, but rather by eliminating the conflict with its subscription television precedents by ruling that subscription television also fell outside of Title III. The D.C. Circuit affirmed the DBS rules. *Subscription Video, Report & Order*, 2 F.C.C.R. 1001 (1987), *aff’d sub nom.* *Nat’l Ass’n for Better Broad. v. FCC*, 849 F.2d 665 (D.C. Cir. 1988).

²⁰⁷ 17 U.S.C. § 111 (2000).

²⁰⁸ Specifically, satellite carriers were concerned that scrambled transmissions might fall outside the “passive carrier” exemption, *id.* § 111(a)(3) (1994), under the 1996 revision to the copyright laws. H.R. REP. NO. 100-887(I), at 11-14 (1988), *reprinted in* 1988 U.S.C.C.A.N. 5577, 5614-17.

²⁰⁹ The SHVA was enacted as Title II of the Trademark Law Revision Act of 1988, Pub. L. No. 100-667, 102 Stat. 3935. After its initial authorization expired, it was renewed by the Satellite Home Viewer Act of 1994, Pub. L. No. 103-369, 108 Stat. 3477.

²¹⁰ § 202(2), 102 Stat. at 3957 (codified as amended at 17 U.S.C. § 119(a)(2)(B) (2000)).

²¹¹ H.R. REP. NO. 100-887(I), at 14 (1988), *reprinted in* 1988 U.S.C.C.A.N. at 5617.

²¹² H.R. REP. NO. 100-887(II), at 20 (1988), *reprinted in* 1988 U.S.C.C.A.N. 5638, 5649.

existing syndicated exclusivity requirements that governed cable.²¹³ Enactment of this provision was similarly motivated by the perceived need to prevent changes in technology and regulation from “undermin[ing] the base of free local television service upon which the American people continue to rely.”²¹⁴

The inability to carry broadcast network programming became a major impediment to the growth of DBS and generated substantial litigation.²¹⁵ Congress therefore revised the copyright laws again by enacting the Satellite Home Viewer Improvement Act of 1999 (SHVIA).²¹⁶ For the first time, the new statute authorized satellite providers to carry local broadcast signals, albeit subject to a fairly restrictive set of conditions. First, the statute limited DBS providers to providing “local-into-local” service. In other words, they could only provide subscribers with broadcast signals that originated locally. Importation of distant broadcast signals was prohibited unless the subscriber was located in an “unserved area.”²¹⁷ These provisions had the effect of prohibiting DBS providers from satisfying a subscriber’s desire for one of the major broadcast networks (such as ABC, CBS, NBC, or Fox) by providing a signal from a station based in New York, Los Angeles, or any other distant city. This left DBS providers who wished to provide broadcast network programming with no option but to carry only locally originated broadcast signals.

In addition, the statute gave DBS providers two options to obtain the copyright licenses they needed to carry broadcast programming. They could

²¹³ § 203, 102 Stat. at 3958.

²¹⁴ H.R. REP. NO. 100-887(II), at 26, *reprinted in* 1988 U.S.C.C.A.N. at 5655.

²¹⁵ *See* CBS Broad., Inc. v. PrimeTime 24 Joint Venture, 48 F. Supp. 2d 1342 (S.D. Fla. 1998); ABC, Inc. v. PrimeTime 24 Joint Venture, 17 F. Supp. 2d 467 (M.D.N.C. 1998), *aff’d in part, vacated in part*, 184 F.3d 348 (4th Cir. 1999); *see also* Satellite Delivery of Network Signals to Unserved Households for Purposes of the Satellite Home Viewer Act, Report & Order, 14 F.C.C.R. 2654, 2663-64 ¶ 21 (1999) (citing other litigation).

²¹⁶ The SHVIA was enacted as Appendix I of the Consolidated Appropriations Act, Pub. L. No. 106-113, 113 Stat. 1501, app. at 523 (1999).

²¹⁷ 17 U.S.C. § 119(d)(10)(A)-(B) (2000). The statute also required the FCC to simplify the process for determining whether a particular household qualified as unserved. 47 U.S.C. § 339(c)(3) (2000); *see also* Technical Standards for Determining Eligibility for Satellite-Delivered Network Signals Pursuant To the Satellite Home Viewer Improvement Act, Report, 15 F.C.C.R. 24,321 (2000); Establishment of an Improved Model for Predicting the Broad. Television Field Strength Received at Individual Locations, First Report & Order, 15 F.C.C.R. 12,118 (2000); Satellite Delivery of Network Signals to Unserved Households for Purposes of the Satellite Home Viewer Act, Report & Order, 14 F.C.C.R. 2654 (1999).

negotiate retransmission consent agreements with individual stations.²¹⁸ Alternatively, they could invoke a newly created compulsory license²¹⁹ provided that they complied with a “carry one, carry all” provision, which required that they carry all of the full power signals available within its service area.²²⁰

The SHVIA also directed the FCC to extend to DBS the network nonduplication, syndicated exclusivity, and sports blackout rules previously applicable only to cable television systems.²²¹ In enacting this legislation, Congress “reassert[ed] the importance of protecting and fostering the system of television networks as they relate to the concept of localism” on the ground that “[i]t is well recognized that television broadcast stations provide valuable programming tailored to local needs, such as news, weather, special announcements and information related to local activities.”²²² Other portions of the legislative history reiterated the same rationale.²²³ The Fourth Circuit mentioned these considerations in passing when sustaining the SHVIA against a constitutional attack, acknowledging the “distinctive value of local broadcast programming.”²²⁴

²¹⁸ 47 U.S.C. § 325(b).

²¹⁹ 17 U.S.C. § 122(a), (c) (Supp. V 1999); 47 U.S.C. § 339(a)(1)(B).

²²⁰ See 47 U.S.C. § 338(a)(1). The statute postponed the effective date of the must-carry requirements until January 1, 2002. *Id.* The must-carry requirements governing satellite carriers are in some ways broader than those imposed on cable operators. For example, the statute limits the percentage of channel capacity that some cable systems must devote to must-carry, *id.* § 534(b)(1)(B), whereas the satellite must-carry provision imposes no such limit, *id.* § 338(a)(1). Unlike the compulsory license for local broadcast signals, the compulsory license for distant broadcast signals requires royalty payments to the copyright holder. See 17 U.S.C. § 122(c) (2000). Satellite providers carrying local programming pursuant to retransmission consent agreements are not subject to the carry one, carry all requirements. 47 U.S.C. §§ 325(b), 338(a)(1).

²²¹ 47 U.S.C. § 339(b); see also Implementation of the Satellite Home Viewer Improvement Act of 1999: Application of Network Non-Duplication, Syndicated Exclusivity, & Sports Blackout Rules to Satellite Retransmissions of Broad. Signals, Report & Order, 15 F.C.C.R. 21,688 (2000).

²²² H.R. CONF. REP. NO. 106-464, at 92 (1999); accord H.R. REP. NO. 106-86(I), at 9 (1999).

²²³ See H.R. CONF. REP. NO. 106-464, at 101-02 (noting that carry one, carry all provision was enacted to allow satellite television viewers “the same range of choice in local programming they receive through cable service,” to “help[] viewers have access to all local programming,” and to “further[] the congressional policy of localism and diversity of broadcast programming, which provides locally-relevant news, weather, and information”); H.R. REP. NO. 106-79(I), at 15 (1999) (arguing that the legislation reaffirms the “historical commitment to localism”); S. REP. NO. 106-42, at 1 (1999) (identifying the protection of local over-the-air television as one of the SHVIA’s purposes); *id.* at 13 (same).

²²⁴ See *Satellite Broad. & Communications Ass’n v. FCC*, 275 F.3d 337, 355 (4th Cir. 2001).

d. Digital Broadcasting

The other major technological innovation that is currently transforming the television industry is the transition to digital broadcasting. Unlike analog television systems, which encode programming onto electronic signals by varying the amplitude and frequency of electrical waves, digital television systems convert television signals into a series of ones and zeroes of the type employed by computer code. By their nature, digital systems are not subject to the static interference that plagues analog systems, because the use of binary coding systems eliminates picture degradation and makes it considerably easier for television receivers to separate the desired television signal from the background noise. Digital systems also avoid some of the flicker and scrolling problems unique to the particular format adopted for analog television.²²⁵ In addition, digital transmission allows television stations to operate at lower power, which in turn allows them to be spaced closer together without causing interference. Furthermore, digital technologies also allow for the use of compression techniques that further increase the efficiency with which information can be conveyed. Especially when combined with the overall technical improvements to receiver technology,²²⁶ the transition to digital television allows for a fairly significant increase in the intensity with which broadcasters can use the spectrum allocated to television.

Shortly after the FCC began considering how to deploy digital television in 1987, it quickly ruled that the best way to deploy digital television was to give each incumbent analog television station an additional six megahertz of spectrum in which to begin digital broadcasting.²²⁷ The FCC based its decision in part on concerns about localism, concluding that deploying digital television in this manner would preserve the system by which U.S. households receive

²²⁵ See *Advanced Television Sys. & Their Impact on Existing Television Broad. Serv.*, Notice of Inquiry, 2 F.C.C.R. 5125, 5126-27 ¶¶ 8-17 (1987).

²²⁶ See *id.* at 5132-34 ¶¶ 59-79; *Advanced Television Sys. & Their Impact on the Existing Television Broad. Serv.*, Tentative Decision & Further Notice of Inquiry, 3 F.C.C.R. 6520, 6529-30 ¶¶ 69-71 (1988) [hereinafter *DTV Tentative Decision*].

²²⁷ *DTV Tentative Decision*, 3 F.C.C.R. at 6530 ¶¶ 73-74; see also *Advanced Television Sys. & Their Impact Upon the Existing Television Broad. Serv.*, Second Report & Order & Further Notice of Proposed Rulemaking, 7 F.C.C.R. 3340, 3342-43 ¶¶ 4-6 (1992) (reaffirming this decision); *Advanced Television Sys. & Their Impact on Existing Television Broad. Serv.*, Memorandum Opinion & Order, Third Report & Order, & Third Further Notice of Proposed Rulemaking, 7 F.C.C.R. 6924, 6930 ¶ 8 (1992) (noting that no parties objected to this decision). See generally Yoo, *supra* note 117, at 352-53 (reviewing the history of the decision to give a free digital channel to all current licensees).

“local and regional news, information, and entertainment.”²²⁸ The FCC also noted that digital broadcasters would be subject to the same public interest obligations as analog broadcasters, including the obligation to “air programming responsive to their communities of license.”²²⁹ The FCC is also entertaining a recommendation by the Gore Commission that digital broadcasters do even more to ensure that the programming they offer is responsive to the needs of the local community.²³⁰

Congress gave its imprimatur to the FCC’s actions by including a provision in the Telecommunications Act of 1996 requiring that in the event the FCC decided to issue digital television licenses, eligibility for such licenses would be limited to existing television broadcasters.²³¹ Congress enacted legislation the following year in effect guaranteeing that the digital television licenses would be given for free by including a provision specifically excepting digital television from the FCC’s authority to auction new licenses.²³² The result is what has been condemned by many as the largest corporate giveaway in history, with estimates of the value of the spectrum given away to digital broadcasters ranging from \$11 to \$70 billion.²³³

In addition to affecting the decisions about how to deploy digital television, localism concerns have also arisen with regard to the question of whether the must-carry statute should be extended to digital, as well as analog, television signals. The legislative history of the Telecommunications Act of 1996 and

²²⁸ DTV Tentative Decision, 3 F.C.C.R. at 6525 ¶ 39.

²²⁹ Pub. Interest Obligations of TV Broad. Licensees, Notice of Inquiry, 14 F.C.C.R. 21,633, 21,638 ¶ 11, 21,640 ¶ 14 (1999) [hereinafter Pub. Int. Oblig. NOI]; *accord* Advanced Television Sys. & Their Impact on Existing Television Broad. Serv., Memorandum Opinion & Order, Fourth Further Notice of Proposed Rulemaking & Third Notice of Inquiry, 10 F.C.C.R. 10,540, 10,545-46 ¶ 33 & n.36 (1995); *see also* Advanced Television Sys. & Their Impact upon Existing Television Broad. Serv., Fifth Report & Order, 12 F.C.C.R. 12,809, 12,829-30 ¶¶ 48-50 (1997) (ruling that digital broadcasters are subject to the same public interest obligations as analog broadcasters).

²³⁰ Pub. Int. Oblig. NOI, 14 F.C.C.R. at 21,640-41 ¶¶ 14-17, 21,642-43 ¶¶ 20-22; ADVISORY COMMITTEE ON PUBLIC INTEREST OBLIGATIONS OF DIGITAL BROADCASTERS, CHARTING THE DIGITAL BROADCASTING FUTURE 45-46 (1998) (proposing enhanced disclosure of, *inter alia*, local programming efforts by digital broadcasters), *available at* <http://www.ntia.doc.gov/pubintadvcom.piacreport.pdf> [hereinafter GORE COMMISSION REPORT]; *id.* at 48 (proposing additional efforts by digital broadcasters to identify the programming needs of the community and minimum public interest obligations on local public affairs programming).

²³¹ 47 U.S.C. § 336(a)(1) (2000).

²³² *Id.* § 309(j)(2)(b).

²³³ *See* Goodman, *supra* note 183, at 533; Logan, *supra* note 182, at 1728; Rubin, *supra* note 182, at 694.

the Balanced Budget Act of 1997 indicates that Congress did not intend to resolve whether the must-carry requirements should be extended to digital television. Instead, Congress left that determination to the FCC.²³⁴

This decision to commit the issues surrounding digital must-carry to the FCC gave rise to what then-FCC Chairman William Kennard called “one of the most contentious and fascinating debates in communications policy.”²³⁵ In issuing its initial Notice of Proposed Rulemaking on whether and how to extend must-carry to digital television, the FCC took as its starting point the general framework used to uphold must-carry with respect to analog broadcasting.²³⁶ These considerations included the need to preserve “the benefits derived from the local origination of programming from television stations” as well as the concern that the absence of mandatory carriage would jeopardize “the economic viability of local broadcast television and its ability to originate quality local programming.”²³⁷

The FCC recognized, however, that if the extension of must-carry to digital television were to withstand a First Amendment attack, such a decision had to be based on a record establishing that the harms to local broadcasting were “real, not merely conjectural, and that the regulation will in fact alleviate these harms in a direct and material way.”²³⁸ The FCC acknowledged the possibility that refusing to extend must-carry to digital television might represent the better way to promote local content. As the FCC noted, “[b]roadcasting may not be the only source of local programming as cable operators have developed local news channels and public, educational, and governmental access channels, which provide highly localized content, have multiplied in the past six years.”²³⁹

²³⁴ Carriage of the Transmissions of Digital Television Broad. Stations, Notice of Proposed Rulemaking, 13 F.C.C.R. 15,092, 15,098 ¶ 8 (1998) [hereinafter Digital Must-Carry NPRM] (citing S. CONF. REP. NO. 104-230, at 161 (1996)); *id.* at 15,100, 15,101 ¶¶ 12-13 (citing H.R. CONF. REP. NO. 105-217, at 577 (1997), reprinted in 1997 U.S.C.C.A.N. 176, 198).

²³⁵ See Eric Glick, *Digital Puzzle Frustrates Feds*, CABLE WORLD, July 13, 1998, at 1, available at <http://www.c-span.org/about/dmc/cworld071398.htm>, quoted in Hazlett, *supra* note 161, at 199.

²³⁶ Digital Must-Carry NPRM, 13 F.C.C.R. at 15,101 ¶ 14.

²³⁷ *Id.* at 15,096 ¶ 5 (citing Cable Television Consumer Protection and Competition Act of 1992, Pub. L. No. 102-385, § 2(a)(7), (10), 106 Stat. 1460, 1461).

²³⁸ *Id.* at 15,102 ¶ 15 (quoting *Turner Broad. Sys., Inc. v. FCC*, 512 U.S. 622, 664 (1994)) (internal citation omitted); *accord id.* at 15,102 ¶ 16.

²³⁹ *Id.* at 15,103 ¶ 16.

The issues surrounding digital must-carry would be particularly problematic prior to 2006, when broadcasters would be transmitting both analog and digital signals.²⁴⁰ The FCC exhibited uncertainty about whether must-carry required cable operators to transmit the analog signal, the digital signal, or both. As a result, it sought comment on seven different digital must-carry proposals, which ranged from immediate carriage of all signals to no carriage whatsoever.²⁴¹ Much of the debate centered on whether cable operators must carry both the analog and digital signals (which the FCC called “dual carriage”) during this period.²⁴²

The FCC’s First Report and Order in this proceeding ultimately ruled that cable operators must provide free carriage to television stations that transmit exclusively in an analog or digital format.²⁴³ Its resolution of the dual carriage issue was less definitive. Although the FCC tentatively concluded that a dual carriage requirement would represent an impermissible burden on cable operators’ First Amendment rights, it found that the record before it was not sufficiently complete to determine the impact that dual carriage would have on local broadcast stations and cable operators. It therefore requested further comment on the impact that imposing dual carriage would have on local broadcasters.²⁴⁴ In particular, the FCC sought comment on the extent to which local broadcasters would be able to obtain carriage of their digital signals through voluntary retransmission consent agreements.²⁴⁵ In addition, the FCC asked whether, in light of the paucity of original digital programming available, imposing dual carriage would in fact enrich the programming environment or simply duplicate existing offerings.²⁴⁶ Thus, although the FCC appears to have tentatively rejected dual carriage for the time being, it left open

²⁴⁰ *Id.* at 15,112-13 ¶ 39.

²⁴¹ *Id.* at 15,113-17 ¶¶ 41-50.

²⁴² *Id.* at 15,123-25 ¶¶ 69-71.

²⁴³ Carriage of Digital Television Broad. Signals, First Report & Order & Further Notice of Proposed Rulemaking, 16 F.C.C.R. 2598, 2605 ¶ 13, 2608 ¶ 21 (2001) [hereinafter Digital Must-Carry First Report & Order & FNPRM]; *accord* WHDT, Memorandum Opinion & Order, 16 F.C.C.R. 2692, 2698 ¶ 12 (2001); Serv. Rules for the 746-764 & 776-794 MHz Bands, & Revisions to Part 27 of the Comm’n’s Rules, Memorandum Opinion & Order & Further Notice of Proposed Rulemaking, 15 F.C.C.R. 20,845, 20,872 ¶ 65 (2000).

²⁴⁴ Digital Must-Carry First Report & Order & FNPRM, 16 F.C.C.R. at 2600 ¶ 3, 2647-49 ¶¶ 112-15.

²⁴⁵ *Id.* at 2648 ¶ 115, 2654-56 ¶¶ 128-31.

²⁴⁶ *Id.* at 2651 ¶ 120. The FCC also sought information regarding cable operators’ channel capacity in order to evaluate the extent to which imposing must-carry would burden cable operators’ First Amendment rights. *Id.* at 2649 ¶ 115, 2653-54 ¶¶ 123-27.

the possibility that it might reach a different conclusion if presented with a more complete record about the impact that failure to mandate dual carriage would have on local programming.

2. *Localism in the Face of Increasing Returns to Scale*

The promotion and preservation of local content has thus represented one of the cornerstones of U.S. media policy since the very beginning of the television industry. Since that time, this commitment has continued to shape the way the FCC has responded to every subsequent television technology. The economic theories described above suggest that this regulatory commitment betrays a fundamental misunderstanding of the basic economics of television programming. Decreasing average costs are an inevitable feature of nonrival goods, because the existence of constant marginal costs causes the returns to scale resulting from the amortization of fixed costs over increasingly large volumes to be inexhaustible.²⁴⁷ They are also endemic to markets involving differentiated products that necessarily reach equilibrium on the declining portion of the average cost curve.²⁴⁸ Consequently, television programming will still exhibit a natural tendency toward an equilibrium level of distribution that is geographically quite broad.²⁴⁹ This is not to say that products directed at local markets will not exist in equilibrium. Even though products directed at national markets will enjoy cost advantages over products directed at local markets, variations in local preferences may allow products directed at local markets to exist.²⁵⁰ As a theoretical matter, the combination of these considerations would lead to an equilibrium mix of nationally oriented and locally oriented products. The greater the taste for locally oriented products, the greater the proportion of locally oriented products will exist at equilibrium. In practice, even the most cursory review of any typical programming day reveals that, with the exception of local news and regional sports programming, local and national preferences do not differ sufficiently to

²⁴⁷ See *supra* notes 31-33 and accompanying text.

²⁴⁸ See *supra* notes 55, 65-71 and accompanying text.

²⁴⁹ BESEN ET AL., *supra* note 118, at 5-6; OWEN, *supra* note 51, at 100. Indeed, the existence of economies of scale may provide the greatest advantages to programs able to achieve distribution that is international in scope. See, e.g., BAKER, *supra* note 7, at 222-26; OWEN & WILDMAN, *supra* note 78, at 49-52; W. Ming Shao, *Is There No Business Like Show Business? Free Trade and Cultural Protectionism*, 20 YALE J. INT'L L. 105 (1995).

²⁵⁰ See OWEN, *supra* note 118, at 112.

overcome the substantial cost advantages that accrue to programming distributed on a national scale. Indeed, it is particularly telling that independent stations unaffiliated with any broadcast network are the stations least likely to provide locally originated programming.²⁵¹ The failure of these stations to provide local content underscores the dramatic cost advantages enjoyed by stations supported by programming produced for national audiences.

This in turn suggests that regulations designed to favor locally oriented programming over nationally oriented programming only serve to limit the networks' ability to take advantage of television's natural economies of scale. Such limitations cause unit costs to increase, as the fixed costs are amortized over a market that is even smaller than the already inefficiently small volume at which these markets reach equilibrium. As unit costs increase, networks that would have covered their costs had they been able to reach a broader market find themselves unable to break even. Attempts to promote local programming thus have the paradoxical effect of reducing the economic viability of programming that appeals to relatively small audience segments (such as local content). The ultimate result is to cause the total number of networks to drop below efficient levels and to reduce the quantity and diversity of product offerings available. To the extent that quality is related to total expenditure, such limits would tend to reduce the quality of television programming as well.

The current system of retransmission consent and must-carry provides a useful indication of the extent of these effects. As noted earlier, broadcast stations have the option of either negotiating a retransmission consent agreement or of obtaining free carriage by invoking their must-carry rights.²⁵² The choice faced by the stations is fairly clear. If a station is strong enough to command some degree of compensation in return for providing programming, it will rely on retransmission consent. Only those stations whose bargaining position is so weak that they would have to pay for carriage will avail themselves of must-carry. Analysis of the available data indicates that eighty percent of independent stations chose must-carry, whereas only ten percent of network affiliates made the same decision.²⁵³ This overwhelming indication of

²⁵¹ Hazlett, *supra* note 161, at 178, 181-83, 195-96.

²⁵² See *supra* notes 193-95 and accompanying text.

²⁵³ Carriage of the Transmissions of Digital Television Broad. Stations, Notice of Proposed Rulemaking,

the financial advantages that network affiliates enjoy over independent stations attests to the natural advantage that nationally distributed programming enjoys over locally distributed programming.

3. *Application to U.S. Television Policy*

a. *Analog Broadcasting*

The analysis developed in Part I helps to explain why the efforts to use broadcast policy to promote localism have proven so unsuccessful. Consider the seminal decision to allocate television to as many communities as possible, which established a basic structural framework that persisted for more than thirty years. The idea was to provide communities with local outlets responsive to local needs.²⁵⁴

Economic analysis reveals the inherent contradiction underlying this policy. The decreasing cost structure of television programming discussed above²⁵⁵ gives rise to inexhaustible returns to scale that give a cost advantage to programming able to obtain national distribution over programming distributed on a smaller scale. As a result, during the era in which broadcasting represented the dominant television distribution technology, stations able to affiliate with networks possessed a decisive advantage over those unable to do so,²⁵⁶ and the success of any particular network depended upon its ability to achieve as close to national distribution as possible.

The net effect of the FCC's station allocation policy, however, was to ensure that a significant portion of the country could receive no more than three television signals.²⁵⁷ As a result, the FCC's attempt to promote localism

13 F.C.C.R. 15,092, 15,110 ¶ 33 & n.92 (1998) (citing Charles Lubinsky, *Reconsidering Retransmission Consent: An Examination of the Retransmission Consent Provision (47 U.S.C. § 325(b)) of the 1992 Cable Act*, 49 FED. COMM. L.J. 99, 146 (1996)).

²⁵⁴ See *supra* Part III.A.1.a.

²⁵⁵ See *supra* note 33 and accompanying text.

²⁵⁶ As noted earlier, these economies of scale are bolstered by technological and transaction efficiencies.

See *supra* notes 156-58 and accompanying text.

²⁵⁷ Specifically, the FCC assigned television stations according to the following priorities:

- (1) To provide at least one television service to all parts of the United States.
- (2) To provide each community with at least one television broadcast station.
- (3) To provide a choice of at least two television services to all parts of the United States.
- (4) To provide each community with at least two television broadcast stations.

by dispersing stations broadly had the effect of forestalling the emergence of a fourth network despite evidence that sufficient demand existed to support as many as six networks.²⁵⁸ It was not until cable emerged as a viable competitor in the 1980s that this logjam was broken.²⁵⁹ This effect was exacerbated still further by the Chain Broadcasting Rules, which were designed in part to preserve local autonomy by curbing the power of the networks.²⁶⁰ In so doing, the Chain Broadcasting Rules simply ignored the underlying economies of scale.

Furthermore, the restrictions on the number of stations not only had the effect of reducing the total number of networks; it also reduced the diversity of programming available. This is because the artificial restrictions on distribution caused by the reduction in the number of networks allowed programming to be crowded out by other programming that commanded a larger audience. This could occur even when the program that was crowded out was able to cover its costs. As a result, programming had to clear more than just the hurdle of economic viability; it also had to compete with other programs.²⁶¹ Regulations requiring stations to carry nonremunerative content only caused the break-even audience to increase still further.

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- (5) Any channels which remain unassigned under the foregoing priorities will be assigned to the various communities depending on the size of the population of each community, the geographical location of such community, and the number of television services available to such community from television stations located in other communities.

Amendment of Section 3.606 of Comm'n's Rules & Regulations, Sixth Report & Order, 41 F.C.C. 148, 167 ¶ 63 (1952). *See generally* Yoo, *supra* note 117, at 275-78 (reviewing the impact of the allocation decision on the number of networks).

²⁵⁸ FED. COMMUNICATIONS COMM'N, 35TH ANNUAL REPORT 135, 137 (1969); ROGER G. NOLL ET AL., ECONOMIC ASPECTS OF TELEVISION REGULATION 116-20 (1973).

²⁵⁹ A fourth network would only be able to reach sixty-four percent of U.S. households. In addition, it should be remembered that when a fourth station was available, it was not infrequently a UHF station. UHF suffers from several technical disadvantages when compared with VHF. As a result, UHF has largely failed as a service during its first several decades of existence. These differences in quality make the gap even more severe. When only signals of comparable quality are considered, the percentage of the country that a fourth network could reach drops to thirty-four percent. *See* Yoo, *supra* note 117, at 276-77.

²⁶⁰ *See supra* notes 163-67 and accompanying text. Baker also recommends that regulatory authorities continue to give a preference for owners of television stations who live in the community being served and who are involved in management. BAKER, *supra* note 7, at 101, 120. Interestingly, Congress and the FCC have already rejected the last of these proposals after the D.C. Circuit struck down such preferences as arbitrary and capricious. *See supra* note 173.

²⁶¹ *See* Yoo, *supra* note 50, at 1940-41.

The aggregate effect of these requirements was to increase the size of the audience that a program had to command to obtain airtime. This in turn reduced the diversity of programming available by forcing out a number of programs that were economically viable but not sufficiently popular. Somewhat paradoxically, this necessarily included a significant amount of local programming, which is one form of special interest programming. Thus the government's attempts to promote local programming might have had the perverse effect of making it more difficult for precisely that type of programming to appear.

b. Cable Television

My analysis also suggests that efforts to promote localism indirectly by attempting to regulate cable television in a manner that favors local content have been similarly counterproductive. As discussed above, regulations such as must-carry have proven to be singularly ineffective in promoting the values of localism. This is because only the weakest broadcasters that provide the least local content are the sole beneficiaries of must-carry.²⁶² Even worse, carriage of broadcasters by cable operators crowds out additional cable networks, beginning with those serving the smallest audiences. All too often, the cable networks in risk of being lost to mandatory carriage requirements are those providing news and public affairs programming, as evidenced by C-SPAN's vigorous opposition to any expansion of the current must-carry requirements.²⁶³ Indeed, one of the most striking developments in recent years has been the proliferation of cable channels devoted exclusively to local news.²⁶⁴ Must-carry threatens to squelch the emergence of locally oriented, all-news channels on cable by preempting channel capacity available for such services. In short, must-carry promotes marginal broadcasters at the expense of marginal cable channels even though it is the marginal cable channels that are more likely to provide diverse (including local) programming.

Indeed, there is a credible argument that locally oriented programming would be promoted more effectively if policymakers were to favor cable over

²⁶² See *supra* note 253 and accompanying text.

²⁶³ See Hazlett, *supra* note 161, at 175-76. For a partial catalog of cable networks providing news, public affairs, documentaries, arts-related, and children's educational programming threatened to be crowded out by must-carry, see *id.* at 185-92.

²⁶⁴ See *id.* at 192-94.

broadcasting instead of the other way around. The leading economic models of program choice reveal that one of the primary obstacles to the emergence of diverse programming is the tendency toward duplication of existing program types that arises whenever products compete on product features as well as price.²⁶⁵ In other words, new entrants often find it more profitable to offer additional versions of existing programming rather than to direct their attention toward smaller audience segments.²⁶⁶ When channel capacity is constrained, this duplication crowds out the appearance of more diverse programming. This problem can be solved, however, by increasing the amount of channel capacity available. If excess channel capacity exists, the minimum break-even audience size drops, and all commercially viable types of programming should eventually appear.²⁶⁷ The intuitions underlying these models should be obvious to anyone who has witnessed the explosion of niche programming that has accompanied the increase in cable systems' channel capacity. More formal empirical studies have corroborated these theoretical conclusions.²⁶⁸

This reasoning suggests that encouraging increases in channel capacity may represent the best way to promote the emergence of programming, such as locally oriented content, that commands small audiences. Since cable has greater channel capacity than broadcasting, localism would arguably be better served if cable were allowed to develop unfettered.

²⁶⁵ See, e.g., Beebe, *supra* note 50, at 15-17; Noam, *supra* note 50; Steiner, *supra* note 50. For reviews of this literature, see OWEN & WILDMAN, *supra* note 78, at 64-92, 140-43; Matthew L. Spitzer, *Justifying Minority Preferences in Broadcasting*, 64 S. CAL. L. REV. 293, 304-17 (1991); Yoo, *supra* note 50, at 1936-42, 1946-48.

²⁶⁶ The intuition underlying this effect is as follows: If the distribution of viewers is skewed toward a particular type of program, the new entrant may find it more profitable to split the audience for that program type with competitors than to serve a smaller audience segment, since a fraction of the largest audience segment may be larger than the entire audience for other program types. The problem from a welfare standpoint is that under these circumstances a significant proportion of the viewers obtained by the new entrant are cannibalized from other stations, which does not cause aggregate welfare to increase. The preferred outcome from a welfare standpoint would be for the new entrant to provide programming for audience segments that are currently unserved.

²⁶⁷ See OWEN & WILDMAN, *supra* note 78, at 86-87; Beebe, *supra* note 50, at 30.

²⁶⁸ See Augustus E. Grant, *The Promise Fulfilled? An Empirical Analysis of Program Diversity on Television*, 7 J. MEDIA ECON. 51, 59, 62 (1994); Noam, *supra* note 161, at 155-71.

c. *DBS*

A similar critique would seem to apply to the restrictions on DBS imposed by the SHVIA. The economic analysis developed above suggests that policymakers should be welcoming the advent of DBS rather than constraining it in the name of preserving local television stations. DBS is the first television technology that naturally lends itself to national distribution of programming. In contrast to the geographic footprint of broadcasting and cable providers, which are inherently limited to a discrete geographic area, DBS can provide programming on a national and even continental scale.²⁶⁹ As a result, DBS is the technology best positioned to realize the economies of scale inherent in television programming. Such gains are likely to be particularly pronounced with respect to DBS, because once the satellite is deployed and programming is made available to it, the marginal costs of allowing another household to view that programming should drop far below those associated with any other means of transmission.

As a result, imposing an implicit cross-subsidy on DBS in favor of local broadcasting appears to be economically misconceived. Not only would doing so bias the industry in ways that would prevent the market from realizing all of the available economies of scale, but requiring DBS to carry all local stations would cause it to waste valuable channel capacity. This is because DBS can currently only target transmissions at the entire country. Although the DBS providers are in the process of deploying “spot beam” technology that should allow them to reuse spectrum by restricting the geographic coverage of particular channels, such technologies are not likely to be operational until 2004 at the earliest.²⁷⁰

²⁶⁹ See *supra* note 148 and accompanying text.

²⁷⁰ See Alicia Mundy, *Charlie's Angel*, CABLE WORLD, Apr. 1, 2002, at 12, 15. The FCC's Media Bureau has recently invalidated EchoStar's attempts to use satellites located in the “wing slots” to solve the capacity problems. The problem is that use of these additional satellites requires the installation of a second satellite dish. The Bureau ruled that EchoStar has not properly educated customers about the need to install the second dish, is not displaying the local channels carried on the second dish contiguously with the local channels provided through the main dish, and is not integrating the channels carried on the second dish into its electronic programming guide. Nat'l Ass'n of Broadcasters, DA 02-765, slip op. at 8-12 ¶¶ 12-28 (Media Bur. Apr. 4, 2002). This ruling will not necessarily prevent EchoStar from using the second dish to provide local service. The Bureau identified several steps that EchoStar could take that would bring its second-dish plan into compliance with applicable law. *Id.* at 18-19 ¶¶ 31-33.

The limits on the geostationary orbit slots and the current unavailability of spot beam technology dictate that DBS providers are each restricted to between 450 and 500 channels;²⁷¹ the prohibition of distant signal importation requires providers to waste valuable capacity by dedicating channels to signals that only a small portion of the country would be able to receive. Even worse, the carry one, carry all rule requires DBS to devote capacity to programming that is essentially duplicative, because the provision requires DBS providers to carry all of the ABC, CBS, NBC, and Fox affiliates in the markets that they serve, despite the fact that the programming carried on those channels is identical during substantial parts of the day. Given that the average U.S. household can receive thirteen local television signals,²⁷² it is clear that the carry one, carry all rule will severely limit the number of cities in which DBS will be able to offer effective competition to cable.

This analysis reveals the fundamental conceptual flaws underlying requiring DBS to carry locally oriented programming. Indeed, it might be more economically beneficial if all national network programming were to migrate to DBS and for television broadcasting to abandon network affiliations and reposition itself exclusively toward local content.²⁷³ Instead, the carry one, carry all rule is preventing the networks from realizing the significant economies of scale associated with nationwide distribution. The result is an inevitable reduction in the quantity, quality, and diversity of the available programming.

d. Digital Broadcasting

The economics of public goods reveal the misconceived nature of basing the decision to deploy digital television through existing analog broadcasters on the need to preserve the local content of television programming. The approach taken by the FCC implicitly builds on the presumption that the preservation of incumbent analog broadcasters represents an effective way to promote local content. As noted earlier,²⁷⁴ a brief review of the current

²⁷¹ *Satellite Broad. & Communications Ass'n v. FCC*, 275 F.3d 337, 345 (4th Cir. 2001).

²⁷² 1998 Biennial Regulatory Review, Review of the Comm'n's Broad. Ownership Rules & Other Rules Adopted Pursuant to Section 202 of the Telecomm. Act of 1996, Biennial Review Report, 15 F.C.C.R. 11,058, 11,064 ¶ 9 (2000); Yoo, *supra* note 51, at 212.

²⁷³ See Shelanski, *supra* note 202, at 1076-77.

²⁷⁴ See *supra* notes 161, 251 and accompanying text.

programming offered by local television stations belies this assertion. The vast majority of local television stations are affiliated with national networks and fill their programming days with either network programming or nationally distributed syndicated programming. Independent broadcasters rely even more heavily on national program sources (usually provided via syndication), because few independent stations have the resources to produce local content.

The incongruity of attempting to promote localism in this manner becomes even more apparent when one closely examines the nature of the service being displaced by the decision to double the spectrum given for free to all incumbent television stations. Much of the spectrum necessary to implement the current plan came at the expense of low power television stations²⁷⁵ and vacant noncommercial allotments.²⁷⁶ Even though this approach was supposedly designed to promote localism, it somewhat ironically did so at the expense of the television services believed to be particularly well suited to providing locally oriented programming.²⁷⁷

Monopolistic competition and public good economics also reveal that requiring cable operators to provide dual carriage of both analog and digital broadcast signals is unlikely to prove effective in promoting local content. As a general matter, nationally distributed programming has an inherent cost advantage over locally distributed programming. As a result, attempts to promote locally oriented over nationally oriented programming are likely to prove ineffectual and will only serve to depress the quantity, quality, and diversity of television programming. Indeed, previous experience indicates

²⁷⁵ See *Advanced Television Sys. & Their Impact upon Existing Television Broad. Serv.*, Sixth Report & Order, 12 F.C.C.R. 14,588, 14,595 ¶ 11 (1997) [hereinafter *DTV Sixth Report & Order*]; *Advanced Television Sys. & Their Impact on Existing Television Broad. Serv.*, Memorandum Opinion & Order, Third Report & Order, & Third Further Notice of Proposed Rulemaking, 7 F.C.C.R. 6924, 6953 ¶¶ 37-39 (1992); *Advanced Television Sys. & Their Impact upon the Existing Television Broad. Serv.*, Second Report & Order & Further Notice of Proposed Rulemaking, 7 F.C.C.R. 3340, 3350-51 ¶¶ 39-42 (1992) [hereinafter *DTV Second Report & Order*].

²⁷⁶ See *DTV Sixth Report & Order*, 12 F.C.C.R. at 14,639 ¶ 112; *DTV Second Report & Order*, 7 F.C.C.R. at 3350 ¶¶ 37-38.

²⁷⁷ See *Cable Television Consumer Protection and Competition Act of 1992*, Pub. L. No. 102-385, § 2(a)(8)(B), 106 Stat. 1460, 1461 (recognizing that “public television is a local community institution . . . that provides public service programming that is responsive to the needs and interests of the local community”); *Inquiry into the Future Role of Low Power Television Broad. & Television Translators in the Nat’l Telecomms. Sys.*, Final Rule, 47 Fed. Reg. 21,468, 21,470 ¶ 12 (1982) (recognizing that LPTV is a medium particularly well suited to providing local programming).

that digital must-carry would only benefit those stations that are the least likely to provide locally oriented content.²⁷⁸

As suggested in the discussion of cable television,²⁷⁹ it is arguable that the FCC would promote local content more effectively if it were to eliminate must-carry altogether, let alone extend it to digital television. The wild card in this scenario is the uncertainty about the type of programming that will appear on digital television. The increase in the number of available voices made possible by multicasting may well foster the emergence of local content in television broadcasting in much the same manner as freeing up channel capacity on cable did. As a result, it would be improper to regard this as an argument for favoring cable at the expense of other media. The better position is to remove implicit cross-subsidies running in either direction. In that way, market forces, as well as the other economic considerations discussed below, will determine the final outcome.

* * *

The analysis I advance reveals that the FCC's attempts to promote locally oriented content over nationally oriented content are inherently misguided. This commitment has only served to deprive television networks of resources by preventing the realization of the available economies of scale without generating any concomitant increase in locally oriented programming. The net effect is to reduce the quantity, quality, and diversity of programming without providing any compensating benefits.

These problems become even worse when viewed from a longer-term perspective. Not only does preventing program producers from realizing the available efficiencies create welfare losses in the here and now, it also deters the emergence of new programming and new television technologies in the future. Viewing these problems from the perspective of dynamic efficiency, it becomes clear that any access requirements and other regulatory measures that artificially reduce the overall profitability of network operations have the inevitable effect of causing investment in new technologies and new

²⁷⁸ See *supra* note 253 and accompanying text.

²⁷⁹ See *supra* Part III.A.3.b.

programming options to drop below efficient levels.²⁸⁰ The localism-related commitments advanced by the FCC thus heighten the inefficiencies identified by public good economics.

It thus seems clear that those who view the problems of localism in largely economic terms would conclude that economic welfare would increase if policymakers were to abandon the historic commitment to promoting local content. I do not mean to suggest that the FCC should reverse this presumption and impose regulation favoring nationally oriented programming over locally oriented programming. Such steps are unnecessary, because even without such regulation networks that are able to achieve national distribution will possess a natural advantage. My point is rather that policymakers should eliminate implicit cross-subsidies running in either direction. Doing so would appear to be a more effective way to promote economic welfare and, to the extent that local content appears to be economically viable, would likely be far more effective at encouraging local content to appear.

Interestingly, my analysis should give even those who favor locally oriented programming for noneconomic reasons cause to reject the attempts to use explicit and implicit cross-subsidies to promote local content. It suggests that these methods are particularly poorly designed to promote local content. On the contrary, attempts to promote localism by requiring other media to cross-subsidize television broadcasting are far more likely to reduce the amount of local content available by raising the break-even audience needed for a network to be economically viable. As a result, the current policy approach simply increases the costs and the constitutional problems faced by those who would promote localism more directly.

Those committed to localism for noneconomic reasons may find that implementation of the reforms I am suggesting would reduce the cost and the magnitude of the intervention required to achieve the results that they seek. In the process, it would minimize any First Amendment problems raised by large, content-based government subsidies. Simply put, even those who object to allowing economics to define the *ends* of television policy should nonetheless remain very interested in what economics can teach us about the likely efficacy of the various *means* available for pursuing noneconomic goals.

²⁸⁰ For an earlier discussion of the dynamic efficiency problems created by access requirements, see Yoo, *supra* note 51, at 246-47, 269.

In fact, if the definition of community is broadened to include communities of interest as well as geographic communities, existing attempts to promote local content necessarily create an inherent tradeoff. Although fostering the availability of locally oriented programming may strengthen geographic communities, it does so at the expense of making nationally oriented programming more expensive and increasing the minimum audience size that national programming must command in order to cover its fixed costs. Making nationally oriented programming more expensive in turn reduces television's ability to serve communities of interest that are geographically dispersed across the nation, because any such increase in cost will cause programming designed to meet the needs of certain small groups to disappear even though such programming would have been economically viable had the regulatory measures that I have been criticizing did not exist. In short, even those who reject viewing policy in terms of maximizing economic welfare must still heed the basic economic lessons about free lunches. Any policy choice inevitably involves tradeoffs, and economic analysis almost invariably proves invaluable in understanding the relative costs and benefits associated with the available policy options.

B. Advertising Support and the Maximization of Total Surplus: Free vs. Pay Television

Just as with its commitment to localism, the FCC's commitment to preserving free television has reduced the quantity, quality, and diversity of programming available. Subsection 1 traces the extent to which attempts to protect free television have shaped television policy with respect to analog broadcasting, cable television, DBS, and digital television. The balance of this section analyzes the ways that the commitment to free television has debased television programming by starving it of resources. Subsection 2 analyzes the inherent inefficiencies of untargeted subsidy programs, such as those currently employed to promote access to television. Subsection 3 addresses how reliance on advertising support interposes an intermediary into the economic relationship between viewers and the networks that interferes with viewers' ability to signal their true preferences to the networks. Subsection 4 identifies the ways that advertising support interferes with the networks' ability to set prices that increase total surplus.

1. *The Regulatory Commitment to Free Television*

After the commitment to localism, the next most significant sub-commitment embodied in the regulatory approach taken by Congress and the FCC is the commitment to “free” (i.e., advertising-supported) television and its hostility toward “pay” television, which it defined as television for which an additional fee is charged on a per-program or per-channel basis.²⁸¹ This subsection will trace how this subcommitment is reflected in the regulatory approach taken with respect to each major television technology.

a. *Analog Broadcasting*

The desire to preserve free television played a major role in shaping the way that the FCC regulated analog broadcasting. The nature of the FCC’s commitment to free television can be discerned in its attempts to suppress the emergence of a technology known as subscription television (STV), which employed scrambling devices to make broadcast programming available only to those willing to pay for the right to view it.²⁸² STV first emerged as a technology in 1950,²⁸³ and the FCC first addressed the regulatory status of STV when it issued a Notice of Proposed Rulemaking in 1955.²⁸⁴ After several false starts,²⁸⁵ the FCC declined to authorize STV as a general service

²⁸¹ As a result of this definition, pay television refers primarily to pay-per-view programs and premium movie channels provided by cable operators and other MVPDs. It does not include programming provided through the basic tiers of cable television, even though viewers clearly pay a flat fee for access to basic cable networks.

²⁸² See, e.g., Samuelson, *Aspects*, *supra* note 20, at 335. The FCC had authorized a trial subscription radio service in 1941, which eventually became Muzak. *Muzak Corp.*, 8 F.C.C. 581, 582 (1941).

²⁸³ Jill Abeshouse Stern et al., *The New Video Marketplace and the Search for a Coherent Regulatory Philosophy*, 32 CATH. U. L. REV. 529, 532 (1983).

²⁸⁴ Radio Broad. Servs., *Subscription Television Serv.*, Notice of Proposed Rulemaking, 20 Fed. Reg. 988 (Feb. 16, 1955).

²⁸⁵ See Second Report, 16 Rad. Reg. (P&F) 1539 (1958); Amendment of Part 3 of the Comm’n’s Rules & Regulations (Radio Broad. Servs.) to Provide for Subscription Television Serv., First Report, 23 F.C.C. 532 (1957); 22 Fed. Reg. 3758 (May 29, 1957) (notice of further proceedings).

in 1959.²⁸⁶ Instead, the FCC merely authorized it on an experimental basis,²⁸⁷ which eventually led to the deployment of a single STV station.²⁸⁸

When the FCC eventually authorized more widescale deployment in 1968, it saddled the technology with a wide range of restrictions. For example, the regulations limited STV to communities that received at least five broadcast signals²⁸⁹ and required that STV stations broadcast at least twenty-eight hours of advertiser-supported programming each week.²⁹⁰ In addition, the FCC subjected STV to a complicated array of programming restrictions designed to ensure that STV did not siphon programming from conventional broadcast television. Specifically, the FCC generally prohibited STV from broadcasting movies that were between two and ten years old (thereby limiting STV to offering movies that were very new or very old),²⁹¹ prohibited STV from carrying any sporting event that had been carried on conventional television within the last two years,²⁹² required that movies and sporting events together not comprise more than ninety percent of STV's total programming schedule,²⁹³ prohibited STV from carrying any television series that normally appeared on conventional broadcasting,²⁹⁴ and prohibited STV from including any commercial advertisements.²⁹⁵

The FCC eventually liberalized the rules relating to movies to exempt foreign language films, to allow movies to be shown for up to three years after their release rather than two, and to allow for the broadcast of a greater number

²⁸⁶ Amendment of Part 3 of the Comm'n's Rules & Regulations (Radio Broad. Servs.) to Provide for Subscription Television Serv., Third Report, 26 F.C.C. 265 (1959).

²⁸⁷ *Id.* at 265-66.

²⁸⁸ See Application of Hartford Phonevision Co. for Authority to Conduct Trial Subscription Television Operations over Station WHCT, Hartford, Conn., Report & Decision, 30 F.C.C. 301 (1961), *aff'd sub nom.* Conn. Comm. Against Pay TV v. FCC, 301 F.2d 835 (D.C. Cir.), *cert. denied*, 371 U.S. 816 (1962).

²⁸⁹ Amendment of Part 73 of the Comm'n's Rules & Regulations (Radio Broad. Servs.) to Provide for Subscription Television Serv., Fourth Report & Order, 15 F.C.C.2d 466, 507 ¶ 128, 518-19 ¶¶ 165-67 (1968), *aff'd sub nom.* Nat'l Ass'n of Theatre Owners v. FCC, 420 F.2d 194 (D.C. Cir. 1969), *cert. denied*, 397 U.S. 922 (1970).

²⁹⁰ *Id.* at 525-26 ¶¶ 190-92.

²⁹¹ The rules made an exception when conventional broadcasters had been offered and refused those movies. *Id.* at 508 ¶ 131, 556-57 ¶¶ 285-87, 569-71 ¶¶ 325-31.

²⁹² *Id.* at 508-09 ¶ 132, 558-64 ¶¶ 289-305.

²⁹³ *Id.* at 564 ¶ 306.

²⁹⁴ *Id.* at 509 ¶ 132, 565 ¶ 309.

²⁹⁵ *Id.* at 565 ¶ 310.

of films that were more than ten years old.²⁹⁶ The FCC also eliminated the prohibition of series programming.²⁹⁷ Finally, following the 1977 judicial invalidation of the parallel restrictions on pay cable discussed below,²⁹⁸ the FCC eventually repealed the program restrictions on STV.²⁹⁹ Repeal of the regulations requiring particular programming and limiting STV to markets in which five or more broadcast channels were available followed four years later.³⁰⁰

These deregulatory efforts were greeted by some initial growth in the STV market³⁰¹ and a flurry of ambitious pronouncements about STV's future.³⁰² By this time, however, cable had emerged as a multi-channel platform for pay television, and the window of opportunity for STV had closed. By 1986, only one or two STV stations were still in operation.³⁰³

b. Cable Television

The FCC also attempted to preserve advertising-supported television by imposing burdensome regulations on cable. As noted above, the FCC imposed stringent regulations on cable programming that required payment of a per-program or per-channel fee, only to see those restrictions invalidated by the D.C. Circuit.³⁰⁴ In addition, the must-carry, distant signal importation, network nonduplication, and syndicated exclusivity rules discussed above³⁰⁵

²⁹⁶ Amendment of Part 76, Subpart G of the Comm'n's Rules & Regulations Pertaining to the Cablecasting of Programs for Which a Per Program or Per Channel Charge Is Made, First Report & Order, 52 F.C.C.2d 1, 51 ¶¶ 165-66, 53-55 ¶¶ 172-77 (1975).

²⁹⁷ *Id.* at 65 ¶ 209.

²⁹⁸ The seminal judicial decision was *Home Box Office, Inc. v. FCC*, 567 F.2d 9, 28-51 (D.C. Cir.) (per curiam), *cert. denied*, 434 U.S. 829 (1977).

²⁹⁹ Repeal of Programming Restrictions on Subscription Television, Report & Order, 43 Fed. Reg. 15,322 (Apr. 7, 1978).

³⁰⁰ Amendment of Part 73 of Comm'n's Rules & Regulations in Regard to Section 73.642(a)(3) & Other Aspects of the Subscription Television Serv., Third Report & Order, 90 F.C.C.2d 341 (1982).

³⁰¹ *See id.* at 344 ¶ 8.

³⁰² *See, e.g.,* Stern et al., *supra* note 283, at 534; Laurence H. Winer, *The Signal Cable Sends—Part I: Why Can't Cable Be More Like Broadcasting?*, 46 MD. L. REV. 212, 254 & n.186 (1987).

³⁰³ *See* Subscription Video, Report & Order, 2 F.C.C.R. 1001, 1005 (1987).

³⁰⁴ Amendment of Part 74, Subpart K of Comm'n's Rules & Regulations Relative to Cmty. Antenna Television Sys., Memorandum Opinion & Order, 23 F.C.C.2d 825, 828-29 ¶ 6 (1970). These rules were ultimately vacated by the D.C. Circuit. *See Home Box Office, Inc. v. FCC*, 567 F.2d 9, 28-51 (D.C. Cir.) (per curiam), *cert. denied*, 434 U.S. 829 (1977).

³⁰⁵ *See supra* notes 189-201 and accompanying text.

were motivated in large part by a desire to prevent those who are unable or unwilling to pay for television service from being deprived of it.³⁰⁶

One of the most explicit endorsements of this position appeared in the legislative findings accompanying the 1992 Cable Act. These findings asserted that broadcasting programming “is otherwise free to those who own television sets” and that there is a “substantial government interest in promoting the continued availability of such free television programming, especially for viewers who are unable to afford other means of receiving programming.”³⁰⁷ Without must-carry, “the economic viability of free local broadcast television . . . w[ould] be seriously jeopardized.”³⁰⁸

The Supreme Court relied on these findings in upholding must-carry against constitutional attack.³⁰⁹ The Court specifically concluded that “Congress’s overriding objective in enacting must-carry was . . . to preserve access to free television programming for the 40 percent of Americans without cable”³¹⁰ and “to ensure that every individual with a television set can obtain access to free television programming.”³¹¹ The Court’s ruling that “‘protecting noncable households from loss of regular television broadcasting service due to competition from cable systems’ is an important federal interest”³¹² left little room for doubt that the desire to preserve free television represented one of the central forces animating federal cable policy.

³⁰⁶ See Cable Television Syndicated Program Exclusivity Rules, Report & Order, 79 F.C.C.2d 663, 744 ¶ 185 (1980), *aff’d sub nom. Malrite T.V. of N.Y. v. FCC*, 652 F.2d 1140 (2d Cir. 1981), *cert. denied*, 454 U.S. 1143 (1982); Amendment of Subpart L, Part 91 to Adopt Rules & Regulations to Govern Grant of Authorizations in Bus. Radio Serv. for Microwave Stations to Relay Television Signals to Cmty. Antenna Sys., Second Report & Order, 2 F.C.C.2d 725, 788-89 ¶ 155 (1966); Amendment of Subpart L, Part 11, to Adopt Rules & Regulations to Govern the Grant of Authorizations in Bus. Radio Serv. for Microwave Stations to Relay Television Signals to Cmty. Antenna Systems, First Report & Order, 38 F.C.C. 683, 699 ¶ 44, 700 ¶ 48(1) (1965).

³⁰⁷ Cable Television Consumer Protection and Competition Act of 1992, Pub. L. No. 102-385, § 2(a)(12), 106 Stat. 1460, 1461 (codified as amended at 47 U.S.C. § 521 (2000)).

³⁰⁸ § 2(a)(16), 106 Stat. at 1462.

³⁰⁹ See *Turner Broad. Sys., Inc. v. FCC*, 520 U.S. 180, 191 (1997); *Turner Broad. Sys., Inc. v. FCC*, 512 U.S. 622, 646 (1994).

³¹⁰ *Turner*, 512 U.S. at 646; see also *Turner*, 520 U.S. at 190; *Turner*, 512 U.S. at 663.

³¹¹ *Turner*, 512 U.S. at 647.

³¹² *Id.* at 663 (quoting *Capital Cities Cable, Inc. v. Crisp*, 467 U.S. 691, 714 (1984)); accord *Turner*, 520 U.S. at 190 (reaffirming this finding).

c. DBS

The preservation of free television has also shaped the way that policymakers have regulated DBS. For example, the initial refusal to allow the importation of distant signals reflected in the SHVA of 1988 stemmed in large part from the need to preserve free over-the-air television.³¹³ As one of the Committee Reports noted,

Free local over-the-air television stations continue to play an important role in providing the American people information and entertainment. The Committee is concerned that changes in technology, and accompanying changes in law and regulation, do not undermine the base of free local television service upon which the American people continue to rely.³¹⁴

Congress expressed similar sentiments when enacting the SHVIA in 1999. As the Conference Report noted, the carry one, carry all provision was “intended to preserve free television for those not served by satellite or cable systems” and to further “Congress’ interest in maintaining free over-the-air television.”³¹⁵ The Fourth Circuit repeatedly invoked this legislative history in sustaining the SHVIA against constitutional attack³¹⁶ and concluded that the carry one, carry all rule “was designed to preserve a rich mix of broadcast outlets for consumers who do not (or cannot) pay for subscription television services.”³¹⁷

d. Digital Broadcasting

The commitment to free television also played a role in the way that the FCC has deployed digital television. For example, the FCC has repeatedly justified the importance of deploying digital television through broadcasting rather than other television services on the grounds that broadcasting, unlike subscription services, represents a “free” service that is available to almost all

³¹³ H.R. REP. NO. 100-887(II), at 26 (1988), *reprinted in* 1988 U.S.C.C.A.N. 5638, 5655.

³¹⁴ *Id.*

³¹⁵ H.R. CONF. REP. NO. 106-464, at 101 (1999); *accord* S. REP. NO. 106-51, at 1 (1999) (recognizing that the purpose of the legislation was “protecting the availability of free, local over-the-air television”); *id.* at 13 (finding that “maintaining free over-the-air-television is a preeminent public interest” and identifying “protecting the viability of free, local, over-the-air television” as one of the statute’s purposes).

³¹⁶ *See* *Satellite Broad. & Communications Ass’n v. FCC*, 275 F.3d 337, 349, 351, 356 (4th Cir. 2001).

³¹⁷ *Id.* at 350.

U.S. households.³¹⁸ Although Congress and the FCC authorized digital broadcasters to offer STV and other forms of pay television, they could do so only if they provided at least one over-the-air video program signal at no direct charge to viewers³¹⁹ and if such services did not derogate from the provision of free television services.³²⁰ The FCC also required digital broadcasters to pay additional spectrum fees if any of the spectrum was used for pay television.³²¹ The FCC based these regulations on indicia in the legislative history suggesting that Congress wanted new television services and technologies to be provided under the leadership of the existing local television broadcasting system, which is available to all citizens and not only those who can afford subscription services.³²²

Finally, concerns about preserving free television have also animated the FCC's proceedings regarding the extension of the must-carry rules to digital programming. As the FCC has noted, both the transition to digital television and the imposition of must-carry on analog broadcasters share the common purpose of ensuring "the continued availability of free over-the-air broadcast service."³²³ As a result, the FCC sought comment on the impact that the various forms of digital must-carry under consideration would have on this

³¹⁸ Advanced Television Sys. & Their Impact upon Existing Television Broad. Serv., Fifth Report & Order, 12 F.C.C.R. 12,809, 12,811-12 ¶ 5, 12,820 ¶¶ 27-29 (1997) [hereinafter DTV Fifth Report & Order]; Advanced Television Sys. & Their Impact on Existing Television Broad. Serv., Fifth Further Notice of Proposed Rule Making, 11 F.C.C.R. 6235, 6249 ¶ 36 (1996); Advanced Television Sys. & Their Impact upon the Existing Television Broad. Serv., Second Report & Order & Further Notice of Proposed Rulemaking, 7 F.C.C.R. 3340, 3342 ¶ 4 (1992); Advanced Television Sys. & Their Impact on the Existing Television Broad. Serv., Tentative Decision & Further Notice of Inquiry, 3 F.C.C.R. 6520, 6525 ¶¶ 38-39 (1988); *see also* Advanced Television Sys. & Their Impact upon Existing Television Broad. Serv., Fourth Report & Order, 11 F.C.C.R. 17,771, 17,787-88 ¶ 33 (1996) (noting that the goals of digital television deployment include preserving a free, universal broadcasting service); Advanced Television Sys. & Their Impact on Existing Television Broad. Serv., Memorandum Opinion & Order, Fourth Further Notice of Proposed Rulemaking & Third Notice of Inquiry, 10 F.C.C.R. 10,540, 10,541 ¶ 6, 10,543 ¶ 22 (1995) (same).

³¹⁹ 47 C.F.R. § 73.624(b) (2002). The resolution of this signal must be comparable to or better than current analog service. DTV Fifth Report & Order, 12 F.C.C.R. at 12,812 ¶ 7, 12,820 ¶ 28.

³²⁰ 47 U.S.C. § 336(b)(2) (2000); DTV Fifth Report & Order, 12 F.C.C.R. at 12,820-22 ¶¶ 29-32.

³²¹ 47 U.S.C. § 336(e)(1); DTV Fifth Report & Order, 12 F.C.C.R. at 12,823 ¶ 35. The FCC later set this fee at five percent of gross revenues received from ancillary and supplementary uses. Fees for Ancillary or Supplementary Use of Digital Television Spectrum Pursuant to Section 336(e)(1) of Telecomms. Act of 1996, Report & Order, 14 F.C.C.R. 3259 (1998) (codified at 47 C.F.R. § 73.624(g) (2002)).

³²² *See* S. REP. NO. 104-23, at 9 (1995).

³²³ Carriage of Transmissions of Digital Broad. Stations, Notice of Proposed Rulemaking, 13 F.C.C.R. 15,092, 15,114-15 ¶ 43 (1998) (citing Cable Television Consumer Protection and Competition Act of 1992, Pub. L. No. 102-385, § 2(a)(12), 106 Stat. 1460, 1461; and H.R. REP. NO. 102-628, at 27 (1992)).

service.³²⁴ When the time came to issue the First Report and Order in the *Digital Must-Carry* proceedings, the FCC tentatively concluded that the governmental interests underlying digital must-carry, which included “preserving the benefits of free over-the-air local broadcast television,” did not justify requiring cable operators to transmit all of the program streams offered by digital broadcasters.³²⁵ The conclusion was tentative because the FCC believed that the record before it was not sufficiently complete to determine the impact that refusing to provide dual carriage would have on broadcast stations, cable operators, cable programmers, and consumers. As a result, the FCC sought further comments on the extent to which imposing dual carriage would further the governmental interests underlying must-carry, including “the preservation of the benefits of free over-the-air television.”³²⁶ However the FCC finally decides to resolve this issue, it is clear that the commitment to preserving free television will play a key role in shaping the outcome.

2. *The Inefficiency of Untargeted Subsidies*

U.S. television policy has thus been shaped in no small part by a desire to preserve free television. The most commonly asserted reason is to make sure that Americans have access to television without regard to the ability to pay. A system that attempts to ensure access to television by providing it to every household without regard to means would seem to be poor policy. It is far from clear that an economic case can be made to support the claim that people should be entitled to receive access to any particular type of communications for free. Consumers place a high value on many other types of media, including newspapers, books, and the Internet, and yet no one expects to be provided with those materials without paying for them.³²⁷

Indeed, because governmental interventions to promote free television have the inevitable effect of skewing demand away from other activities, supporters of free television must justify why society should subsidize the consumption of television programming rather than the consumption of other media. If anything, it is arguable that doing so draws citizens away from other types of

³²⁴ *Id.*

³²⁵ Carriage of Digital Television Broad. Signals, First Report & Order & Further Notice of Proposed Rulemaking, 16 F.C.C.R. 2598, 2600 ¶ 3 (2001); *accord id.* at 2648 ¶ 113.

³²⁶ *Id.*

³²⁷ See Winer, *supra* note 302, at 253; Yoo, *supra* note 117, at 353-54.

information sources that would be far more effective in improving the quality of the processes of democratic self-governance.³²⁸

In any event, even those who support promoting the ability of all households to obtain access to television should agree that adopting regulatory policies that in effect render television free for all households without regard to the ability to pay represents a distinctly inefficient way to preserve the viewing options of the poor. As I have noted elsewhere, providing low-income households with discounts for pay television services in the manner currently used to promote indigent access to telephone service should promote access to television far more efficiently than the system of implicit cross-subsidies currently employed, which effectively lowers the price of television for all households regardless of ability to pay.³²⁹ Had policymakers opted to auction this spectrum rather than give it away, it would have likely generated more than enough revenue to support a telephone-style direct subsidy program aimed at low-income households.³³⁰

More important for the purposes of this Article is the fact that the analytical framework developed above indicates that promoting free television exacts an even greater price by reducing the quantity, quality, and diversity of programming available on television. The problems are twofold. First, reliance on advertising support interposes an intermediary into the economic relationship between viewers and the networks that interferes with viewers' ability to signal their true preferences to the networks. Second, advertising support limits the networks' ability to set prices at levels that maximize total surplus.

³²⁸ Indeed, promoting "free" access to television may well be stimulating excess consumption of television programming. If so, the predominant role that television plays in contemporary society may be the consequence of regulation rather than an empirical fact that should be remedied through regulation. For a general discussion of this problem, see Yoo, *supra* note 117, at 342-44.

³²⁹ See Ross C. Ericksson et al., *Targeted and Untargeted Subsidy Schemes: Evidence from Postdivestiture Efforts to Promote Universal Telephone Service*, 41 J.L. & ECON. 477, 481-82 (1998) (reporting empirical study finding targeted subsidies to be five times more effective than untargeted subsidies); Yoo, *supra* note 117, at 354-55.

³³⁰ See Yoo, *supra* note 117, at 354-55.

3. *Distortions Resulting from Allowing Advertisers to Serve as Intermediaries*

One problem associated with relying entirely on broadcast television is the limitation it places on the viewers' ability to signal the intensity of their preferences to program providers. In a normal market, consumers who place a particularly high value on a good can use their willingness to pay high prices for that good to communicate that fact to the networks. The availability of such price signals allows products that are only able to capture small volumes to generate revenues substantial enough to cover all of the fixed and variable costs needed to produce the product. So long as their willingness to pay is high enough, even extremely small audiences can use price signals to obtain the programming that they seek.

Reliance on advertising support interferes with consumers' ability to send such price signals.³³¹ In a system of advertising support, one would expect advertisers to increase their advertising spending until the marginal cost of placing additional ads equals the marginal revenue generated by those ads. In short, the level of advertising spending (and thus the revenue generated by the networks through advertising support) depends on the return to advertising.³³² Although the returns to advertising are primarily a function of audience size,³³³ they also depend on demographic characteristics, such as income, age, gender, and geographic location.³³⁴ Although these factors may reveal a great deal about whether a person who sees an advertisement will purchase the advertised product, they say little about the value that viewer places on the underlying

³³¹ Timothy J. Brennan, *Economic Efficiency and Broadcast Content Regulation*, 35 FED. COMM. L.J. 117, 128 (1983); Timothy J. Brennan, *The Fairness Doctrine as Public Policy*, 33 J. BROAD. & ELEC. MEDIA 419, 432-33 (1990).

³³² Minasian, *supra* note 31, at 75.

³³³ The conventional wisdom is well captured by the testimony offered during the *Turner* remand staling, "Simply put, a television station's audience size directly translates into revenue—large audiences attract larger revenues, through the sale of advertising time." *Competitive Issues in the Cable Television Industry: Hearing Before the Subcomm. on Antitrust, Monopolies and Bus. Rights of the Senate Comm. on the Judiciary*, 100th Cong., 2d Sess. 526-27 (1988) (statement of Gary Chapman), *quoted in* *Turner Broad. Sys., Inc. v. FCC*, 520 U.S. 180, 208 (1997); *accord Turner*, 520 U.S. at 208-09 (citing empirical research confirming the "direct correlation between size in audience and station advertising revenues") (alterations and internal quotations omitted).

³³⁴ See Franklin M. Fisher et al., *The Audience-Revenue Relationship for Local Television Stations*, 11 BELL J. ECON. 694, 694 (1980).

program.³³⁵ One would not expect advertising revenue to represent an accurate reflection of viewers' aggregate desire to view a particular network. Although it is theoretically possible that this difference could cause advertising support to generate either too much or too little revenue when compared to actual intensity of preferences, an oft-cited empirical study estimated that advertising support understated viewers' willingness to pay by a factor of seven.³³⁶

The point can be illustrated by returning to the airline example. Reliance on advertising support to finance television would be tantamount to financing flights between particular cities solely through the purchases of goods advertised in the airline's in-flight shopping magazine and perhaps during periodic presentations during the flight. The interposition of such an indirect pricing mechanism would no doubt cause the total amount of revenue generated through such sales to underestimate the value that passengers placed on the transportation services between those cities.

The indirectness of the revenue signal is exacerbated still further given that advertising support provides viewers with only a single degree of freedom with which to respond to viewing, i.e., either purchasing or not purchasing the advertised product.³³⁷ Like all voting models, this has the effect of depriving people of the ability to signal the intensity of their preferences.³³⁸ As a result, viewers with a particularly strong desire for a particular type of programming have no way to signal that fact to program producers.

The inability to derive greater revenue from those viewers with the most intense preferences increases the break-even audience size required for a network to generate sufficient revenue to cover its fixed costs. This flattening of viewers' ability to influence the behavior of program producers thus has the

³³⁵ See Inquiry into the Dev. of Regulatory Policy in Regard to Direct Broad. Satellites for the Period Following 1983 Regional Admin. Radio Conference, Report & Order, 90 F.C.C.2d 676, 681-82 ¶ 17 (1982); Spence & Owen, *supra* note 7, at 105, 123.

³³⁶ NOLL ET AL., *supra* note 258, at 23. Although some have criticized the magnitude of this estimate, none has controverted the fundamental conclusion that consumers are willing to pay far more for television than are advertisers. See Rolla Edward Park, *New Television Networks: An Update*, in 1 FCC NETWORK INQUIRY SPECIAL STAFF, NEW TELEVISION NETWORKS 143, 149 & n.2 (1980) [hereinafter NEW TELEVISION NETWORKS] (citing Stanley M. Besen & Bridger M. Mitchell, *Economic Analysis and Television Regulation*, 5 BELL J. ECON. & MGMT. SCI. 301 (1974); and Bryan Ellickson, *Hedonic Theory and the Demand for Cable Television*, 69 AM. ECON. REV. 183 (1979)).

³³⁷ See Minasian, *supra* note 31, at 75; Spence & Owen, *supra* note 7, at 112 & n.12.

³³⁸ See Oakland, *supra* note 20, at 528.

greatest impact on networks that seek to offer programming that is intensely preferred by a relatively small segment of the audience. Thus, reliance on advertising support is likely to reinforce and worsen the bias against special interest programs identified earlier.³³⁹ The indirectness of this signaling is also likely to impact most severely those networks catering to the audiences who are least likely to respond to advertising messages, such as networks offering children's education television, because it is with respect to those networks that responsiveness to advertising and the willingness to pay (in this case the parents' willingness to pay) are likely to diverge the most.³⁴⁰ A shift to pay television would similarly allow parents to have access to larger amounts of educational programming for their children in the most straightforward way imaginable. It is no accident that much of the best children's educational programming on commercial television appears on cable.³⁴¹ To the extent that quality is correlated with the total amount spent on program production, the shortfall in revenue also causes the quality of television programming to decline as well.

Reliance on advertising support also introduces another source of bias by allowing advertisers to introduce their own biases into program selection. A number of scholars have suggested that reliance on advertising support has allowed advertisers to discourage programming that addresses controversial issues or that casts their products in a poor light.³⁴² Although these scholars concede that this evidence is anecdotal,³⁴³ they nonetheless believe that it is representative of a broader pattern of underproduction of certain types of television programming.

Both of these effects are demonstrated dramatically by HBO, which is generally regarded as the premier pay television service. The ability to signal intensity of preference through direct payments allows HBO to generate one half the revenue of CBS even though its prime time audience is over five times

³³⁹ Spence & Owen, *supra* note 7, at 112-13, 122-23; *see also* Chae & Flores, *supra* note 126, at 50-51.

³⁴⁰ *See* Policies & Rules Concerning Children's Television Programming, Report & Order, 11 F.C.C.R. 10,660, 10,675 ¶¶ 32-33 (1996).

³⁴¹ *See* Yoo, *supra* note 117, at 327-28.

³⁴² *See* BAKER, *supra* note 6, at 48, 54-56, 62-66; BAKER, *supra* note 7, at 24-30; SUNSTEIN, *supra* note 6, at 63-65; Steven Shiffrin, *The Politics of the Mass Media and the Free Speech Principle*, 69 IND. L.J. 689, 696-713 (1994).

³⁴³ BAKER, *supra* note 6, at 49; CASS R. SUNSTEIN, *THE PARTIAL CONSTITUTION* 216 (1993).

smaller.³⁴⁴ In addition, in sharp contrast to the difficulties that broadcasters faced in generating enough advertising to support their decisions to air programs on abortion,³⁴⁵ HBO faced little trouble in carrying a documentary on the same subject. A similar scenario played out with respect to the planned CBS miniseries *The Reagans*. After controversy about the way that the former President and First Lady were portrayed threatened to erupt into an advertiser boycott, Viacom opted to shift the program from CBS to Showtime, a premium movie channel that does not depend on advertising support.³⁴⁶ The key difference is, of course, that unlike advertising-supported television, the economic survival of pay television does not depend upon assuaging sponsors. As one HBO executive explained, "We're not any braver than the networks. It's just that our economic basis is different."³⁴⁷

It is thus likely that previous efforts to promote and preserve free television may have had the perverse effect of reducing the total resources available to fund television programming. Some rough empirical studies from the 1970s suggest that the reduction in resources will reduce the overall quantity and diversity of programming produced.³⁴⁸ A pair of recent event studies comparing the demand and revenue generated by similar television programs financed by pay-per-view and by advertising support largely confirm that pay television appears to be considerably more effective at enabling program producers to capture a greater percentage of the available surplus. Both studies concluded that shifting programs to pay-per-view would tend to cause total output to increase.³⁴⁹ The study that framed the issue in terms of total surplus also concluded that a shift to pay television transferred surplus from consumers to producers while simultaneously causing the total revenue and total surplus

³⁴⁴ See *25 Top Television Networks*, BROADCASTING & CABLE, Nov. 27, 2000, at 54.

³⁴⁵ SUNSTEIN, *supra* note 6, at 65; Shiffrin, *supra* note 342, at 698.

³⁴⁶ See Meg James et al., *The Vetoing of "Reagans": How Protests and Bad Timing Led CBS to Cancel a Movie About the Former First Couple*, L.A. TIMES, Nov. 10, 2003, at E1; Emily Nelson & Joe Flint, *CBS Pulls "Reagans" amid Opposition from Conservatives*, WALL ST. J., Nov. 5, 2003, at A3.

³⁴⁷ Jan Hoffman, *TV Shouts "Baby" (and Barely Whispers "Abortion")*, N.Y. TIMES, May 31, 1992, at H1, quoted in Shiffrin, *supra* note 342, at 698.

³⁴⁸ Spence and Owen offer an empirical calculation indicating that reliance on advertising support is preventing the emergence of a fourth television network. Spence & Owen, *supra* note 7, at 118-19. This is despite the fact that other studies indicated that sufficient demand existed to support up to six networks. See *supra* note 258 and accompanying text.

³⁴⁹ See Hansen & Kyhl, *supra* note 126, at 590, 601, 604; Steinar Holden, *Network or Pay-Per-View?: A Welfare Analysis*, 43 ECON. LETTERS 59, 62-64 (1993).

generated to increase.³⁵⁰ As a result, reliance on pay television made possible the production of programming that would not have existed had advertising support represented the only option. Although one should take caution before generalizing from this result,³⁵¹ it does add support for the position that a shift to pay television would be welfare enhancing. The resulting increase in the surplus captured by producers lacks distributional implications, because free entry will dissipate any such profits and will increase consumer benefits in terms of increased product diversity.

Economic theory and available empirical evidence would thus seem to indicate that removing the existing bias in favor of advertising support would allow television markets to come closer to the optimum. When these considerations are combined with the difficulties that arise when advertisers are allowed to act as intermediaries in the economic relationship between viewers and the networks and the problems associated with calibrating subsidies discussed above,³⁵² a powerful argument emerges against any attempt to favor either advertising-supported television or pay television. Simply allowing the networks' attempts to maximize their profits resolves questions about the best way to maximize total surplus.

Although some scholars have proposed retaining the system of advertising support and redressing these imperfections through targeted subsidies,³⁵³ a number of considerations would seem to make such a solution unrealistic. First, given that advertising support tends to understate overall demand for programming, any such subsidy would be massive. In addition, an earlier discussion emphasized that anyone attempting to figure out how to allocate such subsidies to particular programs would need an unmanageably large amount of information concerning the utility that every person would derive

³⁵⁰ Hansen & Kyhl, *supra* note 126, at 590, 601, 604. The results of the other study are thus consistent, concluding that a shift to pay television caused total revenue to increase and caused consumer surplus to decrease. The key difference is that this study looked only at the impact on consumer surplus without going on to consider the effect on total surplus. See Holden, *supra* note 349, at 62-64.

³⁵¹ It should be noted that both studies focused on a single event and involved sports programming (specifically boxing matches) that may not be generalizable to other types of programming.

³⁵² See *supra* notes 44-46, 342-43 and accompanying text.

³⁵³ See BAKER, *supra* note 7, at 98-99, 115-17; SUNSTEIN, *supra* note 6, at 84-88.

from each network as well as all of the substitution effects.³⁵⁴ Lastly, such an intervention may raise serious First Amendment problems.³⁵⁵

The more straightforward solution would be the elimination of the FCC's current preference for advertising-supported television over pay television. A shift to pay television would allow viewers to employ the conventional economic mechanism for signaling to the networks that preferences for particular networks are not uniform and that certain networks are particularly popular with smaller segments of the total audience. Using prices thus allows smaller audience segments with particularly strong preferences to support programming that would not meet the minimum audience size required for economic viability under advertising support. Although some degree of bias against special interest programming would remain, it will be less severe than the bias that exists under advertising support.³⁵⁶

This is not to say that advertising-supported television will disappear. It is conceivable that what would result is a mix of some networks that rely solely on direct payments, other networks that rely solely on advertising support, and still other networks that offer a mix of the two. The eventual market could end up looking much like the current environment for printed newspapers, in which some charge for subscriptions and contain little advertising, others are given away free of charge and survive solely on advertising, and some depend on both subscription and advertising revenue. Allowing such mixed regimes risks reintroducing the problems associated with permitting advertisers to serve as intermediaries. Such problems, however, should not prove insuperable so long as advertising represents a relatively small percentage of total revenues, as seems to be the case with pay television.³⁵⁷

C. Windowing as a Form of Price Discrimination: Protecting Incumbents vs. Promoting New Entrants and New Technologies

The third policy commitment that has informed federal policy since the earliest days of the television industry is the willingness to protect incumbents

³⁵⁴ See *supra* notes 44-46 and accompanying text.

³⁵⁵ Spence & Owen, *supra* note 7, at 112-13, 122-23.

³⁵⁶ Spence, *Product Selection*, *supra* note 49, at 234; Spence & Owen, *supra* note 7, at 234.

³⁵⁷ See John E. Lopatka & Michael G. Vita, *The Must-Carry Decisions: Bad Law, Bad Economics*, 6 SUP. CT. ECON. REV. 61, 96 (1998) (citing data indicating that local advertising represents less than five percent of the typical cable operator's total revenue).

from the economic dislocation and disruption caused by the appearance of new entrants and new television technologies.³⁵⁸ At times this commitment appears to be nothing more than an incidental byproduct of policymakers' attempts to favor local content and advertising-supported television technologies. That cannot be said in all cases, however. All too often, policymakers have regarded shielding the television industry from the disruption caused by competitive entry as an independent regulatory justification. Subsection 1 traces the extent to which this has been true in the regulation of conventional broadcasting, cable television, DBS, and digital broadcasting. Subsection 2 describes the problems that this commitment poses from the standpoint of competition policy. Subsection 3 explains how favoring incumbents over new entrants and new technologies creates inefficiencies by reducing the ability to price discriminate.

1. *The Regulatory Commitment to Incumbents*

a. *Analog Broadcasting*

The commitment to protect incumbents against the arrival of new entrants and new technologies first became evident in the FCC's spectrum management policies. At the risk of some oversimplification, it is useful to think of spectrum management as consisting of two separate functions.³⁵⁹ The first function is a determination of how much spectrum will be allocated to a particular service and how its frequencies will be partitioned. The second function focuses on identifying those to whom the blocks of frequencies established by the first function will be licensed.

The preference for incumbents is manifest in the way that the FCC has managed both of these functions. Turning first to the second function, during the thirty-year period following the D.C. Circuit's decision in *Carroll Broadcasting Co. v. FCC*,³⁶⁰ protection of incumbents served as one of the de

³⁵⁸ In addition to protecting broadcasting from competition by new media, the FCC limited the competition within broadcasting by pursuing policies that prevented the entrance of additional television stations. See Yoo, *supra* note 117, at 272-74.

³⁵⁹ This taxonomy is a modified version of the categories described in STUART MINOR BENJAMIN ET AL., TELECOMMUNICATIONS LAW AND POLICY 62-64 (2001).

³⁶⁰ 258 F.2d 440, 443 (D.C. Cir. 1958). Although *Carroll Broadcasting* involved a radio license, the FCC extended the same principles to television licensing as well. See, e.g., *WLVA, Inc. v. FCC*, 459 F.2d 1286 (D.C. Cir. 1972); *Southwestern Operating Co. v. FCC*, 351 F.2d 834 (D.C. Cir. 1965). The FCC ultimately

facto criteria used by the FCC when deciding whether to issue a new television license, as the FCC required that applicants for new licenses prove that their entry would not inflict so much harm to incumbent broadcast stations as to force them to stop providing service. Similar considerations applied to license renewals. The dominant consideration in license renewals was the "renewal expectancy," which extended a preference to incumbent broadcasters that provided meritorious service in the past.³⁶¹ Although the FCC based its decision in part on justifications that carry a great deal of economic credibility,³⁶² it also relied on the more questionable justification that

abandoned the *Carroll* doctrine in 1988. Policies Regarding Detrimental Effects of Proposed New Broadcast Stations on Existing Stations, Report & Order, 3 F.C.C.R. 638, 639-41 ¶¶ 10-25 (1988). In so ruling, the FCC recognized that "the *Carroll* doctrine may have the undesired effect of providing existing licensees with an anticompetitive tool to delay the entry of new stations." *Id.* at 640 ¶ 14.

³⁶¹ The FCC initially attempted to codify the renewal expectancy in 1970 in order to quell industry reaction to its decision not to renew an incumbent broadcaster the previous year. See *WHDH, Inc.*, 16 F.C.C.2d 1, *reconsideration denied*, 17 F.C.C.2d 856 (1969), *aff'd sub nom.* Greater Boston Television Corp. v. FCC, 444 F.2d 841 (D.C. Cir. 1970), *cert. denied*, 403 U.S. 923 (1971). The 1970 Policy Statement gave a renewal applicant a "controlling preference" if it could demonstrate substantial past performance without serious deficiencies. Policy Statement Concerning Comparative Hearings Involving Regular Renewal Applicants, 22 F.C.C.2d 424 (1970), *rev'd sub nom.* Citizens Communications Ctr. v. FCC, 447 F.2d 1201 (D.C. Cir. 1971). Despite the fact that it had previously recognized that "legitimate renewal expectancies [were] implicit in the structure of the Act," *Greater Boston Television Corp.*, 444 F.2d at 854, the D.C. Circuit struck down the 1970 Policy Statement, ruling that precedent prevented the FCC from elevating the renewal expectancy into an irrebuttable presumption in favor of the incumbent. *Citizens Communications Ctr.*, 447 F.2d at 1210-14. A later attempt to base a renewal expectancy upon average past performance similarly failed. *Cowles Fla. Broad., Inc.*, 62 F.C.C.2d 953 (1977) (on reconsideration), *rev'd sub nom.* Cent. Fla. Enters., Inc. v. FCC, 598 F.2d 37, 57-58 (D.C. Cir. 1978), *cert. dismissed*, 441 U.S. 957 (1979). The FCC subsequently revised its position to make the renewal expectancy simply one of several factors weighed in a comparative hearing, with the weight accorded to it varying with the quality of the service rendered. *Cowles Fla. Broad., Inc.*, 86 F.C.C.2d 993 (1981). This time, the D.C. Circuit upheld the FCC's actions. *Central Fla. Enters. v. FCC*, 683 F.2d 503 (D.C. Cir. 1982), *cert. denied*, 468 U.S. 1084 (1983). For overviews of the twists and turns on the road to the establishment of the renewal expectancy, see ERWIN G. KRASNOW ET AL., *THE POLITICS OF BROADCAST REGULATION* 206-32 (3d ed. 1982); Levi, *supra* note 173, at 253-69 (1996); and Jonathan Weinberg, *Broadcasting and Speech*, 81 CAL. L. REV. 1101, 1120-24 (1993).

³⁶² The FCC based its decision in part on the fact that applicants often make paper promises that they are ultimately unable or unwilling to keep, thereby recognizing that moral hazard problems surround any process that distributes licenses and does not require applicants to make any upfront investments. It also acknowledged that strengthening the nature of the property interest conveyed by the license would provide licensees with better incentives to make efficient levels of investment. *Cowles Fla. Broad., Inc.*, 86 F.C.C.2d at 1013 ¶ 62(1)-(2). For a discussion of the economic benefits flowing from strengthening the property rights held by broadcast licensees, see Christopher S. Yoo, *Beyond the Coasean Critique of Broadcast Regulation* (unpublished manuscript, on file with author).

comparing applicants as equals “could lead to a haphazard restructuring of the broadcast industry.”³⁶³

The preference for incumbents is also reflected in the way that the FCC has allocated and partitioned-off the amount of spectrum devoted to television broadcasting.³⁶⁴ For example, the allocation principles followed by the FCC when first setting aside spectrum for television had the effect of ensuring that most communities would have access to no more than three television stations.³⁶⁵ Because of the inherent cost advantages resulting from networking,³⁶⁶ this regulatory decision had the effect of entrenching the triopoly of broadcast networks that dominated the first thirty years of the broadcast industry, because it ensured that a fourth network would be able to reach no more than sixty-four percent of the national audience with a technically comparable signal.³⁶⁷ In so ruling, the FCC rejected a proposal submitted by the nascent DuMont Network that would have made entry by a fourth network possible.³⁶⁸ Although the FCC based this rejection in part on the localism concerns discussed above,³⁶⁹ it also based its decision in part on the ground that the DuMont plan would have disrupted the then-emerging system of broadcasting by requiring some incumbent broadcasters to shift channel positions, which would in turn force them to abandon some of their investments in their existing facilities.³⁷⁰

The FCC took the same approach when managing the spectrum allocated to UHF television. The FCC had recognized since the earliest days of the television industry that the amount of spectrum available in the VHF band is insufficient to support a competitive national television service and that the best long-range solution was for television to reside entirely in the UHF

³⁶³ *Cowles Fla. Broad., Inc.*, 86 F.C.C.2d at 1013 ¶ 62(3).

³⁶⁴ For additional discussion of this dynamic, see Yoo, *supra* note 117, at 272-74.

³⁶⁵ See Amendment of Section 3.606 of Comm'n's Rules & Regulations, Sixth Report & Order, 41 F.C.C. 148, 148-53 ¶¶ 1-18 (1952).

³⁶⁶ See *supra* Part II.C.

³⁶⁷ 1 NEW TELEVISION NETWORKS, *supra* note 336, at 68 tbls.8-9. A fifth network would reach less than forty-one percent of the country. *Id.*

³⁶⁸ The DuMont plans would have increased the population receiving four or more channels to nearly ninety-five percent and increased the percentage of the population receiving technically comparable signals to ninety-three percent—levels that would have greatly increased the feasibility of a fourth network. See Schuessler, *supra* note 171, at 891, 921-26, 929 tbl.10, 938-39 & tbl.16.

³⁶⁹ See *supra* notes 257-63 and accompanying text.

³⁷⁰ Schuessler, *supra* note 171, at 909-10.

band.³⁷¹ When widescale deployment of UHF became technologically feasible, however, the FCC declined to follow through with its plan to shift all incumbent VHF broadcasters to UHF on the grounds that doing so would force incumbent broadcasters and purchasers of television sets to abandon their investments in existing equipment.³⁷² Instead, the FCC opted to “intermix” VHF and UHF stations into the same geographic markets, a decision which caused irreparable harm to UHF stations. The problem is that UHF television has technical characteristics that make it difficult for it to compete directly with VHF. The decision to protect incumbent broadcasters thus caused UHF to fail as a television service for more than a quarter century.³⁷³

The same preference for incumbent broadcasters and technologies was reflected in the FCC’s reluctance to allow for more intensive use of the VHF spectrum. For example, the FCC resisted all attempts to allow VHF “drop-ins” made possible by relaxing the geographic spacing normally required of VHF television stations.³⁷⁴ In addition, the FCC has consistently refused to reallo-

³⁷¹ See Second Report on Deintermixture, 13 Rad. Reg. (P&F) 1571, 1577-78 ¶ 18 (1956); Third Notice of Further Proposed Rule Making, 16 Fed. Reg. 3072, 3074 (Apr. 6, 1951); Allocation of Frequencies to Various Classes of Non-Governmental Servs. in Radio Spectrum from 10 Kilocycles to 30,000,000 Kilocycles, 39 F.C.C. 68, 129-30 (1945); Public Release, 39 F.C.C. 16, 16 (1939); see also *United States v. Southwestern Cable Co.*, 392 U.S. 157, 174 (1968) (“[T]he Commission has held that an appropriate system of local broadcasting may be created only if . . . significantly wider use [is] made of the available ultra-high-frequency channels.”).

³⁷² See H.R. REP. NO. 85-1297, at 76 (noting testimony of FCC Commissioner Hyde that the refusal to reallocate television stations to the UHF band stemmed from “the fact that these stations were constructed, the investments made, [and] the public accustomed to listening to them”). This decision also stands in stark contrast to the FCC’s near-contemporaneous willingness to strand investments in equipment made by broadcasters and listeners of FM radio by requiring the entire service to shift to a different portion of the spectrum. See Thomas W. Hazlett, *The Wireless Craze, the Unlimited Bandwidth Myth, the Spectrum Auction Faux Pas, and the Punchline to Ronald Coase’s “Big Joke”: An Essay on Airwave Allocation Policy*, 14 HARV. J.L. & TECH. 335, 410-11 (2001); Schuessler, *supra* note 171, at 910-11. The two decisions can be reconciled when one notes that in each case the FCC’s decisions favored the incumbent broadcast networks.

³⁷³ For a more detailed review of these events, see Yoo, *supra* note 117, at 273-74.

³⁷⁴ See Channel Assignments at Sub-Standard Spacings, 13 Rad. Reg. (P&F) 1598, 1601 (1957); Second Report on Deintermixture, 13 Rad. Reg. (P&F) 1571, 1575 (1956). In 1961, the FCC announced that it would entertain specific drop-in requests on an ad hoc basis. Interim Policy on VHF TV Channel Assignments, 21 Rad. Reg. (P&F) 1695, 1695 (1961). It soon abandoned this policy, however. VHF Drop-Ins, 25 Rad. Reg. (P&F) 1687, 1687 (1963). The only subsequent attempt to revive the drop-in policy was quickly abandoned. *Compare* *St. Anthony Television Corp.*, 2 Rad. Reg. 2d (P&F) 348, 348-49 (1964) (authorizing a VHF drop-in in Baton Rouge, La.), *remanded sub nom.* *La. Television Broad. Corp. v. FCC*, 347 F.2d 808 (D.C. Cir. 1965), *with* *St. Anthony Television Corp.*, 8 F.C.C.2d 294 (1967) (abandoning the drop-in proposal). Thereafter, the FCC only granted drop-in requests in “highly unusual circumstances.” Amendment of Section 73.606(b), Table of Allotments, Television Broad. Stations (Pueblo, Colo.), Report & Order, 10 F.C.C.R. 7662, 7666-67

cate vacant television allocations to commercial service, notwithstanding the fact that hundreds of those allocations have never been economically viable and have lain fallow for decades.³⁷⁵

The only significant broadening of the spectrum allocated to broadcast television was the initiation of low power television (LPTV) service in 1982.³⁷⁶ Although the FCC promoted the deployment of LPTV by exempting it from many of the restrictions applicable to full power broadcasters,³⁷⁷ it ensured that the interests of incumbent broadcasters would predominate by designating LPTV as a “secondary service” that would have to cease operation whenever it interfered with the reception of full power stations.³⁷⁸ Widescale deployment of LPTV was further hamstrung by a series of administrative missteps, obstruction by full power broadcasters,³⁷⁹ and the failure to accord LPTV

¶ 23 (1995) (citing Petition for Rulemaking to Amend Television Table of Assignments to Add New VHF Stations in Top 100 Mkts. & to Assure that New Stations Maximize Diversity of Ownership, Control & Programming, Report & Order, 81 F.C.C.2d 233 (1980)), *vacated sub nom.* Sangre De Cristo Communications v. FCC, 139 F.3d 953 (D.C. Cir. 1998). The FCC once again revived VHF drop-ins in 1980 only to terminate the proceedings a decade later without taking any action. Compare Notice of Proposed Rule Making, 83 F.C.C.2d 51 (1980), with Table of Television Channel Allotments, Order, 5 F.C.C.R. 398 (1990). For reviews of the early history of VHF drop-ins, see BESEN ET AL., *supra* note 118, at 17-18, and Glen O. Robinson, *The Making of Administrative Policy: Another Look at Rulemaking and Adjudication and Administrative Procedure Reform*, 118 U. PA. L. REV. 485, 533 & n.190 (1970).

³⁷⁵ See, e.g., Amendment of Section 73.606, Table of Assignments, Television Broad. Stations (Ogden, Utah), Report & Order, 44 Fed. Reg. 25,253, 25,253-54 (Apr. 30, 1979); Amendment of Section 73.606, Table of Assignments, Television Broad. Stations (Ogden, Utah), Memorandum Opinion & Order, 26 F.C.C.2d 142 (1970). See generally Deletion of Noncommercial Reservation of Channel *16, 482-88 MHz, Pittsburgh, Pa., Memorandum Opinion & Order, 11 F.C.C.R. 11,700, 11,708 ¶ 18 (1996) (noting that the FCC has never eliminated a noncommercial allotment, even when vacant or proven not to be economically viable).

³⁷⁶ See Inquiry into the Future Role of Low Power Television Broad. & Television Translators in the Nat'l Telecomms. Sys., Final Rule, 47 Fed. Reg. 21,468 (May 18, 1982) [hereinafter LPTV Final Rule]. LPTV broadcast at only three kilowatts of power on VHF frequencies and 150 kilowatts on UHF frequencies, which typically gives them a range of fifteen to twenty miles. Full power television stations, in contrast, can transmit up to 316 kilowatts of power on VHF and 5000 kilowatts on UHF, which gives them a range of up to eighty miles. For further discussion of LPTV, see *supra* notes 177-79 and accompanying text.

³⁷⁷ LPTV was exempt from the ascertainment and local programming requirements applicable to full service television, because the limited coverage area would make LPTV inherently responsive to local needs. LPTV Final Rule, 47 Fed. Reg. at 21,491 ¶ 106. It also was exempt from many of the ownership restrictions imposed on fullpower broadcasters, including the limits on the number of stations that fullpower broadcasters can own nationwide and the “duopoly” and the “one-to-a-market” rules, which restrict the number and types of stations that any one licensee can operate within any geographic area. *Id.* at 21,487-89 ¶¶ 83-95.

³⁷⁸ Inquiry into Future Role of Low Power Broad. & Television Translators in the Nat'l Telecomms. Sys., Notice of Proposed Rule Making, 82 F.C.C.2d 47, 49-50 ¶¶ 6-7 (1980).

³⁷⁹ Specifically, the FCC rejected all applications that were not “complete and sufficient,” which was a standard that was considerably more stringent than the “substantially complete” standard applied to full-power

stations full must-carry rights.³⁸⁰ LPTV finally began to flourish after 1994 when the FCC at last removed many of the procedural obstacles that had been restricting the development of LPTV,³⁸¹ only to be devastated by the FCC's decision to displace a multitude of LPTV stations in order to deploy digital television by doubling the amount of spectrum given for free to all incumbent, full-power broadcasters.³⁸² The effect of these presumptions was to forgo the benefits of competition and to place a premium on industry stability for its own sake.

b. Cable Television

The desire to protect incumbents also determined the FCC's response to the emergence of cable television. After initially declining to assert jurisdiction over cable, the FCC subsequently decided to hamstring the cable industry with the series of regulations described at length above.³⁸³ Although enactment of these restrictions arose partly from the desire to preserve and promote locally oriented content and the availability of free television, the FCC also justified these regulations in part by the need to protect television broadcasting in general, and the weaker UHF stations in particular, from competition with this

broadcasters. LPTV Final Rule, 47 Fed. Reg. at 21,481 ¶ 51. The FCC also confused the public by assigning LPTV stations five-digit call signs composed of both letters and numerals instead of the traditional four-letter call signs used by full-power television stations. *Id.* at 21,490 ¶ 97. See generally Andrew J. Kersey, Comment, *Low Power Television in 1994: Outgrowing its Secondary Status*, 3 COMMLAW CONSPECTUS 53, 55-56 (1995).

³⁸⁰ See 47 U.S.C. § 534(h)(2)(B) (2000) (requiring LPTV stations to establish that their programming "would address local news and informational needs which are not being adequately served by full power broadcast stations" before receiving free carriage). The irony is that LPTV and must-carry were both animated by the desire to promote the core policies of localism, diversity of information sources, and competition in an adequate manner. If those concerns had been taken more seriously, one might have expected Congress to accord greater protection to LPTV than to conventional broadcasting rather than less, because LPTV stations were supposedly more likely to promote the statute's stated goals.

³⁸¹ Review of Comm'n's Rules Governing Low Power Television Serv., First Report & Order, 9 F.C.C.R. 2555 (1994).

³⁸² See *Advanced Television Sys. & Their Impact Upon Existing Television Broad. Serv.*, Sixth Report & Order, 12 F.C.C.R. 14,588, 14,595 ¶ 11 (1997). Congress subsequently mitigated the impact of the digital television rollout on LPTV by passing legislation in 1999 creating new "Class A" LPTV licenses that no longer had to yield to full-power stations. In order to qualify for a Class A license, the LPTV must have broadcast for a minimum of eighteen hours per day, including an average of three hours or more per week of locally produced programming, during the ninety-day period preceding the enactment of the statute. 47 U.S.C. § 336(f)(2)(A)(i); see also *Establishment of Class A Television Serv.*, Report & Order, 15 F.C.C.R. 6355 (2000) (implementing the statute).

³⁸³ See *supra* Parts III.A.1.b, III.B.1.b.

upstart technology. For example, in the seminal decision in which the FCC asserted jurisdiction over cable television, the FCC denied an application for a microwave facility to distribute cable television programming in part because the additional competition threatened to inflict economic harm on a local TV station.³⁸⁴ Although the FCC explicitly disavowed any intention of protecting existing investments against new technological advances,³⁸⁵ it repeatedly prevented the importation of distant signals out of concern that allowing cable operators to do so would hurt incumbent broadcasters (UHF stations in particular)³⁸⁶ and would jeopardize the basic structure of over-the-air television.³⁸⁷ As FCC Chairman Dean Burch candidly admitted in 1971, the FCC had interpreted its public interest mandate to include the short-term “protectionism for over-the-air broadcasting” against incursions by cable television.³⁸⁸ The irony is that cable would ultimately prove to be UHF’s savior, because cable transmission is what finally allowed UHF stations to achieve technical parity with VHF stations.³⁸⁹

Congress expressed similar considerations in the findings that accompanied the 1992 Cable Act, which emphasized the importance of protecting broadcasters’ ability to continue to provide certain services.³⁹⁰ As the Supreme Court ultimately concluded, the must-carry provisions “are designed to

³⁸⁴ Carter Mountain Transmission Corp., 32 F.C.C. 459, 464-65 (1962).

³⁸⁵ Amendment of Subpart L, Part 91 to Adopt Rules & Regulations to Govern Grant of Authorizations in Bus. Radio Serv. for Microwave Stations to Relay Television Signals to Cmty. Antenna Sys., Second Report & Order, 2 F.C.C.2d 725, 788 ¶ 155 (1966).

³⁸⁶ See *id.* at 782 ¶ 141; CATV First Report & Order, 38 F.C.C. 683, 700 ¶ 48(I) (1965).

³⁸⁷ Amendment of Part 74, Subpart K of Comm’n’s Rules & Regulations Relative to Cmty. Antenna Television Sys., Cable Television Report & Order, 36 F.C.C.2d 143, 164 ¶ 58 (1972), *aff’d sub nom.* ACLU v. FCC, 523 F.2d 1344 (9th Cir. 1975).

³⁸⁸ *Cable Antenna Television (CATV): Hearing Before the Subcomm. on Communications & Power of the House Comm. on Interstate and Foreign Commerce*, 92d Cong., 1st Sess. 34 (1971); accord *Community Antenna Television Problems, Hearings Before the Subcomm. on Communications of the Sen. Comm. on Commerce*, 92d Cong., 1st Sess. 94 (1971), quoted in Stanley M. Besen, *The Economics of the Cable Television “Consensus,”* 17 J.L. & ECON. 39, 40-41 (1974).

³⁸⁹ See Rolla Edward Park, *Cable Television, UHF Broadcasting, and FCC Regulatory Policy*, 15 J.L. & ECON. 207 (1972).

³⁹⁰ Cable Television Consumer Protection and Competition Act of 1992, Pub. L. No. 102-385, § 2(a)(10), 106 Stat. 1460, 1461 (codified as amended at 47 U.S.C. § 521 (2000)) (finding a substantial government interest in “ensuring [the] continuation” of the local origin of programming provided by broadcasters); § 2(a)(12), 106 Stat. at 1461 (finding a substantial government interest in “promoting the continued availability of . . . free television programming”); see also § 2(a)(11), 106 Stat. at 1461 (finding that broadcasters “continue to be an important source of local news and public affairs programming”).

guarantee the survival of a medium that has become a vital part of the Nation's communication system."³⁹¹ In enacting them, "Congress sought to preserve the existing structure of the Nation's broadcast television medium while permitting the concomitant expansion and development of cable television."³⁹²

c. DBS

The desire to protect the economic interests and the existing structure of the broadcast industry has also shaped the regulation of DBS. Most notable are the restrictions on the ability of DBS providers to carry programming from the major broadcast networks. As noted earlier, the SHVA, which Congress enacted in 1988, prohibited satellite carriers from carrying broadcast signals (including, most importantly, signals provided by the major broadcast networks such as ABC, CBS, and NBC), unless the household was unable to receive such programming over the air. Congress based these restrictions explicitly on the need to promote "the public interest in protecting the network-affiliate distribution system."³⁹³ In addition, the SHVA prohibited the transmission of broadcast signals to any households that had received network television via cable within the previous ninety days,³⁹⁴ further insulating cable against the emergence of DBS.

This commitment to protecting broadcast television was still evident when Congress passed the SHVIA in 1999, which imposed the carry one, carry all requirement on satellite carriers.³⁹⁵ The available legislative history indicates that Congress enacted these provisions in order "to hew as closely . . . as

³⁹¹ *Turner Broad. Sys., Inc. v. FCC*, 512 U.S. 622, 647 (1994).

³⁹² *Id.* at 652; *accord* *Turner Broad. Sys., Inc. v. FCC*, 520 U.S. 180, 193 (1997) (quoting the same language).

³⁹³ H.R. REP. NO. 100-887(II), at 19-20 (1988), *reprinted in* 1988 U.S.C.C.A.N. 5638, 5648; *accord id.* at 20, *reprinted in* 1988 U.S.C.C.A.N. at 5649; H.R. REP. NO. 100-887(I), at 8, 14 (1988), *reprinted in* 1988 U.S.C.C.A.N. 5577, 5611, 5617. Congress added a further level of regulation to DBS in 1992 by subjecting DBS providers to the same political access requirements that applied to broadcasters and instructing the FCC to consider how DBS could best serve the principle of localism. 47 U.S.C. § 335(a) (2000). It also required DBS operators to set aside four to seven percent of its channel capacity for noncommercial programming of an educational or informational nature. *Id.* § 335(b)(1). The D.C. Circuit rejected a facial challenge to these regulations in *Time Warner Entertainment Co. v. FCC*, 93 F.3d 957, 310-14 (D.C. Cir. 1996).

³⁹⁴ Trademark Law Revision Act of 1988, Pub. L. No. 100-667, § 202(2), 102 Stat. 3935, 3957 (enacting 17 U.S.C. § 119(d)(10)(B)), *repealed by* Consolidated Appropriations Act, Pub. L. No. 106-113, app. I, § 1005(a)(1), 113 Stat. 1501, 1501A-527 (1999) (codified at 17 U.S.C. § 119(d)(10) (2000)).

³⁹⁵ *See supra* notes 216-20 and accompanying text.

possible” to the existing structure of broadcast networks.³⁹⁶ The SHVIA did eliminate the provision that created a ninety-day waiting period for DBS customers who currently subscribed to cable.³⁹⁷

d. Digital Broadcasting

Finally, policymakers’ commitment to favoring incumbents over new entrants and new technologies is reflected in the decision, made initially by the FCC and later endorsed by Congress, to deploy digital television by giving each incumbent station an additional television channel.³⁹⁸ Invoking a rationale strikingly reminiscent of the policies favored by then-Secretary of Commerce Herbert Hoover and the Federal Radio Commission during the nascent days of the radio industry,³⁹⁹ the FCC contended that current broadcasters were important sources of relevant expertise and experience and thus were in the best position to assure a prompt and orderly transition to digital broadcasting.⁴⁰⁰ Even more problematically, the FCC stressed the need to avoid the disruption associated with a change in the ownership structure of the broadcast industry.⁴⁰¹ The FCC declined to revisit this decision even after it explicitly recognized that digital broadcasters could transmit SDTV in

³⁹⁶ H.R. CONF. REP. NO. 106-464, at 92 (1999); *accord* S. REP. NO. 106-42, at 10 (1999); *see also* H.R. REP. NO. 106-79(1), at 13 (1999) (noting that the DBS must-carry requirement was crafted so as to “protect the traditional network-affiliate relationship”); *see also* Implementation of Satellite Home Viewer Improvement Act of 1999: Broad. Signal Carriage Issues, Report & Order, 16 F.C.C.R. 1918, 1925 ¶ 13 (2001) (observing that Congress enacted the DBS must-carry requirement in part to “preserve free over-the-air broadcasting”).

³⁹⁷ Consolidated Appropriations Act, Pub. L. No. 106-113, app. I, § 1005(a)(1), 113 Stat. 1501, 1501A-527 (1999) (codified at 17 U.S.C. § 119(d)(10) (2000)).

³⁹⁸ *See supra* notes 227-33 and accompanying text.

³⁹⁹ Hoover and the Federal Radio Commission made experience and expertise major licensing considerations, in his case by emphasizing the importance of adequate financial backing and previous broadcast experience. It goes without saying that such considerations have the inexorable effect of favoring incumbents over new entrants. *See* KRATTENMAKER & POWE, *supra* note 128, at 22.

⁴⁰⁰ *See* Advanced Television Sys. & Their Impact upon Existing Television Broad. Serv., Notice of Proposed Rulemaking, 6 F.C.C.R. 7024, 7025 ¶ 6 (1991) [hereinafter DTV Impact]; Advanced Television Sys. & Their Impact on the Existing Television Broad. Serv., Tentative Decision & Further Notice of Inquiry, 3 F.C.C.R. 6520, 6537-38 ¶¶ 136-37 (1988) [hereinafter DTV Tentative Decision]; *see also* Advanced Television Sys. & Their Impact upon the Existing Television Broad. Serv., Second Report & Order & Further Notice of Proposed Rulemaking, 7 F.C.C.R. 3340, 6926 ¶ 2, 6930 ¶ 8 (1992) (reaffirming the decision to limit eligibility for digital television licenses to existing license holders) [hereinafter DTV Second Report & Order].

⁴⁰¹ *See* DTV Impact, 6 F.C.C.R. at 7025 ¶ 6; DTV Tentative Decision, 3 F.C.C.R. at 6537-38 ¶ 136-137; *see also* DTV Second Report & Order, 7 F.C.C.R. at 6926 ¶ 2, 6930 ¶ 8 (reaffirming the decision to limit eligibility for digital television licenses to existing license holders).

substantially less spectrum, again emphasizing the importance of ensuring an orderly transition.⁴⁰²

2. *An Aside on Competition Policy*

The decision to protect incumbents against incursions by new entrants and new technologies contradicts many of the most fundamental principles of competition policy. The most important problem that any regulatory authority can face is excessive horizontal concentration in a particular market. Although other regulatory responses exist, the best long-term solution to the problems resulting from such concentration is to encourage entry by new competitors.

This suggests that Congress and the FCC should instead be taking steps to encourage the emergence of new market entry and new media technologies. All too often, however, U.S. television policy has had the effect of frustrating such entry. Many of the key decisions made by Congress and the FCC have thus had the perverse effect of creating and preserving horizontal concentration rather than dissipating it.

In each instance, Congress and the FCC justified their actions on two grounds, neither of which can withstand analysis. The first is the desire to avoid short-term transitional costs.⁴⁰³ Needless to say, excessive concern over short-term losses to prevent the realization of sustainable long-term gains is incredibly short sighted, because the long-term benefits are almost certain to outweigh any short-term concerns.⁴⁰⁴ This result is rendered all the more unfortunate by the fact that the key decisions were made when the television industry was still in its infancy and the short-term transitional costs were still relatively low.⁴⁰⁵

The other justification is a desire to avoid disrupting the existing industry.⁴⁰⁶ Put simply, this justification is an economic non sequitur. As an

⁴⁰² Advanced Television Sys. & Their Impact upon Existing Television Broad. Serv., Fifth Report & Order, 12 F.C.C.R. 12,809, 12,814 ¶¶ 11-12 (1997); *see also* Advanced Television Sys. & Their Impact on Existing Television Broad. Serv., Memorandum Opinion & Order, Fourth Further Notice of Proposed Rulemaking & Third Notice of Inquiry, 10 F.C.C.R. 10,540, 10,541 ¶¶ 7-8, 10,545 ¶ 27 (1995).

⁴⁰³ *See supra* notes 370, 372, 401 and accompanying text.

⁴⁰⁴ Hazlett, *supra* note 161, at 164-65.

⁴⁰⁵ *See* Henry Geller, *A Modest Proposal for Modest Reform of the Federal Communications Commission*, 63 GEO. L.J. 705, 710-15 (1975).

⁴⁰⁶ *See supra* notes 363, 387, 396, 401 and accompanying text.

FCC working paper recognized, it is inevitable that the increased competition caused by the arrival of new television technologies would cause some television stations to exhibit distress and perhaps even cause some to fail.⁴⁰⁷ Protecting broadcasters against such economic forces inevitably deprived the marketplace of the benefits that are supposed to flow from competition. The price of adhering to this policy is likely to increase in the future. Indeed, such Schumpeterian “gales of creative destruction” may well represent the norm of competition in the digital age.⁴⁰⁸ As a result, any attempt to shield the television industry from such disruption simply blinks reality.

a. Analog Broadcasting

Consider first the structure of the television industry as it existed before the emergence of cable as the dominant means of transmission. During this era, policymakers regarded concentration at the wholesale (i.e., network) level of the chain of distribution to be the television industry’s central problem. As a result, over the years the FCC launched a series of initiatives designed to redress the dominance of the three major broadcast networks (ABC, CBS, and NBC),⁴⁰⁹ which in the 1970s commanded ninety percent of the prime time viewing audience.⁴¹⁰

The irony is that the dominant position of ABC, CBS, and NBC the FCC was attempting to redress was itself the creation of FCC policy.⁴¹¹ As noted earlier,⁴¹² the failure of a fourth network to emerge was largely a product of the FCC’s allocation policy and its hostility toward pay television. The FCC compounded this problem by adopting additional measures to reduce the

⁴⁰⁷ Florence Levy & Jonathan Setzer, *Broadcast Television in a Multichannel Marketplace*, 6 F.C.C.R. 3996, 4001, 4097-98 (OPP Working Paper No. 26, June 27, 1991).

⁴⁰⁸ See JOSEPH A. SCHUMPETER, *CAPITALISM, SOCIALISM AND DEMOCRACY* 84 (1942).

⁴⁰⁹ See, e.g., H.R. REP. NO. 85-1297 (1958) (reprinting the so-called “Barrow Report”); Amendment of Part 73 of Comm’n’s Rules & Regulations with Respect to Competitiveness & Responsibility in Network Television Broad., Report & Order, 23 F.C.C.2d 382 (1970), *aff’d sub nom.* Mt. Mansfield Television, Inc. v. FCC, 442 F.2d 470 (2d Cir. 1971); 1 NEW TELEVISION NETWORKS, *supra* note 336; see also FED. COMMUNICATIONS COMM’N, *supra* note 164, 30-34 (addressing the dominance of radio networks); 2 NEW TELEVISION NETWORKS, *supra* note 336, at 653-716 (describing antitrust actions brought against all three major broadcast networks in 1974).

⁴¹⁰ *Schurz Communications, Inc. v. FCC*, 982 F.2d 1043, 1046 (7th Cir. 1992).

⁴¹¹ For an earlier discussion of this problem, see Yoo, *supra* note 117, at 275-78.

⁴¹² See *supra* Part III.B.1.

networks' profitability.⁴¹³ These efforts were worse than useless, because limiting network revenues had two perverse effects. First, the artificial limits on network revenue depress investment in new programming, which in turn reduces the diversity of programming and starves the program producers of investment resources.⁴¹⁴ Second, reducing the profitability of network operations deters entry by new networks and thus tends to entrench the very network oligopoly that lies at the heart of the competitive problem.⁴¹⁵ The lessons are quite simple. Attempts to promote certain values through implicit cross-subsidies may actually have the unintended effect of entrenching the existing, uncompetitive market structure.

b. Cable

When cable television emerged as a technology, the relative scarcity of broadcast frequencies and the concomitant restrictions on channel capacity were generally regarded as one of the central regulatory challenges facing television.⁴¹⁶ As a result, one might have imagined that policymakers would have welcomed cable with open arms. Unfortunately, nothing could have been further from the truth. Even though cable television simultaneously eliminated the handicap in signal quality suffered by UHF and drastically expanded the channel capacity available to television viewers, the FCC initially responded to cable television with considerable hostility.⁴¹⁷

It was therefore not until cable made it possible for the networks to reach households without having to rely on local television stations for carriage that real network competition began to emerge. But rather than embrace cable as a solution to the inability of a fourth network to reach substantial portions of the country, the FCC instead chose to impede cable's emergence in the name of protecting incumbent (and particularly the weaker UHF) broadcasters.⁴¹⁸

⁴¹³ See Jim Chen, *The Last Picture Show (On the Twilight of Federal Mass Communications Regulation)*, 80 MINN. L. REV. 1415, 1454-58, 1499-500 (1996); Yoo, *supra* note 51, at 184-86, 217-18.

⁴¹⁴ *Schurz*, 982 F.2d at 1050-52.

⁴¹⁵ *Id.* at 1053; Chen, *supra* note 413, at 1457-58.

⁴¹⁶ For a more complete discussion of scarcity's role in shaping broadcast regulation, see Yoo, *supra* note 117, at 260, 262, 265-66.

⁴¹⁷ See *supra* notes 383-92 and accompanying text.

⁴¹⁸ See *supra* notes 386-89 and accompanying text.

In addition, the subsequent history raises serious doubts about the credibility of the FCC's justification for suppressing cable. Ironically, cable would ultimately prove to be UHF's savior, because cable transmission is what finally allowed UHF stations to achieve technical parity with VHF stations.⁴¹⁹ In retrospect, the idea that the FCC restricted the growth of the cable industry in order to protect UHF broadcasters appears ludicrous. In the end, true competition among television networks developed more from successful judicial challenges to the FCC's cable regulations⁴²⁰ than it did from FCC policies.

Although the advent of cable as the primary means for household distribution of television programming did alleviate the horizontal concentration of the wholesaling functions provided by the networks, it simultaneously increased the concentration of the retail distribution functions performed by the cable operator. Because of the large, up-front fixed costs associated with connecting entire neighborhoods with coaxial cable, policymakers believed that direct competition between cable television systems was impossible. Despite the existence of some evidence that this was not the case,⁴²¹ regulatory authorities began to undertake a series of steps that only served to entrench the monopoly. For example, municipal licensing authorities began to make the licenses issued to cable systems exclusive ones for the supposed reason that doing so would avoid the waste of resources associated with the establishment of duplicative networks.⁴²² Although Congress eventually passed legislation prohibiting the issuance of exclusive licenses,⁴²³ the practice has continued.

⁴¹⁹ See *supra* note 389 and accompanying text.

⁴²⁰ See, e.g., *Century Communications Corp. v. FCC*, 835 F.2d 292 (D.C. Cir. 1987), *cert. denied*, 486 U.S. 1032 (1988); *Quincy Cable TV, Inc. v. FCC*, 768 F.2d 1434 (D.C. Cir. 1985); *Home Box Office, Inc. v. FCC*, 567 F.2d 9, 28-51 (D.C. Cir.) (per curiam), *cert. denied*, 434 U.S. 829 (1977).

⁴²¹ See, e.g., Thomas W. Hazlett, *Private Monopoly and the Public Interest: An Economic Analysis of the Cable Franchise*, 134 U. PA. L. REV. 1335 (1986); Richard A. Posner, *The Appropriate Scope of Regulation in the Cable Television Industry*, 3 BELL J. ECON. 98 (1972). But see ALBERT K. SMILEY, ANTITRUST DIVISION, U.S. DEPT. OF JUSTICE, DIRECT COMPETITION AMONG CABLE TELEVISION SYSTEMS (EAG Paper No. 86-9, June 5, 1989); Oliver E. Williamson, *Franchise Bidding for Natural Monopolies—In General and with Respect to CATV*, 7 BELL J. ECON. 73 (1976).

⁴²² See Thomas W. Hazlett, *Duopolistic Competition in Cable Television: Implications for Public Policy*, 7 YALE J. ON REG. 65, 65-70 (1990).

⁴²³ 47 U.S.C. § 541(a)(1) (2000).

Such exclusivity terms appear to be useless at best. If cable truly were a natural monopoly, incumbent cable operators would have little fear that direct competition would emerge, because no rational company would try to enter the market. Even if entry were to occur, the resulting competition would create considerable, albeit temporary, benefits for consumers. In the absence of any constructive purpose, the only possible effect of such a restriction is to become a *de jure* barrier to entry that cannot be unjustified in terms of static efficiency.⁴²⁴ The imposition of legal restrictions on entry has implications for dynamic efficiency that may be even more important, because entry restrictions may frustrate investment in, and the emergence of, alternative network facilities that represent the only long-term solution to the problems of horizontal concentration. This effect is further exacerbated by the fact that such *de jure* restrictions may continue to exist long after technological developments have undercut the factors that caused policymakers to view the technology in question as a natural monopoly in the first place.⁴²⁵ Unfortunately, policymakers do not appear to have learned from their previous

⁴²⁴ See, e.g., ROBERT H. BORK, *THE ANTITRUST PARADOX* 159, 195-96 347-64 (1978); HERBERT HOVENKAMP, *FEDERAL ANTITRUST POLICY* § 12.6, at 530-31 (2d ed. 2000). See generally CARLTON & PERLOFF, *supra* note 23, at 679-82.

⁴²⁵ As Richard Posner observed:

Changes in technology may, over time, erode a natural monopoly. . . . Such developments would be hindered by the grant of long-term exclusive franchises to cable companies for the franchises would enlarge the cable companies' effective monopoly. What is more, since cable companies might not have monopoly power in the absence of government regulation, an exclusive franchise could create monopoly where none would otherwise exist.

RICHARD A. POSNER, *CABLE TELEVISION: THE PROBLEM OF LOCAL MONOPOLY* 15 (1970). Other scholars have offered similar thoughts. See STEPHEN BREYER, *REGULATION AND ITS REFORM* 286-87 (1982) ("[B]ecause regulation, once in place, is hard to dismantle, one would like to know whether future technological change is likely to transform an industry that is now a natural monopoly, making it structurally suited to competition."); 2 ALFRED E. KAHN, *THE ECONOMICS OF REGULATION* 127 (1971) ("In the presence of such rapid [technological] change, the natural monopoly of yesterday may be transformed into a natural area of competition today. . . ."); John C. Panzar & Robert D. Willig, *Free Entry and the Sustainability of Natural Monopoly*, 8 *BELL J. ECON.* 1, 21 (1977) (providing public policy analysis of free entry into a regulated natural monopoly should heed sustainability considerations). Posner similarly notes:

The most pernicious feature of regulation would appear to be precisely its impact on change—its tendency to retard the growth of competition that would erode the power of regulated monopolists. To embrace regulation because an industry is today a natural monopoly and seems likely to remain so is to game dangerously with the future. To impose regulation on the basis of a prophecy that the industry will remain monopolistic forever may be to make the prophecy self-fulfilling.

Richard A. Posner, *Natural Monopoly and Its Regulation*, 21 *STAN. L. REV.* 548, 636 (1969).

mistakes. As noted earlier, the commitment to these policies appears to be retarding the deployment of 3G wireless devices.⁴²⁶

c. DBS

The way that DBS is regulated also reflects the principle of favoring incumbents against competition from new entrants and new media technologies. As noted earlier, the dearth of facilities-based competition among alternative television providers has long represented one of the central problems in television policy. Viewed from this perspective, DBS represents something of a policy godsend. It has emerged as the first viable competitor to cable, having reached penetration levels identified as representing effective competition,⁴²⁷ and it is starting to impose price discipline on cable.⁴²⁸ DBS systems are also providing greater viewing options and innovative products.⁴²⁹ Even more important is the prospect of allowing rural areas to obtain access to multi-channel television and high-speed Internet service for the first time.⁴³⁰

Instead, policymakers have taken steps to stifle the development of DBS in order to protect the economic interests and the existing structure of the broadcast industry. The most egregious provision is the now-repudiated provision banning customers from subscribing to DBS if they had subscribed to cable within the past ninety days.⁴³¹ The most problematic constraint currently in force is the restriction on DBS providers' ability to carry programming from the major broadcast networks. As noted earlier, the SHVA, which Congress enacted in 1988, prohibited satellite providers from carrying broadcast signals, including the signals provided by the major broadcast networks (ABC, CBS, and NBC), unless the household was unable to receive such programming over the air. Congress based these restrictions explicitly on the need to protect existing broadcast stations,⁴³² while the ninety-day waiting

⁴²⁶ See *infra* Part IV.

⁴²⁷ See *supra* note 149 and accompanying text.

⁴²⁸ Implementation of Section 3 of Cable Television Consumer Protection & Competition Act of 1992, Report on Cable Industry Prices, 16 F.C.C.R. 4346, 4363 ¶ 48, 4364-65 ¶ 53 (2001).

⁴²⁹ Of particular note are DirecTV's sports packages. See DirecTV Programming and Channels, Sports Subscriptions, at <http://www.directv.com/DTVAPP/see/SportsSubscriptions.jsp> (last visited Dec. 10, 2003).

⁴³⁰ Yoo, *supra* note 51, at 257.

⁴³¹ See *supra* note 394 and accompanying text.

⁴³² See *supra* notes 393, 396 and accompanying text.

period served to protect cable.⁴³³ Although the SHVIA allowed satellite providers to begin to offer broadcast signals to all of its customers, it continued to prohibit distant signal importation and to subject satellite carriers to a wide variety of other restrictions designed to protect the incumbent broadcasters.⁴³⁴

d. Digital Broadcasting

Finally, the decision to deploy digital television by giving each incumbent an additional channel contradicts the fundamental economic principles of competition policy. The decision to double the amount of spectrum devoted to television without diversifying the ownership structure of the broadcast industry was one that stunned those who had long complained about the excessive concentration and lack of diversity in broadcast ownership.⁴³⁵ The fact that Congress and the FCC were able to do so without displacing a single other service came as a shock to those who lived through the protracted battles over attempts to squeeze in a handful of additional channels into the table of allocations⁴³⁶ as well as those who had long supported attempts to deconcentrate and diversify broadcast station ownership.⁴³⁷ Admittedly, some of the more intensive uses of the spectrum were made possible by the nature of the digital medium. That does not fully explain the FCC's ability to double the amount of spectrum given to the industry that is already the heaviest user of the electromagnetic spectrum. Indeed, the FCC itself acknowledged that many of the efficiencies resulted from improvements in receiver technology that had been available for quite some time, but had never before seemed sufficient to prompt the FCC to liberalize its licensing policies.⁴³⁸

Equally troublesome is the existence of other options that could have reduced the amount of spectrum needed to deploy digital television. The FCC could have adopted an HDTV format that required considerably less than six megahertz of spectrum.⁴³⁹ Moreover, the FCC could have favored

⁴³³ See *supra* note 394 and accompanying text.

⁴³⁴ See *supra* note 216-21, 395-97 and accompanying text.

⁴³⁵ See Thomas G. Krattenmaker, *The Telecommunications Act of 1996*, 29 CONN. L. REV. 122, 163-64 (1996).

⁴³⁶ See Glen O. Robinson, *Spectrum Property Law 101*, 41 J.L. & ECON. 609, 616 (1998).

⁴³⁷ See Krattenmaker, *supra* note 435, at 163-64.

⁴³⁸ See *supra* note 226 and accompanying text.

⁴³⁹ For example, the FCC rejected proposals supporting an HDTV format that would have required only three megahertz of spectrum. Advanced Television Sys. & Their Impact on Existing Television Broad. Serv.,

multicasting several streams of SDTV rather than a single stream of HDTV, which would have dramatically increased the number of voices in each market.⁴⁴⁰ Alternatively, the FCC could have reduced the amount of spectrum allocated to each incumbent broadcaster to that needed to transmit a single stream of SDTV. Doing so would have benefited consumers by freeing up substantial amounts of spectrum for other uses.

All of these implications raise serious doubts about the sincerity of the policy commitments supposedly espoused by Congress and the FCC. Indeed, there are significant indications that the decision to deploy digital television in this manner was driven by far baser motives. It has long been understood that the existing allocation of television stations creates substantial monopoly rents for incumbent broadcasters.⁴⁴¹ Broadcasters have been careful to protect their privileged position by opposing any regulatory reforms that would have dissipated these rents by allowing new entry or by allocating more spectrum to commercial broadcasting. The arrival of digital television threatened to upset the status quo. The only way that broadcasters could ensure that they would not lose their privileged position would be to ensure that digital television was deployed in a manner that allowed them to continue to receive their spectrum for free without increasing the number of channels available or the number of competing voices.

The FCC's approach to deploying digital television solved all of these problems. After years of being unable to justify permitting more intensive use of the available spectrum or reallocating spectrum from other uses when doing so would have hurt incumbent television stations,⁴⁴² the FCC was able to find sufficient spectrum within the bands already committed to television broadcasting to double the number of signals that could operate without interfering with one another. Restricting eligibility for those additional stations to current license holders ensured that no new entrants would gain access to broadcast facilities. And the emphasis on HDTV offered the promise of

Tentative Decision & Further Notice of Proposed Rulemaking, 3 F.C.C.R. 6520, 6531-32 ¶¶ 83-93 (1988).

⁴⁴⁰ See *supra* note 152 and accompanying text.

⁴⁴¹ See, e.g., HARVEY J. LEVIN, *FACT AND FANCY IN TELEVISION REGULATION* 115 (1980); R.H. Coase, *The Federal Communications Commission*, 2 J.L. & ECON. 1, 22-23 (1959); Herbert Hovenkamp, *Technology, Politics, and Regulated Monopoly: An American Historical Perspective*, 62 TEX. L. REV. 1263, 1277 (1984).

⁴⁴² See *supra* notes 364-82 and accompanying text.

ensuring that the transition to digital broadcasting would not cause a concomitant increase in the number of voices.

Under the standard public choice analysis, the regulated entities generate political support for this state of affairs by allowing policymakers to redirect a certain portion of the rents created in directions that they find politically beneficial.⁴⁴³ In this situation, the key television-related policy issues that concerned legislators arose around additional restrictions on indecent and violent programming, increased support for children's educational programming, and the provision of free air time for political candidates—matters that broadcasters had consistently opposed on First Amendment grounds.⁴⁴⁴ Just as the television industry's protracted lobbying campaign in favor of providing incumbent broadcasters with additional spectrum for free was about to come to fruition as part of the Telecommunications Act of 1996, it was placed in jeopardy by a bipartisan group led by Senate Majority Leader and Presidential candidate Bob Dole, who condemned the impending license giveaway as an unsupportable act of corporate welfare. This group held up the enactment of the 1996 Act until it was agreed that the FCC would not award any digital television licenses until Congress had enacted spectrum reform.

At this point, the broadcast industry began a series of high-level meetings during which, in the words of one FCC official, broadcasters began "tripping all over themselves to give up their First Amendment rights."⁴⁴⁵ A few days after Dole resigned from the Senate to campaign for the Presidency full time, the leadership in the House and Senate sent a letter to the FCC rescinding the Dole agreement. Significant concessions by the industry with respect to indecency and violence on television, children's educational programming, and candidate access soon followed. Congress eventually enshrined this final resolution in a provision of the Balanced Budget Act of 1997 explicitly forbidding the FCC from auctioning digital television licenses.⁴⁴⁶ The entire episode thus appears to be yet another example of how the regulations posing as remedies to the problems caused by barriers to entry in maintaining market

⁴⁴³ See, e.g., FRED S. MCCHESENEY, MONEY FOR NOTHING (1997).

⁴⁴⁴ For an earlier discussion of these events, see Yoo, *supra* note 117, at 352-53. See also Hazlett, *supra* note 181, at 564-67; Thomas W. Hazlett, *Physical Scarcity, Rent Seeking, and the First Amendment*, 97 COLUM. L. REV. 905, 938-43 (1997); Robinson, *supra* note 374, at 919.

⁴⁴⁵ Hazlett, *supra* note 444, at 942 (internal quotations omitted).

⁴⁴⁶ 47 U.S.C. § 309(j)(2)(B) (2000).

concentration are, in fact, revealed to be the means by which those anticompetitive structures are created and maintained.

Similar issues are raised by the principle against favoring incumbents over new entrants and new technologies. In this case, digital television is the new technology that promises to provide increasingly diverse services. From this perspective, it is arguable that policymakers should take steps to encourage its deployment, even when doing so would burden established players, such as cable operators.

3. *Windowing and Imperfect Price Discrimination*

Although the foregoing discussion focusing on competition policy provides sufficient reason to advocate abandoning policymakers' historic commitment to protecting television broadcasting against the emergence of horizontal competition, such arguments draw further support from the economic analysis that forms the heart of this Article. In addition to raising concerns relating to competition policy, the decision to deploy digital television through incumbent broadcasters is also somewhat problematic from the standpoint of public good economics in that it has also had the unfortunate effect of limiting the ability of the networks to price discriminate. Not only did the FCC's commitment to free television deprive consumers of the ability to signal differences in the intensity of their preferences, obstructing the emergence of new media also had the effect of frustrating a form of price discrimination known as "windowing."⁴⁴⁷ The best-known example of windowing occurs when a movie is initially released in first-run theaters, where prices are the highest. Eventually, the movie is re-released through a series of lower-revenue channels, including second-run theaters, pay-per-view on cable television, premium cable movie channels such as HBO and Showtime, prime-time network television, and then syndication.⁴⁴⁸ The available empirical studies confirm that the imperfect price discrimination made possible by release of television programs through both pay television and advertising-supported

⁴⁴⁷ For an overview, see OWEN & WILDMAN, *supra* note 78, at 26-38.

⁴⁴⁸ *Id.* at 29-30 & tbl.2.2; David E. Leibowitz, *The Sequential Distribution of Television Programming in a Dynamic Marketplace*, 34 CATH. U.L. REV. 671, 694-95 (1985); David Waterman, *Prerecorded Home Video and the Distribution of Theatrical Feature Films*, in VIDEO MEDIA COMPETITION, *supra* note 82, at 229-30 & fig.7.2.

television increases both the total revenues generated by the program and the total surplus.⁴⁴⁹

The ability to employ windowing as a form of price discrimination would thus appear to depend in part on the emergence of pay television and the ability to make direct charges for television programs, without which price discrimination would appear to be impossible. Windowing depends on the availability of different television technologies with different cost structures and different abilities to sort customers. It is thus conceivable that the emergence of additional media will allow for even finer segmentation of the market. For example, it is noteworthy that DBS has been able to offer programming that is not available on cable.⁴⁵⁰

That said, the primary way that the emergence of cable television appears to have facilitated price discrimination has more to do with its ability to serve as a platform for pay television than it does with the increased opportunities for windowing provided by the arrival of a new medium.⁴⁵¹ The similarity in the pay-per-view events, premium movie channels, and basic cable networks offered on cable and DBS also suggests that the additional benefits provided by the emergence of additional television technologies may be limited. Still, the possibility remains that the emergence of different media with different underlying cost structures and audiences may make new windows possible. In any event, the competitive concerns described above provide ample reason for encouraging the emergence of new media apart from public good economics.

It bears emphasizing that my point is not that policymakers should impose cross-subsidies to favor one type of television service over the other. My point is rather that policymakers should forgo imposing cross-subsidies running in either direction and should instead allow the marketplace to settle debates about the relative merits of the various technologies. This position thus counsels in favor of eliminating must-carry altogether or, failing that, to limit its scope as much as possible. It does not provide any support for imposing

⁴⁴⁹ Hansen & Kyhl, *supra* note 126, at 601-04.

⁴⁵⁰ See *supra* note 429 and accompanying text.

⁴⁵¹ See Hansen & Kyhl, *supra* note 126, at 603-04 (concluding that, although the imperfect price discrimination made possible by windowing did increase total surplus, that effect was small compared to the increases in total surplus made possible by the ability to charge direct payments to viewers).

dual carriage or for requiring cable operators to carry multiple program streams provided by digital broadcasters.

The question whether the FCC should reverse its current presumption and instead begin adopting policies that promote the emergence of new entrants and technologies at the expense of the incumbent players is somewhat more difficult. When horizontal markets are relatively concentrated, stimulating new entry would clearly create significant welfare gains. In addition, new entrants and new technologies frequently face different risk profiles and costs of capital than do established players, which may in turn make it difficult for them to compete on an equal footing. Although such considerations arguably support policies favoring new entrants and technologies at the expense of incumbents, I am somewhat chary of regulatory intervention in the process of picking technology winners and losers.⁴⁵² Thus, absent a more compelling demonstration that government intervention would be more effective at compensating for these shortcomings than would private ordering, I remain reluctant to reverse the presumption embodied in past FCC policy and believe the better policy is to allow the market to resolve the role that each technology will occupy in the end.

D. Bundling as a Form of Price Discrimination: Single-Channel vs. Multi-Channel Television

The fourth and final basic commitment that I believe has animated U.S. regulatory policy with respect to television has been a preference for single-channel technologies over multi-channel technologies. In many cases, this commitment has been an inadvertent side effect of policymakers' attempts to promote local content and advertising-supported television technologies by favoring broadcast television. In other cases, such as the deployment of digital television, the commitment has been quite conscious and explicit. My analysis suggests that the preference for single-channel television has exacerbated the welfare losses that arise in the market for television programming. As the discussion that follows explains, discouraging the development of multi-channel television options inhibits the ability of the program providers to use bundling to minimize the welfare losses through price discrimination.

⁴⁵² See Yoo, *supra* note 51, at 283-84.

1. *The Regulatory Commitment to Single-Channel Television*

The FCC's commitment to single-channel television over multi-channel television has long been implicit in its attempts described above to require cable television to cross-subsidize broadcast television.⁴⁵³ It is also implicit in the decision to require that DBS systems that wished to provide programming by the major broadcast networks carry all full-power local television stations broadcasting in that service area.⁴⁵⁴

The preference for single-channel over multi-channel television became most explicit during the debates surrounding the deployment of digital television. From 1987 until 1995, the FCC presumed that digital broadcasters would use their additional spectrum to simulcast a single stream of HDTV, which uses the greater efficiency of spectrum usage to double the number of vertical and horizontal lines used to comprise a television picture so that the picture quality approximates the resolution of thirty-five millimeter film.⁴⁵⁵

It has long been apparent, however, that rather than using the increased efficiency of spectrum to improve the resolution of television images, broadcasters could instead use the increased efficiency provided by digital transmission to multicast up to six streams of SDTV.⁴⁵⁶ Despite this fact, the FCC initially signaled its intention to adopt a simulcast HDTV system⁴⁵⁷ and

⁴⁵³ See *supra* notes 185-90, 305-06 and accompanying text.

⁴⁵⁴ See *supra* notes 217-22 and accompanying text.

⁴⁵⁵ DTV First Report & Order, 5 F.C.C.R. 5627, 5627 ¶ 1, 5628 ¶ 7 (1990); see also *Advanced Television Sys. & Their Impact on Existing Television Broad. Serv.*, Fifth Further Notice of Proposed Rule Making, 11 F.C.C.R. 6235, 6246 ¶ 28 (1996) [hereinafter DTV Fifth FNPRM]; *Advanced Television Sys. & Their Impact on Existing Television Broad. Serv.*, Memorandum Opinion & Order, Fourth Further Notice of Proposed Rulemaking & Third Notice of Inquiry, 10 F.C.C.R. 10,540, 10,542 ¶ 13, 10,544 ¶ 26, 10,547 ¶ 39, 10,553 ¶ 82 (1995) [hereinafter DTV Fourth FNPRM].

⁴⁵⁶ See *supra* note 152 and accompanying text. As noted earlier, even without any increase in resolution, SDTV would provide substantially higher picture quality than analog television. See *supra* note 225 and accompanying text.

⁴⁵⁷ DTV First Report & Order, 5 F.C.C.R. at 5627 ¶ 1, 5628 ¶ 7; accord *Advanced Television Sys. & Their Impact on the Existing Television Broad. Serv.*, Tentative Decision & Further Notice of Inquiry, 3 F.C.C.R. 6520, 6522 ¶¶ 10-12 (1988) (reporting that 1988 Interim Report of the Advisory Committee on Advanced Television Service concluded that "efforts should be focused on establishing an HDTV standard for terrestrial broadcasting" and suggested that digital SDTV options be considered only as solutions that might facilitate the transition from analog to HDTV); cf. DTV Fifth FNPRM, 11 F.C.C.R. at 6246 ¶ 28 (noting that prior to the emergence of the ATSC digital television standard in 1995, it was widely believed that digital television would be comprised of a single HDTV program stream).

took steps to discourage multicasting.⁴⁵⁸ Although the FCC eventually removed its bias against multicasting,⁴⁵⁹ congressional pressure forced digital broadcasters to abandon attempts to multicast and to commit instead to providing a single stream of HDTV.⁴⁶⁰ The FCC reinforced this conclusion by requiring digital television stations to simulcast on both their digital and analog stations during the last years of the transition to digital.⁴⁶¹ Furthermore, drawing on the recommendations of a prominent presidential advisory committee,⁴⁶² the FCC has requested comments on whether broadcasters who multicast should be required to bear additional public interest obligations or pay additional fees.⁴⁶³ The FCC raised a similar possibility in its proceeding regarding digital broadcasters' obligations with respect to children's television programming.⁴⁶⁴

There is one way that the FCC has deviated from its tendency to favor single-channel television technologies over multi-channel television technologies. In its *Digital Must-Carry* proceedings, the FCC determined that

⁴⁵⁸ See DTV First Report & Order, 5 F.C.C.R. at 5627 ¶ 1, 5629 ¶ 12 (ruling that resolution of the issues surrounding HDTV take priority over SDTV proposals); Advanced Television Sys. & Their Impact upon the Existing Television Broad. Serv., Second Report & Order & Further Notice of Proposed Rulemaking, 7 F.C.C.R. 3340, 3355-56 ¶¶ 58-60 (1992) (requiring that broadcasters simulcast the same programming on their analog and digital channels) [hereinafter DTV Second Report & Order].

⁴⁵⁹ DTV Fourth FNPRM, 10 F.C.C.R. at 10,541-42 ¶¶ 8-11, 10,544 ¶ 23, 10,546 ¶¶ 34-36, 10,547 ¶¶ 39-43; accord Advanced Television Sys. & Their Impact upon Existing Television Broad. Serv., Fourth Report & Order, 11 F.C.C.R. 17,771, 17,774 ¶ 5 (1996); DTV Fifth FNPRM, 11 F.C.C.R. at 6246 ¶ 28; DTV Fourth FNPRM, 10 F.C.C.R. at 10,541 ¶ 4; see also Advanced Television Sys. & Their Impact upon Existing Television Broad. Serv., Fifth Report & Order, 12 F.C.C.R. 12,809, 12,826-27 ¶¶ 41-44 (1997) (declining to require digital broadcasters to transmit a minimum number of hours of HDTV) [hereinafter DTV Fifth Report & Order].

⁴⁶⁰ Yochai Benkler, *Siren Songs and Amish Children: Autonomy, Information, and Law*, 76 N.Y.U. L. REV. 23, 99-100 (2001) (citing Joel Brinkley, *Under Pressure, 2 Broadcasters Decide They Will Now Run HDTV*, N.Y. TIMES, Sept. 18, 1997, at D1).

⁴⁶¹ See DTV Second Report & Order, 7 F.C.C.R. at 3355-57 ¶¶ 58-62 (initially requiring one hundred percent simulcasting); Advanced Television Sys. & Their Impact on Existing Television Broad. Serv., Memorandum Opinion & Order, Third Report & Order, & Third Further Notice of Proposed Rulemaking, 7 F.C.C.R. 6924, 6970-77 ¶¶ 64-70 (1992) (reaffirming one hundred percent simulcasting phased in over two years). The FCC retained its simulcast requirement even after it dropped its insistence that digital stations transmit a single stream of HDTV. DTV Fifth Report & Order, 12 F.C.C.R. at 12,832-33 ¶¶ 54-56 (retaining the simulcast requirement, but lengthening the phase-in period).

⁴⁶² GORE COMMISSION REPORT, *supra* note 230, at 55.

⁴⁶³ Pub. Interest Obligations of TV Broad. Licensees, Notice of Inquiry, 14 F.C.C.R. 21,633, 21,635-36 ¶ 6, 21,637-38 ¶¶ 10-11 (1999).

⁴⁶⁴ Children's Television Obligations of Digital Television Broadcasters, Notice of Proposed Rulemaking, 15 F.C.C.R. 22,946, 22,952-56 ¶¶ 15-24 (2000).

cable operators need not carry all of the program streams offered by digital broadcasters who choose to multicast. The FCC reasoned that the must-carry statute only requires cable operators to provide carriage of a broadcast station's "primary video."⁴⁶⁵ In the FCC's opinion, the plain meaning of the term "primary" and the legislative history both indicated that Congress intended the must-carry provision to apply only to a single program stream.⁴⁶⁶

2. *Bundling as a Form of Imperfect Price Discrimination*

As noted earlier,⁴⁶⁷ price discrimination offers the promise of bringing the supposedly conflicting considerations surrounding static and dynamic efficiency into alignment. It is now generally recognized that bundling represents one way to effect imperfect price discrimination.⁴⁶⁸ The seminal analyses focused on two-product bundles in which the demand for the bundled products was negatively correlated. In such cases, producers can use the consumer surplus associated with one of the products to fund the purchase of the other product, which in turn allows the producer to capture a greater percentage of the total surplus. The greater the negative correlation of reservation prices, the more likely that bundling will be profitable.⁴⁶⁹

This effect can be illustrated with a simple numerical example.⁴⁷⁰ Assume that a firm is offering two products to two buyers who both may want to purchase one or both of the products. The buyers' reservation prices are noted in Figure 12.

⁴⁶⁵ 47 U.S.C. § 534(b)(3) (2000).

⁴⁶⁶ Carriage of Digital Broad. Signals, First Report & Order & Further Notice of Proposed Rulemaking, 16 F.C.C.R. 2598, 2620-22 ¶¶ 54-57 (2001).

⁴⁶⁷ See *supra* Part 1.E.

⁴⁶⁸ For recent reviews of this literature, see Gregory S. Crawford, *The Discriminatory Incentives to Bundle* 2-4 (June 25, 2001), at <http://eller.arizona.edu/~crawford/research/bundling.html>, and Barry Nalebuff, *Bundling* 1-5 (Yale ICF Working Paper No. 99-14, Nov. 22, 1999), at http://papers.ssm.com/paper.taf?abstract_id=185193.

⁴⁶⁹ The seminal analysis is George J. Stigler, *United States v. Loew's Inc.: A Note on Block-Booking*, 1963 SUP. CT. REV. 152. Stigler's work was extended by William James Adams & Janet L. Yellen, *Commodity Bundling and the Burden of Monopoly*, 90 Q.J. ECON. 475 (1976), and Richard Schmalensee, *Commodity Bundling by Single-Product Monopolies*, 25 J.L. & ECON. 67, 70-71 (1982).

⁴⁷⁰ The example is taken from Stigler, *supra* note 469, at 153.

Figure 12
 Bundling of Two Products with Negatively Correlated Demands

	Buyer A	Buyer B
Product 1	\$8.00	\$7.00
Product 2	\$2.50	\$3.00

The key feature is that the buyers' demands for each product are negatively correlated, i.e., Buyer A values Product 1 more than Buyer B, with the opposite being true with respect to Product 2. If the producer sells the products separately, it will maximize profits by pricing Product 1 at \$7 and pricing Product 2 at \$2.50. It would sell two units of each product, earning \$19 in revenue. But if the distributor bundles both products into a single package, it can sell two such bundles for \$10, thereby increasing its revenue to \$20.

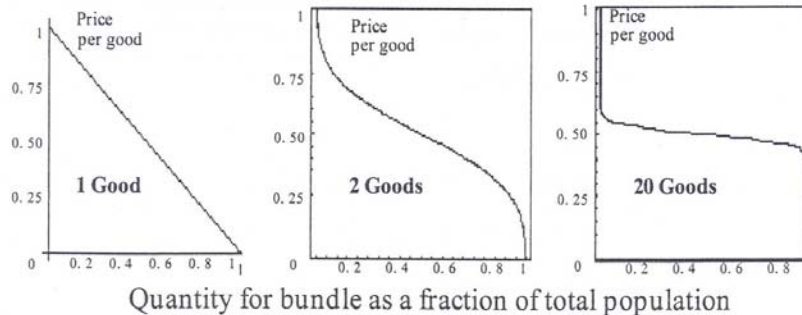
Subsequent work has revealed that bundling can facilitate price discrimination even when the buyers' demands for the bundled products are independently rather than negatively correlated. In effect, the law of large numbers dictates that aggregating larger numbers of products lowers the variance of consumers' valuations for individual goods when measured on a per-good basis.⁴⁷¹ By reducing the heterogeneity of customers' preferences, bundling flattens the aggregate demand curve, which in turn reduces deadweight loss and makes it easier for the producer to use linear pricing to capture a larger proportion of the available surplus.⁴⁷² As Figure 13 indicates,

⁴⁷¹ This is because $(\sigma_{1+2})^2 = (\sigma_1)^2 + (\sigma_2)^2 + 2\rho\sigma_1\sigma_2$, where $(\sigma_{1+2})^2$ represents the variance of a bundle of goods 1 and 2, and $(\sigma_1)^2$ and $(\sigma_2)^2$ represent the variance of each component. Since $(\sigma_1 + \sigma_2)^2 = (\sigma_1)^2 + (\sigma_2)^2 + 2\sigma_1\sigma_2$, this implies that $\sigma_{1+2} \leq \sigma_1 + \sigma_2$. So long as the demands for the components are not perfectly correlated, the standard deviation of the bundle will be less than the sum of the standard deviations of the components. See Richard Schmalensee, *Gaussian Demand and Commodity Pricing*, 57 J. BUS. S211, S219-21 (1984).

⁴⁷² See Mark Armstrong, *Price Discrimination by a Many-Product Firm*, 66 REV. ECON. STUD. 151 (1999); Yannis Bakos & Erik Brynjolfsson, *Bundling Information Goods: Pricing, Profits, and Efficiency*, 45 MGMT. SCI. 1613, 1614, 1616, 1619 (1999); Crawford, *supra* note 468, at 4; R. Preston McAfee et al., *Multi-*

the variance narrows and the demand flattens still further as the number of products added to the bundle increases.⁴⁷³

Figure 13
 Bundling of Products with Independently Correlated Demands



Put in terms of a simple numerical example, assume that a firm produces two products. Assume also that individual customers' willingness to pay for each product may vary up or down by any amount up to \$1, with the price that the average customer is willing to pay for the first product being \$5 and the price that the average customer is willing to pay for the second being \$2. If the firm offers each product on an unbundled basis at \$5 and \$2, a person who valued the first product at \$5.50 and who valued the second product at \$1.75 would purchase the first product, but not the second. This person would, however, purchase both products if they were bundled together and offered at a price of \$7. This is because the extent to which this person's valuation of the

product Monopoly, Commodity Bundling, and Correlation of Values, 104 Q.J. ECON. 371, 372, 377-80 (1989); Michael A. Salinger, *A Graphical Analysis of Bundling*, 68 J. BUS. 85, 86, 92-93 (1995); Schmalensee, *supra* note 471, at S220, S228.

⁴⁷³ The source for Figure 13 is Bakos & Brynjolfsson, *supra* note 472, at 1617 fig.1. Note that Figure 13 represents the aggregation of goods whose demand is uniformly distributed across the price space, as represented in the left-most graph denoting the demand for a single, unbundled good. The effect of aggregation on the shape of the demand curve of the overall bundle should be the same regardless of the shape of the demand curve for the component products.

first product exceeded \$5 (i.e., \$0.50) was greater than the extent to which their valuation of the second product fell short of \$2 (i.e., \$0.25). The net result of bundling is to allow the producers to use the excess surplus associated with the first product to help fund the purchase of the second product. This in turn allows producers to capture a greater proportion of the available surplus.

In contrast to other forms of imperfect price discrimination, which must satisfy a relatively restrictive set of preconditions (including a fairly high degree of knowledge about customer preferences, some mechanism for segregating different classes of consumers into different price points, and the ability to prevent arbitrage through resale), bundling permits producers to reduce deadweight loss and maximize producer surplus in a much simpler manner. Sellers need only charge a single price without identifying different types of consumers.⁴⁷⁴

It should be noted that bundling introduces a possible source of economic loss that is not possible in single-product sales. As noted earlier,⁴⁷⁵ maximization of total surplus requires that consumers be able to purchase a product only when the value that they would derive from consuming it exceeds the marginal cost of producing an additional unit of the good. In other words, they should only be able to purchase the good if their reservation price exceeds marginal cost. Using the consumer surplus from one product to fund the purchase of another may induce some consumers to purchase a bundle even though their reservation price for a particular component falls below the marginal cost of that component.⁴⁷⁶ Such an outcome is, of course, impossible if the marginal cost is zero, as is the case when consumption of a good is nonrival. Stated more generally, bundling is more likely to be welfare enhancing in markets in which marginal costs are relatively low and the spread between marginal cost and the consumers' mean reservation price is large.⁴⁷⁷

⁴⁷⁴ See *id.* at 1619.

⁴⁷⁵ See *supra* notes 73-74 and accompanying text.

⁴⁷⁶ See Adams & Yellen, *supra* note 469, at 492; Nalebuff, *supra* note 468, at 3.

⁴⁷⁷ Bakos & Brynjolfsson, *supra* note 472, at 1617; Salinger, *supra* note 472, at 92-95; Schmalensee, *supra* note 471, at S228-29; see also Suchan Chae, *Bundling Subscription TV Channels: A Case of Natural Bundling*, 10 INT'L J. INDUS. ORG. 213, 219-20, 226-27 (1992) (concluding that pure bundling represents the optimal strategy when costs are low, while mixed bundling represents the preferred strategy when costs are high).

The theoretical literature has often cited television as a prime example of an industry in which bundling could be employed as a form of imperfect price discrimination.⁴⁷⁸ Although some of these analyses have suggested that the welfare impact of bundling television programming is ambiguous,⁴⁷⁹ there are aspects of the television industry that make it more likely that bundling television network channels would enhance total surplus. By providing producers with an effective means for capturing surplus that is relatively easy to administer, bundling promises to increase dynamic efficiency. So long as program producers have the option to bundle or not to bundle as they see fit (or alternatively to engage in a practice called “mixed bundling” in which consumers are free to choose from a menu that includes options to purchase both bundles or individual components), they will do so only when the practice increases revenue and, by extension, is most likely to increase total surplus. In addition, the fact that marginal costs associated with the television industry are so low as to approach zero makes it unlikely that bundling television networks will give rise to the unique type of welfare loss that occurs whenever customers are forced to purchase products even though their reservation price for those goods falls below the marginal cost of producing them.⁴⁸⁰

These theoretical results have recently been confirmed by an empirical study of the impact of bundling in the cable television industry. This study tested the impact of the addition of each of the top fifteen cable networks to the bundle of networks that comprised the basic programming package offered by various cable operators. Although these results are still preliminary, this study found that, consistent with the theory described above, bundling of cable television networks caused demand to flatten, with the effect being particularly pronounced with respect to special-interest networks when compared with general-interest networks.⁴⁸¹ Some rough welfare calculations based on this data revealed that, again consistent with the theoretical predictions, bundling

⁴⁷⁸ See, e.g., BESANKO & BRAEUTIGAM, *supra* note 21, at 539-40; CHURCH & WARE, *supra* note 47, at 169; Chae, *supra* note 477, at 214-15; Salinger, *supra* note 472, at 97 n.17; Wildman & Owen, *supra* note 82, at 255-58.

⁴⁷⁹ See Wildman & Owen, *supra* note 82, at 257-58. This is because bundling can cause another source of welfare loss resulting from the reduction in the number of instruments available to extract consumer surplus. If consumer preferences are sufficiently heterogeneous, producers will find that they can extract surplus more effectively by pricing the goods separately. See Crawford, *supra* note 468, at 6.

⁴⁸⁰ See Bakos & Brynjolfsson, *supra* note 472, at 1626.

⁴⁸¹ Crawford, *supra* note 468, at 14-17, 19.

causes consumer surplus to fall, while causing total surplus to rise.⁴⁸² Thus the belief that bundling will tend to cause total welfare to increase is based on more than just theory. It is confirmed by empirical data as well.

The implication is that the overall hostility toward multi-channel technology reflected in current television policy may be exacting a significant price in terms of the overall quantity, quality, and diversity of television programming. It also has implications for the efforts undertaken by the FCC and Congress to impel digital broadcasters to forgo multicasting in favor of transmitting a single stream of HDTV. The approach taken by the FCC in rolling out digital television, however, only serves to frustrate the networks' ability to price discriminate, both by discouraging digital broadcasters from focusing their efforts on pay television and by placing burdens on the deployment of multi-channel service, which limits the networks' ability to use bundling as a form of imperfect price discrimination. Removing such a bias would thus be more likely to promote the maximization of both static and dynamic efficiency.

Perhaps the most complex consideration is whether the principle disfavoring the promotion of single-channel television over multi-channel television also supports requiring cable operators to carry all of the program streams offered by digital broadcasters who choose to multicast. It is arguable that this principle has no application to what amounts to a tradeoff between two multi-channel media. Particularly when combined with the general principle favoring the emergence of new technologies,⁴⁸³ this consideration would arguably support requiring cable operators to carry all such streams.

Upon closer analysis, however, it becomes clear that favoring multi-channel broadcast television over multi-channel cable television cannot be justified. This is because the welfare losses associated with the producers' inability to capture the entire surplus are likely to be worse under advertising-supported television than under pay television.⁴⁸⁴ In addition, the bundling analysis advanced above suggests that the providers that are able to bundle

⁴⁸² *Id.* at 17-19. These findings contradict Chae's conclusions that economies of scope, rather than price discrimination, represent the primary motivation for bundling cable channels and that consumer surplus and total surplus tend to move together. Chae, *supra* note 477, at 219-20, 226-27.

⁴⁸³ See *infra* Part IV.

⁴⁸⁴ See *supra* Part III.B.3-4.

relatively large numbers of networks are likely to be able to extract a higher proportion of the available surplus than providers limited to smaller-sized bundles.⁴⁸⁵ Although the magnitude of this effect depends somewhat on the structure of viewer demand, this consideration would tend to disfavor efforts to impose carriage burdens on cable television in order to advantage digital broadcasters who multicast.

The more fundamental problem with this argument is that it is not my position that policymakers should reverse their previous willingness to require multi-channel television services to cross-subsidize single-channel services. My point is that policymakers should eliminate cross-subsidies altogether. Thus my criticism of past policy does not in any way suggest support for imposing an implicit cross-subsidy running in the other direction. On the contrary, the economic analysis suggests that multi-channel television needs no such cross-subsidy, because the ability to price discriminate through bundling will give multi-channel technologies a natural advantage over single-channel technologies by allowing them to capture a greater proportion of the available surplus to cover fixed costs. Nor do I mean to suggest that regulators should force television providers to bundle their networks. Indeed, the theoretical literature suggests that requiring the bundling of all television networks in all circumstances may actually cause total welfare to fall.⁴⁸⁶ It should be sufficient to eliminate the cross-subsidies running in either direction and to allow television providers either to bundle their networks or sell their networks as individual components as they see fit.

IV. ASSESSING THE SECONDARY DISTORTIONS RESULTING FROM THE COMMITMENT TO FREE, LOCAL TELEVISION

The foregoing analysis demonstrates how the commitment to free, local television has had the direct consequence of reducing the overall quantity, quality, and diversity of television programming available. It is equally important to recognize that in addition to these primary effects, these regulations cause important secondary effects that make the welfare losses still greater. Some of these secondary effects stem from the fact that all of these

⁴⁸⁵ See *supra* note 473 and accompanying text.

⁴⁸⁶ See Adams & Yellen, *supra* note 469, at 483; McAfee et al., *supra* note 472, at 374; Schmalensee, *supra* note 471, at S228-29.

policies have tended to preserve and increase the amount of electromagnetic spectrum devoted to broadcasting. Even when taken by itself, analog broadcasting represents the single largest commitment of spectrum. Estimates of the combined value of the spectrum committed to analog and digital broadcasting run from \$32 billion to \$202 billion.⁴⁸⁷

This decision has obvious collateral supply-side consequences on all other spectrum-based media products. The enormous commitment of spectrum to the various forms of television broadcasting (especially when combined with the limitations on broadcasters' ability to transfer that spectrum to alternative uses) inevitably increases the cost of all other spectrum-based technologies. As a result, the public bears the costs by paying higher fees for cellular telephony, 3G, and other spectrum-based technologies.⁴⁸⁸

These effects are exacerbated by the cross-subsidy implicit in the other regulatory features designed to promote broadcasting at the expense of cable and DBS discussed above. By reducing the revenue generated by cable and DBS systems, these regulations cause the price of subscribing to cable and DBS to rise. Thus, not only does the decision to promote free, over-the-air broadcasting exact costs by reducing the quantity, quality, and diversity of television programming available, it also reduces the accessibility of television programming and in so doing works to thwart one of the justifications that underlay the enactment of many of these regulations in the first place.⁴⁸⁹

In addition to these static efficiency considerations, the secondary distortions resulting from the promotion of free, local television have effects on dynamic efficiency as well. The burdens placed on the cable industry inevitably slowed the buildout of the nation's broadband infrastructure by retarding the implementation of cable modem service. The increase in cost has also slowed the deployment of 3G. Furthermore, the amount of spectrum

⁴⁸⁷ See *supra* notes 183, 233 and accompanying text.

⁴⁸⁸ Yoo, *supra* note 117, at 354-55; see also Hazlett, *supra* note 372, at 504 (offering a similar observation with respect to unlicensed spectrum).

⁴⁸⁹ See Erickson et al., *supra* note 329, at 499. Cross-subsidies that penalize one subsector of an industry to benefit another are also somewhat problematic from the standpoint of fairness, in that rarely is the penalized subsector responsible for creating the problem being redressed. Doing so makes about as much as sense as taxing cable operators to pay for the construction of new public schools. To the extent that general concerns of public welfare form the basis for the subsidy program, those subsidies should be financed out of general revenues.

committed to broadcasting has also created administrative problems. In contrast to European nations, which have already deployed 3G (albeit with less success than they hoped),⁴⁹⁰ the FCC remains embroiled in administrative controversies over which services will be relocated in order to make way for this new technology.⁴⁹¹

The policies designed to promote free, local television have caused secondary distortions on the demand side as well. Altering the relative prices of the various spectrum-based services makes broadcast television artificially attractive and makes cable, DBS, and spectrum-based technologies look artificially unattractive from an economic standpoint. Because these prices do not reflect the true costs of these goods, these differences will inevitably cause consumers to deviate from the most efficient product mix.⁴⁹²

Examination of these collateral consequences further underscores the fact that there is nothing “free” about free, local television. Although individual consumers do not have to pay for television services directly, such services depend on the availability of the massive direct subsidy associated with the spectrum giveaway as well as the massive cross-subsidies implicit in the overall regulatory scheme. As a result, consumers must pay for free television in other ways, either through higher prices, reduced product offerings associated with other spectrum-based services, or both. Such indirect pricing mechanisms are unlikely to lead to efficient allocation in the primary market and inevitably create secondary distortions in other markets, as producers respond to the artificial prices set by such subsidies by combining substitute inputs in combinations that are less economically efficient.

CONCLUSION

The classic approach to television regulation frames the basic policy issue as an irreconcilable conflict between two countervailing forces. On the one hand are considerations of static efficiency, which demand that price be set as

⁴⁹⁰ See Almar Latour & David Pringle, *Europe Gets 3G Phone Service*, WALL ST. J., Mar. 20, 2003, at B4; David Pringle & Evan Ramstad, *European Telecoms Face Price War from 3G Cellphones*, WALL ST. J., Aug. 13, 2003, at C1.

⁴⁹¹ See Yochi J. Dreazen, *Space Wars: The Future of Wireless Depends on Companies Getting More Room on the Spectrum; But Who's Going to Give It Up?*, WALL ST. J., Sept. 23, 2002, at R9.

⁴⁹² See Ericksson et al., *supra* note 329, at 478.

low as possible. On the other hand are considerations of dynamic efficiency, which require that price be set high enough to generate sufficient revenues to cover the fixed costs of producing the television program in the first place. Any single-part price chosen would generate too much revenue from the standpoint of static efficiency and too little revenue from the standpoint of dynamic efficiency. Thus any resolution of this conflict allegedly necessitated a choice from among second-best outcomes.

The integrated analysis developed in this Article offers a way to bring these supposedly opposing forces into alignment. Both static and dynamic efficiency can be maximized if the producer is able to appropriate the entire surplus created by its product. A producer that is able to capture the entire surplus achieves static efficiency by allowing every person who places a positive value on the product to purchase it. Indeed, even the marginal customer who places only a nominal value on the product is able to consume it for free. Producers who appropriate the entire surplus also achieve dynamic efficiency by allowing products to be produced whenever the total benefits created by the product exceed the costs associated with creating it (which in the case of nonrival goods consist solely of fixed costs). So long as the revenue generated exceeds the fixed costs, the product will be made, and revenue represents a good proxy for the total benefits created by the product so long as the proportion of surplus appropriated by the producer remains relatively high. The amount of the surplus that the producer is unable to capture will determine whether a socially beneficial product does not get produced. Although enhancing the appropriability of surplus may allow some producers to earn short-run profits, the free entry made possible by the nonexistence of barriers to entry ensures that any such profits will not be sustainable.

This transformation has profound economic and policy implications. It makes room for policy decisions by identifying ways to promote static and dynamic efficiency simultaneously. In so doing, it reveals the supposedly irreconcilable conflict between static and dynamic efficiency to be a false one. Furthermore, it transforms the transfer of surplus from consumers to producers from a consideration that has no effect on efficiency into a necessary condition for efficiency. In any event, whatever distributional consequences that may have been thought to exist will be limited by the fact that free entry will dissipate supra-competitive profits in most cases.

Appropriability of surplus in turn depends on two considerations. First, consumers must be able to use prices to signal the intensity of their preferences. Second, producers must be able to engage in price discrimination. The standard model of perfect competition has long regarded price discrimination with suspicion, taking it as evidence of monopoly or oligopoly power. Price discrimination takes on a far different cast in the context of public good economics, because it is a common feature of competitive markets whenever products are differentiated and whenever joint costs are spread over multiple purchasers. In neither case is it necessarily evidence of substantial monopoly power.

The power of the analysis is demonstrated quite persuasively by applying it to the market for television programming to evaluate the longstanding policy of attempting to promote free, local television, which I suggest should be disaggregated into four smaller subcommitments. What emerges is a theoretical explanation for why these historical efforts have failed to produce the desired results. The theory reveals how past attempts to promote free, local television might well have reduced the overall quantity, quality, and diversity of television programming and made it harder for any programming that appeals only to small audiences (such as locally oriented programming) to survive. It also demonstrates how the market for television programming lends itself to a technique known as bundling, which represents a form of price discrimination that is relatively easy to implement. These theoretical results are backed up with empirical findings with respect to each of the subcommitments.

Finally, my analysis shows how the commitment to free, local television has had the inevitable consequence of artificially raising the prices of other spectrum-based communications media and of impeding the deployment of new spectrum-based services, such as 3G wireless devices. Consequently, the fundamental policy commitments identified above have caused economic harms in the here and now and have harmed dynamic efficiency by artificially discouraging investment in new programming and new television technologies.

This analysis should be of obvious interest to those inclined to define the goals of television policy exclusively in economic terms. There are also two reasons why it should also be of interest to those who would define these goals in noneconomic terms. First, my analysis shows how elimination of the historical policies designed to promote free, local television should allow a richer variety of programming to appear, which should reduce the need to

promote directly many of the types of merit programming usually advanced by commentators who have adopted noneconomic approaches. Indeed, those who value diversity for its own sake would find it best promoted if producers were able to capture as much revenue as possible.⁴⁹³

As a result, allowing the market to function more efficiently will both lower the cost and minimize the First Amendment concerns associated with any such programs by narrowing the extent to which the government will need to intervene in order to further these goals. In addition, this Article underscores the extent to which the economic analysis points out the price exacted by the traditional forms of regulatory intervention and underscores the importance of determining whether a particular regulatory device is likely to promote or frustrate policymakers' goals.

Ever since Newt Minow's classic speech condemning broadcast television as a "Vast Wasteland,"⁴⁹⁴ it has been fashionable to disparage the quality of television programming and to use its poor quality as justification to call for more regulation. My analysis indicates that, somewhat ironically, the relative mediocrity of the current programming environment may in part be the result of regulatory decisions rather than a problem that must be redressed. A better understanding of the distinctive economic characteristics of television programming reveals that in this instance regulation is the cause rather than the consequence of this phenomenon. The insights provided by my analysis should also help us avoid the pitfalls of the past and design regulatory steps that are less likely to be part of the problem and more likely to be part of the solution.

⁴⁹³ See *supra* note 86.

⁴⁹⁴ Minow, *supra* note 6.