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GOOGLE AND THE PROPER ANTITRUST SCRUTINY OF ORPHAN BOOKS

*Jerry A. Hausman** & *J. Gregory Sidak***

ABSTRACT

We examine the consumer-welfare implications of Google's project to scan a large proportion of the world's books into digital form and to make these works accessible to consumers through Google Book Search (GBS). In response to a class action alleging copyright infringement, Google has agreed to a settlement with the plaintiffs, which include the Authors Guild and the Association of American Publishers. A federal district court must approve the settlement for it to take effect. Various individuals and organizations have advocated modification or rejection of the settlement, based in part on concerns regarding Google's claimed ability to exercise market power. The Antitrust Division has confirmed that it is investigating the settlement. We address concerns of Professor Randal Picker and others, especially concerns over the increased access to "orphan books," which are books that retain their copyright but for which the copyright holders are unknown or cannot be found. The increased accessibility of orphan books under GBS involves the creation of a new product, which entails large gains in consumer welfare. We consider it unlikely that Google could exercise market power over orphan books. We consider it remote that the static efficiency losses claimed by critics of the settlement could outweigh the consumer welfare gains from the creation of a valuable new service for expanding access to orphan books. We therefore conclude that neither antitrust intervention nor price regulation of access to orphan books under GBS would be justified on economic grounds.

JEL: K20; K21; L40; L41; L50; O34

I. INTRODUCTION

New goods and services are among the most important sources of increased economic welfare. Recently, a Wharton School ranking of new products listed the internet, personal computers (PCs), and cell phones as the top three innovations of the past thirty years.¹ Google's project to scan a large

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¹ See Phyllis Korkki, *These Things Went From New To Much-Used*, N.Y. TIMES, Mar. 8, 2009.

proportion of the world's books into a digital format is a massive undertaking with profound implications for how users will connect with information using the internet, PCs, and cell phones as well. Users will access Google Book Search (GBS) through the internet using cellular and Wi-Fi technology on PCs, digital book readers, and perhaps on their iPhones and other smart phones as the technology evolves.

Scanning all those books and organizing them for use on the internet is a costly undertaking. Google has copied approximately seven million books to date and aims to scan fifteen million books onto its digital platform. It has reportedly cost Google about \$100 million to scan the books.² Although the overall cost to Google is unknown, from estimates of scanning costs and legal fees it appears to be in the hundreds of millions of dollars.

Yet the overall cost is not so prohibitive as to prevent another company from engaging in a book-scanning project and competing with Google. Until 2008, Microsoft also had a project to scan books and produce a digital library. With Microsoft's cash hoard of \$20 billion and a market capitalization of approximately \$200 billion, Microsoft would not encounter funding problems, nor would other potential competitors, such as Yahoo (\$23 billion in market capitalization) or Amazon (\$38 billion in market capitalization). Thus, complaints from companies such as Microsoft and Amazon, which are competitors of Google in search engines and electronic book sales, should be analyzed within an economic framework that recognizes that these companies could invest in parallel projects and compete with GBS if they chose to do so.

Google's project, along with other evolving technologies such as Sony's or Amazon's digital book readers, is likely to have a significant effect on the current world of physical book use. Will universities need their imposing libraries and costly staffs when a researcher can investigate a topic much more efficiently on the internet rather than waiting for musty tomes to be retrieved from repositories, often after a significant time period?³ What role will university presses play in an internet world? With very few exceptions, university press publications, although important for a scholar's career advancement, are cash drains on fiscally challenged university endowment incomes. No reason exists for printing their output and physically delivering books with

² See David Chen, *Google's Book Search Library Project Faces Legal Challenges*, ILL. BUS. L.J., Nov. 21, 2007, available at http://iblsjournal.typepad.com/illinois_business_law_soc/2007/11/googles-book-se.html.

³ On a personal note, Hausman has not been in a library at MIT since about 1994. All the economics journals are online, and Google Scholar is a valuable source for finding references. Indeed, Hausman wrote most of a paper while flying from China to Frankfurt a few years ago, using the internet and Google Scholar to complete the bibliography. Although economics differs from other subjects in its use of historical material, once many researchers recognize the advantages of using the internet for research, trips to the library may become a relatively rare occurrence. Around the same time that Hausman stopped entering MIT libraries, Sidak similarly abandoned his Marxian practice of using the reading room of the Library of Congress to conduct legal research.

low readership that will sit largely unread on library shelves. For example, the MIT Press could, at a much lower cost than its printed publications require, publish a book solely in electronic form that buyers could download onto their book readers and libraries could load onto a server for research use. The likely result is that university presses will publish more books electronically, and this increased output will increase economic efficiency. The British Museum reading room, where Karl Marx sat day after day, is no longer a reading room but rather a tourist attraction and a venue for cocktail parties. An internet-based approach will make waits for books that are currently checked out or in use by other researchers and queues a memory of the past.⁴ Waits for inter-library loans will also become a distant memory.

Economists expect these types of changes to elicit protests by affected constituencies, including providers who benefit from the established and less efficient model. Very few changes make everyone better off, and those groups adversely affected will predictably try to stop or modify the changes to advance their own interests.⁵ In this article, we consider the effect of Google's book project on economic efficiency and consumer welfare. We find that Google Book Search will significantly increase economic efficiency and consumer welfare. If for reasons of regulation or other government intervention the project does not go forward, significant gains in consumer welfare and economic efficiency will be lost. Thus, we suggest that proposals for government-mandated changes to the GBS settlement and complaints from affected constituencies should be analyzed carefully, with the goal of consumer welfare and economic efficiency kept in mind.

The current proposed settlement arose after Google decided to make substantial investments to digitally scanning books, was sued by rights holders for copyright infringement, and, rather than continue to litigate its fair use arguments, agreed to a resolution that would authorize various uses of the rights holders' intellectual property.⁶ A federal court must now approve the settlement for it to take effect, and a number of individuals and organizations have called for modification or rejection of the settlement agreement

⁴ Lady Antonia Fraser complained that she had to wait twenty minutes to enter the new British Library reading room and fifteen minutes to obtain a book. See Dalya Alberge, *Frustration for authors as students hog British Library reading rooms*, (LONDON) TIMES ONLINE, Apr. 21, 2008, available at http://entertainment.timesonline.co.uk/tol/arts_and_entertainment/books/article3784828.ece With an internet-based approach, Lady Fraser could sit at home in Holland Park or in her London club, doing her research without having to accommodate the hoi polloi students she finds so bothersome.

⁵ Indeed, some book publishers complain that Kindle's prices for books are "too low" and that Amazon may be involved in a strategy to take over book publishing. According to one publishing executive: "The concern is they want to corner the book market." See Boris Kachka, *The End*, N.Y. MAGAZINE, Sept. 14, 2008, available at <http://www.thebookofkindle.com/2008/09/is-kindle-trick-for-amazon-to-control.html>.

⁶ Settlement Agreement, Author's Guild, Inc. v. Google Inc., Case No. 05 CV 8136-JES (S.D.N.Y. Oct. 28, 2008) [hereinafter *Settlement Agreement*].

based, in part, on concerns regarding Google's putative ability to exercise market power. In July 2009, the Antitrust Division confirmed that it is investigating the settlement.⁷ We examine here a number of the concerns that academic critics have raised, especially concerns that would invoke the antitrust laws to change the structure of Google's book project.

The increased accessibility of orphan books under GBS involves the creation of a new product, which entails large gains in consumer welfare. We consider it unlikely that Google could exercise market power over orphan books. We consider it remote that the static efficiency losses claimed by critics of the settlement could outweigh the consumer welfare gains from the creation of a valuable new service for expanding access to orphan books. We therefore conclude that neither antitrust intervention nor price regulation of access to orphan books under GBS would be justified on economic grounds.

II. THE VIRTUAL PRICE AND THE VALUE OF A NEW GOOD

How can society establish the value of the new services and increased choices that Google Book Search offers? This question has important economic consequences and equally important implications for antitrust enforcement and regulation. By demonstrating how to value new services, we allow for a more reasoned approach to the necessary benefit-cost calculations that motivate antitrust analysis under the rule of reason.

A. The Virtual Price of a New Good

Economists, beginning with Nobel laureate Sir John Hicks in 1940, have developed a framework to value new goods.⁸ Hicks valued social income and economic welfare using index-number theory to analyze the effects of rationing and the introduction of new goods. He correctly saw his approach as the basis for evaluating real income under these changes. Without completely working out the mathematics, Hicks stated that for rationed goods, the index number needed to be altered so that the price used in the index number being calculated would lead to the amount of the ration being demanded.

Hausman revised Hicks' technique to account for competitive effects and to derive bounds on the estimates.⁹ The basic idea underlying the economic approach to valuing new goods or services is the recognition that, until these goods actually come on the market, consumers are unable to purchase them

⁷ See Miguel Helft, *U.S. Inquiry Is Confirmed Into Google Books Deal*, N.Y. TIMES, July 3, 2009, at B3.

⁸ John R. Hicks, *The Valuation of the Social Income*, 7 *ECONOMICA* 105 (1940).

⁹ Jerry A. Hausman, *Valuation of New Goods Under Perfect and Imperfect Competition*, in *THE ECONOMICS OF NEW GOODS* 209 (Timothy F. Bresnahan & Robert J. Gordon, eds., University of Chicago Press 1997); Jerry A. Hausman, *Sources of Bias and Solutions to Bias in the CPI*, 17 *J. ECON. PERSPECTIVES*, no.1, at 23 (2003).

at any price, no matter how much consumers would like to buy them. Thus, in some sense, the price of the new good or service might as well be infinite. A more refined economic approach estimates the virtual price that sets demand for the new good or service to zero. At this virtual price, demand is zero, so a “virtual equilibrium” exists between demand and supply (which is zero). Estimation of the virtual price along with the expenditure function (demand curve) for the new good or service gives the economic value. Given the demand function, one can solve for the virtual price and for the expenditure function and correctly value social welfare without using the index number formulas discussed by Hicks.

Using this method, Hausman estimated that in 2000 the value of cellular phones to U.S. consumers was between \$53 billion and \$111 billion.¹⁰ That is, U.S. consumers would have been willing to pay that amount, in addition to their monthly cellular service payments, to be just as well off using their cell phones as not having the technology available. That amount was between approximately 0.5 percent and 1.1 percent of U.S. GDP, a substantial amount. Similarly, for China in 2000, Hausman estimated the gain from cellular telephones to be about 3 percent of GDP.¹¹ Hausman has also used these economic techniques to estimate consumer gains from more mundane new products, such as Apple Cinnamon Cheerios, and more controversial products, such as a Wal-Mart superstore opening in a geographic area to compete with existing supermarkets.

The actual price of the new service will usually be well below the virtual price. The quantity consumed, multiplied by the difference between the virtual price and the market price (multiplied by one-half), approximates the fundamental gain in value, also called the consumer surplus, from the new service. This estimate is the calculation of the well-known welfare triangle, which measures consumer surplus and approximates the gain in consumer welfare. This economic approach uses market demand to value new goods and services because the market establishes what consumers are willing to pay. For example, for cellular telephone service Hausman estimated that in 1984, when cellular service was introduced in the United States, the estimated virtual price was \$156 per month, which seems quite realistic, because at that time some individual subscribers were paying \$125 to \$150 per month for cellular service in Los Angeles. The virtual price minus the actual price that the consumer pays is then the gain in consumer welfare. So if the consumer’s virtual price is \$150 per month and the consumer pays \$50 per month, the consumer’s welfare increases by \$100 per month, or \$1200 per year.

¹⁰ Jerry A. Hausman, *Mobile Telephone*, in HANDBOOK OF TELECOMMUNICATIONS ECONOMICS 585 (Martin E. Cave, Ingo Vogelsang & Sumit K. Majumdar, eds., North Holland 2002).

¹¹ Jerry A. Hausman, *Cellular, 3G, Broadband and WiFi*, in FRONTIERS OF BROADBAND, ELECTRONIC AND MOBILE COMMERCE 9 (Russell Cooper & Gary Madden, eds., Physica-Verlag 2004).

The consumer would be willing to pay this additional amount to have cellular telephone service compared with not having the service available.

The virtual price estimate also determines how much economic efficiency increases when a new product is introduced once the cost of the new product is subtracted. Academic research finds that successful new goods lead to a significant increase in economic efficiency. Few goods will have the economic impact of cellular telephones of increasing GDP by 1 to 3 percent, but the increases in economic efficiency will often be in the hundreds of millions of dollars.

B. Gains in Economic Efficiency from New Goods

The gain in economics efficiency is typically divided between consumers and producer(s). Introduction of a new good almost always makes consumers better off because they have a wider choice of products and services. Granted, one caveat is necessary: the introduction of a new good may cause an existing good to exit the market. Those consumers who prefer the exiting good may be made worse off. However, usually only goods with low demand would exit the market, such that aggregate consumer welfare increases. No lost consumer surplus arises so long as the older product continues to be available at its previous price.

The firm that introduces the new good, if it is successful, is often also made better off because it earns economic profits on the new good—that is, profits after investment and other economic costs are taken into account. In aggregate, firms need not be better off because the new good may divert profits from existing goods. Consequently, aggregate profits may decrease because of the additional competition from the new good.

If only one firm introduces the new good, it is likely to gain a greater share of economic profits (if any) than if numerous competing firms also produce the new product, because the additional competition will typically decrease prices. Decreased prices lead to a gain in consumer welfare and a small (second-order) gain in economic efficiency.

C. Investment Risk from the Introduction of a New Good

The introduction of new products, however, is risky because about 80 percent of new consumer products fail.¹² In market economies, firms that introduce new products can often obtain patent protection for the product or for certain features of the product, which provides an enhanced economic incentive for new product introduction. In instances where the firm does not receive patent protection for its new product, yet only that one firm controls production of the new good, few governments attempt to regulate away economic profits.

¹² See, e.g., Hausman, *Valuation of New Goods Under Perfect and Imperfect Competition*, *supra* note 9, at 213.

Again, economic incentives to introduce the new good and to take the risk of failure or success (along with the gain in consumer welfare) are more important than attempting to require a firm to cover only its economic costs. It is the lure of economic profits above cost that leads to the introduction of the iPod and iPhone, as well as the introduction of many failed new products and services, such as the Apple Newton and the Lisa computer, that have been consigned to the dustbin of economic history by the lack of sufficient market demand.

D. The Cost to Consumers of the Delayed Introduction of a New Good Due to Regulatory or Antitrust Intervention

The introduction of a new regulated service is typically much different from the introduction of a new good in an unregulated industry. If Kellogg or General Mills wants to introduce a new brand of cereal, it manufactures the cereal and convinces supermarkets to stock the new brand on their shelves. Consumers then decide whether the new brand will be successful by voting with their consumer expenditures. Regulation makes the introduction of new telecommunications services—to take a significant example—much different. In the United States, a telecommunications company typically must file an application with the Federal Communications Commission (FCC) and state regulators before commencing a new service. Potential competitors of the new service have economic incentives to attempt to stop or delay introduction of the new service. While regulators review the application and resolve these claims, the new service can be delayed for many years, even decades. The approach explained here allows estimation of the cost of those regulatory delays by valuing the economic gains that consumers would have had if the service had been available during the period of regulatory delay. One can directly extend this analysis to antitrust intervention that delays (or halts) the introduction of a new good, such as widespread access to orphan books by means of GBS.

To appreciate the relative magnitude of the economic costs of regulatory or antitrust delay, consider first the particular example of voice-messaging services offered by the Bell operating companies (BOCs). AT&T initially proposed to offer these services in the late 1970s, before the breakup of the Bell System. The FCC first delayed its decision and then refused to allow the BOCs to offer voice-messaging services on an integrated basis with the rest of their telecommunications services. In 1986, the FCC reversed its decision. By then, however, a new legal impediment—the AT&T divestiture decree, formally known as the Modification of Final Judgment (MFJ)—established line-of-business restrictions that forbade the BOCs to offer (among other services) voice-messaging services.¹³ Two years later, in 1988,

¹³ For the definitive legal analysis of the administration of the MFJ, see MICHAEL K. KELLOGG, JOHN THORNE & PETER W. HUBER, *FEDERAL TELECOMMUNICATIONS LAW* 199–247 (Little, Brown & Co. 1992).

the MFJ court vacated the line-of-business restriction on information services, which included voice-messaging services, and the BOCs began to offer the services in 1989, more than ten years after AT&T first proposed to offer these services. The services have been widely available since 1990, and about 16 million consumers bought them in 1996. If, as Hausman estimated, the consumer value from these services was \$1.27 billion in 1994, then the approximately ten-year regulatory delay cost consumers many billions of dollars. If one applies the same methodology to the cost of regulatory delay in the introduction of cellular telephone services, the estimated cost to consumers is closer to \$100 billion in total by 1997, with more than \$25 billion lost in a single year.

The cost of regulatory delay in the introduction of new telecommunications services has not received the attention it deserves. Although the potentially adverse effect of regulation on “dynamic economic efficiency” is often mentioned, the literature on the effects of regulation has largely ignored the actual effects of regulatory delays in new services.¹⁴ One can calculate the loss in consumer surplus and also the effect on the telecommunications consumer price index from the introduction of these new services. Either alternative measure of consumer welfare demonstrates the significant consumer gains from the introduction of new telecommunications services and, conversely, the very large cost imposed by regulatory delay in the introduction of these services.

In a nominally unregulated market, antitrust intervention (and the delays associated with the threat of such litigation) can become a de facto form of regulation. Relative to the consumer-welfare losses from the delay in the introduction of cell phones and voice messaging, we would expect similarly large losses in consumer welfare from the misguided or strategic use of antitrust intervention to delay the introduction of a new information-based product like consumers’ enhanced access to orphan books through GBS.

III. GOOGLE’S ORPHAN WORKS PRODUCT AND THE EFFECT OF PROPOSED PRICE REGULATION

Commentators have expressed widespread agreement that the Google book project is a good idea. For example, Professor James Grimmelman states that “[t]he project will be immensely good for society, and the proposed deal is a fair one for Google, for authors, and for publishers.”¹⁵ From an

¹⁴ See Paul L. Joskow & Nancy L. Rose, *The Effects of Economic Regulation*, 2 HANDBOOK OF INDUSTRIAL ORGANIZATION 1449 (1989). Sharon Oster and John Quigley did find that regulation in the construction industry retarded diffusion of techniques, but they did not estimate the loss to consumer welfare from such regulation. See Sharon M. Oster & John M. Quigley, *Regulatory Barriers to the Diffusion of Innovation: Some Evidence from Building Codes*, 8 BELL J. ECON. 361 (1977).

¹⁵ James Grimmelman, *How to Fix the Google Book Search Settlement*, at 1, available at http://works.bepress.com/cgi/viewcontent.cgi?article=1022&context=james_grimmelman.

economist's perspective, Google's new platform for accessing books is an extraordinary new product. The ability to search and access all books—using GBS without waiting for a book to be recalled or procured by inter-library loan—makes research significantly more productive. A present-day Karl Marx need not walk through the London rain each day to sit in the reading room of the British Library, but instead he or she will be able to access all the necessary books from a garret in Notting Hill or Mumbai.

Despite their recognition of these benefits from GBS, some academic commentators have expressed concerns over the structure of the settlement into which Google has entered.¹⁶ We principally examine here the concerns of Professors James Grimmelman, Randal Picker, Robert Darnton, and Pamela Samuelson.¹⁷ From our viewpoint, which is informed by numerous encounters with merger investigations and other regulatory matters with the Antitrust Division and Federal Trade Commission, an improvement in consumer welfare and economic efficiency should be the goal of the antitrust agencies' review process. An alternative viewpoint, to which we do not subscribe, is to use antitrust law to try to design the "best" of all possible outcomes. However, given the inherent uncertainty of future economic outcomes and the divergent views of different economic parties, the goal of the "best" often seems to be an obstacle to obtaining actual improvements in economic welfare. This logical fallacy is so common in policy making that a maxim attributed to Voltaire has become a cliché in Washington to describe it: "making the perfect the enemy of the good." Nevertheless, we now consider the settlement between the plaintiffs and Google and the resulting concerns of various commentators who regard the settlement as imperfect.

A. Concerns Arising from Orphan Books

Critics of the settlement appear to be most concerned with the settlement's treatment of orphan books—books that retain their copyright but for which the rights holders are unknown or cannot be found.¹⁸

¹⁶ See, e.g., *id.* ("The public interest demands . . . that the settlement be modified.")

¹⁷ *Id.*; Randal C. Picker, *The Google Book Search Settlement: A New Orphan-Works Monopoly?*, 5 J. COMPETITION L. & ECON. 383 (2009); Robert Darnton, *Google and the Future of Books*, N.Y. REV. BOOKS, Feb. 12, 2009, available at <http://www.nybooks.com/articles/22281>; Pamela Samuelson, *Legally Speaking: The Dead Souls of the Google Booksearch Settlement*, O'REILLY RADAR, Apr. 17, 2009, available at <http://radar.oreilly.com/2009/04/legally-speaking-the-dead-soul.html>; Pamela Samuelson, *Reflections on the Google Book Settlement*, Presentation from OCLC/Kilgour Lecture, UNC (Apr. 14 2009), available at <http://www.slideshare.net/naypinya/reflections-on-the-google-book-search-settlement-by-pamela-samuelson>.

¹⁸ Many books' copyrights are no longer in force. No problems arise with the copying or use of these books because they have entered the public domain. Indeed, GBS will permit a user to download a PDF copy of the book, much as a digital book reader or PC user can download an out-of-copyright book for free from Project Gutenberg.

How numerous are orphan books? Considerable uncertainty exists about the actual number of orphan books, with most estimates (including our estimate) based on a number of assumptions. We give some estimates, but the actual number of orphan books does not significantly affect our subsequent economic analysis. Professor Peter Hirtle estimates the percentage of orphan books to be 12 percent.¹⁹ Professor Samuelson states that 70 percent of books are in copyright but out of print.²⁰ Professor Samuelson states that most of the in-copyright but out-of-print books are “orphan works” for which the rights holder cannot be located.²¹ However, if one uses Professor Hirtle’s assumption (based on a random trial by Denise Covey) that the majority of publishers can be found, one finds that 16 percent of books are orphan books based on Professor Samuelson’s 70 percent out-of-print estimate. We estimate that, as an upper bound, approximately 40 percent of the books that Google has copied remain in copyright but are out of print.²² Again using Professor Hirtle’s assumption based on a random trial, we estimate that 9 percent are orphan books. Whatever estimate is used, this percentage of orphan books will decrease as copyright owners come forward and claim works that currently have an uncertain copyright status.

Any copyright holder of an orphan book can step forward and opt out of the GBS settlement. Once so identified, the orphan book ceases to be an orphan. In Dickens, orphans often find their parents. In GBS, orphan books will find their readers and their parents (authors) if the search technology goes forward. Consequently, we expect a significant number of copyright owners to identify themselves in the future. The settlement provides funding to a newly created Books Rights Registry (BRR) expressly to locate copyright holders so as to reduce the number of orphans. Orphans finding readers creates an economic incentive for authors (parents) to come forward and claim their progeny, because authors will receive payment for use of their books. Thus, the GBS and associated BRR should significantly decrease the proportion of orphan books over time.

¹⁹ Peter Hirtle, *Why the Google Books Settlement is better than orphan works legislation*, LIBRARY-LAW BLOG, May 27, 2009, available at <http://blog.librarylaw.com/librarylaw/2009/05/why-the-google-books-settlement-is-better-than-orphan-works-legislation.html>. Professor Hirtle estimates that 54 percent of books published since 1923 retain copyright but are out of print. *Id.*

²⁰ Samuelson, *Legally Speaking*, *supra* note 17, at 1.

²¹ *Id.* Professor Samuelson fails to take account of the fact that a large proportion of publishers can be located as Hirtle explains.

²² We derive this estimate in the following way. Of the seven million works that Google had scanned as of the last report, about one million are in the public domain, one million are in print, and the remaining five million have an uncertain copyright status. Over 85 percent of copyrighted works before 1978 were not renewed and are now in the public domain. See U.S. COPYRIGHT OFFICE, REPORT ON ORPHAN WORKS 43–44 (2006). If we assume that an upper bound of pre-1978 books is 50 percent of the five million uncertain copyright books, we estimate the result that 41 percent are in copyright but out-of-print books.

Although orphan books may be neglected and out of print, they nonetheless may be useful to scholarly research, especially if they are easy to research—which is precisely the function that GBS will provide. Many of these books are research monographs that receive very little attention and have been out of print for decades. Sophisticated use of the new searching functionality that GBS makes possible may allow for new scholarly discoveries. The marginal benefit over the status quo will be greatest for those researchers who are not at top-tier research universities that have comprehensive libraries (such as Harvard or the University of Michigan) or who do not live near cities such as Washington or New York where large research libraries are located. These scholars will have immediate access to all the material required for their research, and it will be available from their PC, digital book reader, or library-based terminal.

Although the idea of a virtual price is useful to conceptualize the value that GBS creates by increasing access to out-of-print books, we find it difficult to determine the virtual price for increased access. Perhaps \$1 per search through an orphan book (the cost of a coffee or soda) or perhaps \$3 (the cost of a Starbucks cappuccino) is in the correct range. An alternative approximation of value is the cost of a plane ticket plus living expenses for a summer spent doing research in Washington at the Library of Congress—an expenditure of about \$3000 for three months of unlimited searching. Whatever virtual price is used for the value of a search of an orphan book, the gain in economic efficiency and consumer welfare will be significant.

GBS provides access to orphan works that would not be available to many researchers otherwise. This orphan-works access has all the classic features of a new good. The settlement gives Google a release to use the orphan books. Commentators such as Professor Picker and Professor Grimmelmann worry that the settlement grants Google an initial monopoly on the use of orphan books and might be used in the future as an exclusionary device to keep subsequent entrants from having access to orphan books.²³ We now evaluate these concerns, as well as related concerns of other commentators.

B. Nonexclusive Access to Orphan Books

The settlement provides Google with nonexclusive access to orphan books. If a book ceases to be an orphan, a potential user (such as a library) can contract directly with the rights holder. Further, GBS gives information on the nearby libraries that hold the work, so a potential user can travel to the library or obtain the book by inter-library loan. For example, for a book on Dickens and orphans, GBS lists twelve libraries within 25 miles of MIT. It also lists a copy at the University of Western Australia in Perth, a trip of

²³ See, e.g., Picker, *supra* note 17, at 386; Grimmelmann, *supra* note 15, at 14.

11,600 miles for those scholars in Cambridge who have large research grants and a desire to visit Perth. It bears emphasis that other companies can also embark on Google's road of scanning orphan works and providing access to them through fair use.

But what if Google decides to charge prices that are "too high" or even charges "monopoly prices"? For example, Professor Robert Darnton, the director of the Harvard University Library, claims that Google will "entice subscribers with low initial rates and then, once they are hooked, ratchet up the rates as high as the traffic will bear."²⁴ He claims that the Google platform will have the economic characteristics of a railroad or "essential facility" that will require regulatory agencies or even a court to intervene.²⁵ The American Library Association (ALA) similarly claims that GBS resembles an "essential facility."²⁶ In a response, Professor Paul Courant—University Librarian and Dean of Libraries at the University of Michigan and an economics professor—rejects Professor Darnton's monopoly-power claims and discusses why it is unlikely that Google will employ "rapacious pricing strategies used by many publishers of current scientific literature."²⁷ Does the possibility of "monopoly prices" merit the court's rejection of the GBS settlement? Does that possibility merit regulatory intervention by the Antitrust Division, such that judicial approval of the GBS settlement would be conditioned on the plaintiffs' and Google's consent to having their digitized library of orphans books declared an essential facility, to which access would be mandated at a regulated price? We think not.

C. Adverse Effects of Regulation

If the court and the Antitrust Division seek to maximize consumer welfare, as we presume they do, then a regulatory outcome for GBS would be a bad idea. Other competitors, such as Microsoft, entered the book platform business and decided to exit. Nonetheless, Professor Darnton claims that "Google *alone* has the wealth to digitize on a massive scale."²⁸ The ALA similarly claims that Google will not face a competing digital library for the "foreseeable future."²⁹ We find these statements very odd. Many companies could invest, say, \$500 million to \$1 billion for a book project because it combines attractive search opportunities and book sales. Yahoo with a market capitalization of \$23 billion and Amazon with a market capitalization

²⁴ Darnton, *supra* note 17.

²⁵ *Id.*

²⁶ American Library Association Comments on the Proposed Settlement, May 4, 2009, at 3 [hereinafter *ALA Comments*].

²⁷ Paul Courant, *Google and Books: An Exchange*, N.Y. REV. BOOKS, Mar. 26, 2009, available at <http://www.nybooks.com/articles/22496>.

²⁸ Darnton, *supra* note 17 (emphasis added).

²⁹ *ALA Comments*, *supra* note 26, at 2.

of \$38 billion both have economic incentives to enter, alone or as a joint venture. Yahoo and Amazon only become more likely potential entrants if GBS succeeds in creating significant demand for online book search. No technological reason exists that creates a barrier to entry in the future.

A further competitive constraint on Google's pricing currently exists because of the ability of researchers to access books in physical form from libraries. GBS directs readers to libraries near their location and to used book stores, where the book can be purchased. Amazon also is a ready source from which to buy out-of-print books. Alternatively, Google will offer consumers the ability to purchase online access to a book. We expect that the book will be downloadable to a book reader or similar device (perhaps after being first downloaded to a PC), such that the convenience to the customer will be increased.

By scanning books and developing GBS, Google will create all value above the value that consumers derive from having physical access to orphan books. From an economic perspective, Google should be able to capture some, or even all, of the extra value that it has created. In practice, however, Google will not be able to capture all of the value that it has created because doing so would require it to engage in first-degree price discrimination.

Price discrimination occurs when consumer *A* pays a firm a different price for a particular good than consumer *B*, even though the marginal cost of producing the good is the same for both consumers.³⁰ There are three necessary conditions for price discrimination.³¹ First, the firm faces a downward-sloping demand curve. Second, arbitrage (that is, resale) cannot profitably occur. Third, the firm must know or be able to infer consumers' willingness to pay for each unit, and this willingness to pay must vary across consumers or units.

If a firm has sufficient information to charge a different price to each consumer, it can achieve first-degree (or "perfect") price discrimination,³² which leaves no consumer surplus. One cannot criticize first-degree price discrimination on grounds of allocative inefficiency, because it increases social welfare by increasing output to the level that would result in a competitive market.³³ In the case of GBS, first-degree price discrimination would involve each consumer paying his or her reservation price—the most that the consumer is willing to pay to search for an orphan book. It would,

³⁰ See, e.g., GEORGE J. STIGLER, *THE THEORY OF PRICE* 210–11 (Macmillan 4th ed. 1987); see also Hal R. Varian, *Price Discrimination*, in 1 *HANDBOOK OF INDUSTRIAL ORGANIZATION* 597, 619–22 (Richard Schmalensee & Robert Willig eds., North Holland 1989).

³¹ See, e.g., DENNIS W. CARLTON & JEFFREY M. PERLOFF, *MODERN INDUSTRIAL ORGANIZATION* 294 (4th ed. 2005).

³² The terminology is credited to Pigou. See A.C. PIGOU, *THE ECONOMICS OF WELFARE* 240–46 (1st ed. 1920); see also JOAN ROBINSON, *THE ECONOMICS OF IMPERFECT COMPETITION* 186–87 & n.1 (1933).

³³ See, e.g., HAL R. VARIAN, *MICROECONOMIC ANALYSIS* 243–44 (3d ed. 1992).

however, be impossible for Google to gather sufficient information to ascertain the different reservation prices of its many book-search customers, nor has there been any suggestion that it will seek to do so. Google therefore will be unable to capture all of the welfare gains from its creation of GBS.

It is debatable whether Google would attempt third-degree discrimination, which would segment consumers not by their reservation prices into infinitesimally small groups, but rather into larger and less refined groups.³⁴ The risk to Google of attempting third-degree price discrimination is that, in a low-marginal-cost business, a firm needs to be correct over 90 percent of the time in setting different prices to achieve higher profits than it would by using a single non-discriminatory price.³⁵ Book search has almost zero marginal cost, because an extra search adds very little incremental cost except in terms of computer resources during peak periods of use.

Economists know that price discrimination can increase output, and in these circumstances it can also increase consumer welfare. Consequently, many economists and antitrust scholars believe—as we do—that an output increase from price discrimination should not be prohibited even if it cannot be proven that consumer welfare has increased. The leading antitrust treatise, for example, observes that “[m]ost [quantity discounts] are output-increasing and thus at least presumptively pro-competitive.”³⁶ Thus, although we consider price discrimination unlikely, we think that it would be a mistake to forbid price discrimination as Professor Grimmelmann recommends.³⁷ Price discrimination is observed and allowed in all sectors of the economy, especially for services. So no economic reason exists to prohibit it for GBS.

D. Adverse Effects of the Free Option Arising from Regulation

Nobel laureate Sir John Hicks would tell his students at Oxford, “When you make an investment, you are giving a hostage to fortune.” That maxim applies to Google’s book project. When a firm undertakes new investments in an information-based good, most of that investment is sunk. If the new service fails, the investment is gone forever. This sunk nature of the investment makes the investment much more risky compared with many other investments in other industries.

³⁴ See, e.g., CARLTON & PERLOFF, *supra* note 31, at 303. Second-degree price discrimination involves nonlinear pricing (such as a classic two-part tariff based on access and usage), *id.* at 313–14, whereas third-degree price discrimination charges different groups different prices. *Id.* at 303.

³⁵ See Jerry A. Hausman, Gregory K. Leonard & Christopher A. Velturo, *Market Definition Under Price Discrimination*, 64 ANTITRUST L.J. 367 (1996).

³⁶ See, e.g., PHILIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶ 749a at 307 (3d ed. 2008). Quantity discounts are a form of second-degree price discrimination.

³⁷ Grimmelmann, *supra* note 15, at 16.

Regulation increases this risk. Economic regulation of new products has very poor economic incentive properties. New products are inherently risky to introduce and, as noted, usually fail to yield any economic return. From an economic perspective, regulation gives competitors and consumers a free option: the right (but not the obligation) to purchase the use of the incumbent's infrastructure investment at a regulated price. Such options decrease incentives to make the risky investment in the first place. If, for example, GBS fails to create sufficient demand to be profitable, Google will be unable to recover its sunk investment in scanning. Potential future competitors have not made an investment in the project, nor have potential future consumers. Thus, if the project is not successful, only Google stockholders will suffer, not these potential competitors and consumers. By setting a maximum price, regulation decreases the expected return from a risky project and thus decreases economic incentives to undertake the project.

Price regulation requires demand forecasts used in future revenue projections, and these forecasts are always subject to uncertainty. Here, we focus on demand and revenue uncertainty. (Other types of uncertainty, such as cost uncertainty, also exist.) Because no one can predict the future, a band of uncertainty always surrounds a forecast. In a regulated market, worse-than-expected outcomes will typically not attract competitors, although better-than-expected outcomes are likely to attract entrants. Thus, the consequences of the band of uncertainty will be asymmetric, and the actual expected value of future revenues and profits will be less than the mean forecasts because of the asymmetric nature of market entry. The regulator's forecasts will be upward-biased for future revenues because of the failure to allow for the effects of the possible future competitive entry that can occur in a contestable market. This asymmetric risk arising from regulation causes a truncation of returns as shown in Figure 1.³⁸

Here, the regulator sets the regulated price at c , which truncates the returns to the right of c . The expected value of the investment is always decreased, so that at the margin less investment in risky new projects will occur if regulation is expected. Thus, regulation decreases investment by firms when the outcome is uncertain.

This decrease in investment occurs because of the transfer of property rights from the incumbent to the new entrant or consumers when "times are good" (the outcome to the right of point c). Thus, the incumbent bears the asymmetric risk of expropriation through regulation. Some (but not all) regulators

³⁸ Hausman first discussed the problem of the free option arising from asymmetric outcomes with regulation under uncertainty in Jerry A. Hausman, *Valuing the Effect of Regulation on New Services in Telecommunications*, 1997 BROOKINGS PAPERS ON ECON. ACTIVITY: MICROECONOMICS 1. See also Jerry A. Hausman & J. Gregory Sidak, *A Consumer-Welfare Approach to the Mandatory Unbundling of Telecommunications Networks*, 109 YALE L.J. 417 (1999). This problem has now been widely recognized and discussed in a number of different contexts.

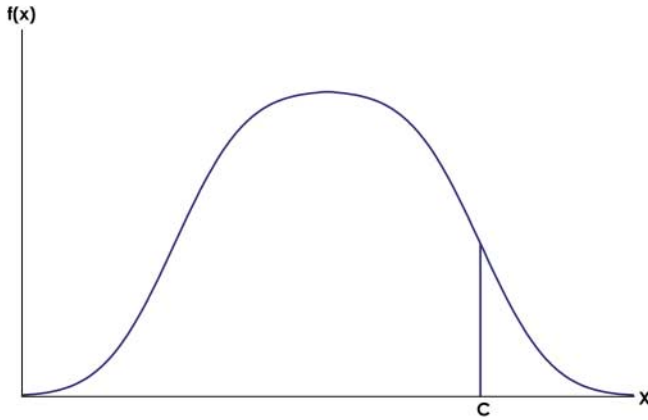


Figure 1. Truncated returns caused by regulation.

have recognized this problem.³⁹ For example, the FCC does not regulate investment in new services such as Verizon’s fiber-optic network, FiOS.⁴⁰

Regulation requires the incumbent to give a free option to subsequent entrants to purchase the use of the incumbent’s infrastructure investment at a regulated price. The regulated price of mandatory access is necessarily less than the price that would emerge from voluntary exchange between the incumbent and the access seeker. Typically, when one purchases a call option (for example, a call option for Intel stock at \$25 on, say, July 1, 2010) the price is positive because the call option allows its holder to purchase when times are good (Intel stock exceeds \$25 at expiration), but it does not require its holder to purchase when times are bad. The potential entrant pays nothing for the option of getting to wait until much of the uncertainty is resolved and deciding to invest only when “times are good.” The potential entrant makes no upfront investment, which is significantly riskier than an investment at a subsequent time when and if the incumbent’s project proves to be successful.

Instead of undertaking the entire risk of the investment, the subsequent entrant faces only the right-hand tail of Figure 1 and does not compensate the

³⁹ In 2003, in its *Triennial Review Order*, the FCC decided to refrain on a nationwide basis from requiring incumbent local exchange carriers to undertake mandatory unbundling of fiber-to-the-home (FTTH) loops. Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers, 18 F.C.C.R. 16,978, 17,142 (2003) [hereinafter *Triennial Review Order*]. The FCC did so to preserve incentives for both incumbents and entrants to invest in new fiber-optic networks. *Id.* at 17,121–22, 17,141–53. The U.S. Court of Appeals for the D.C. Circuit affirmed this aspect of the *Triennial Review Order*. See *U.S. Telecom Ass’n v. FCC*, 359 F.3d 554, 588 (D.C. Cir. 2004).

⁴⁰ The academic literature on the economics of public utility regulation has recognized the risk of asymmetric treatment of regulatory outcomes since at least the publication of A. LAWRENCE KOLBE, WILLIAM B. TYE & STEWART C. MEYERS, *REGULATORY RISK: ECONOMIC PRINCIPLES AND APPLICATIONS TO NATURAL GAS PIPELINES AND OTHER INDUSTRIES* (Springer 1993).

incumbent investor for the asymmetric risk. Because the free option granted by the regulator shifts value from the initial investor to the subsequent entrant, the value of a new investment will decrease and consequently decrease overall investment to develop other risky new goods and services as well. Further, potential entrants will use the free option to wait for the resolution of uncertainty. Overall investment by both the original firm and subsequent entrants will fall below the efficient level. Thus, price regulation often leads to “too little” creation of new goods and services, which are a major source of increase in consumer welfare and economic efficiency. Using this economic framework, we now consider the commentators’ specific proposals.

E. Adverse Effects of a Regulated Price

Google will offer institutional subscriptions, based on the number of users, that permit access to the entire set of digital books but limit the user’s ability to reconstruct the entire book. Professor Picker raises no concerns with respect to the limitations that Google has placed on the use of the digital files that it has created by scanning orphan books. Professor Picker and other critics of the settlement, however, claim that the price of these institutional subscriptions may be “monopoly prices.”⁴¹ Although Professor Picker recognizes that antitrust law typically does not set prices, his concern arises because, in his words, Google’s “‘monopoly’ status is seemingly being created by the ability of the rightsholders to act collectively.”⁴² He believes that more competition would result if the rights holders needed to act separately. However, Professor Picker does not consider the loss in economic efficiency and consumer welfare that would occur if GBS could not effect agreements with the rights holders acting individually.

Indeed, without some price, the product will not be available at all. Consumer welfare and economic efficiency will increase significantly with the new product of GBS. The settlement determines a price, and, in the absence of the settlement, we do not see how GBS can go forward. Given the non-exclusivity of the settlement terms, subsequent entrants will not face legal barriers to entry. We discuss economic barriers below and conclude that, by concentrating only on orphan works, Professor Picker has missed the economic incentives for future agreement between the plaintiffs and entrants to occur.

F. Consumer Purchases with GBS

The other type of access is Consumer Purchases. Under the terms of the settlement, online searching with GBS will be unlimited, but copying and

⁴¹ Picker, *supra* note 17, at 397.

⁴² *Id.*

printing are restricted so that the book cannot be fully reconstructed. Pricing of books will be determined either by the rights holder or by a “settlement controlled price” using an algorithm applied by Google. Professor Picker finds this settlement controlled price problematic because he worries that the outcome would differ from the outcome that “would emerge from normal, decentralized competition.”⁴³ He especially dislikes the “pricing algorithm” that Google will design to maximize revenue for each rights holder. Professor Picker claims that competition drives prices down to costs and does not maximize revenues.⁴⁴

We do not agree with Professor Picker’s concerns. He is incorrect that, for a differentiated product (such as a book), competition drives price down to cost. For example, the cost of creating another copy of software is near zero, regardless of whether it is a very successful application (like McAfee anti-virus software or TurboTax software) or an unsuccessful computer game that few people know about or purchase. Indeed, every producer of a differentiated product attempts to maximize profits, and if marginal cost is near zero, the resulting outcome is approximately equal to maximizing revenue. If Google could gather sufficient information to charge individual customer-based prices, the revenues and profits could be higher than in the absence of that information. However, as we discussed above, the information requirements for price discrimination are extremely high for that strategy to be successful.

G. The Effects of the Settlement on Economic Incentives

In terms of orphan books, the economic question that we consider most important is the incentive properties arising from the settlement. Orphan books currently exist but are little used. Their current economic value, before GBS, is near zero, as evidenced by the fact that insufficient demand exists for them to remain in print. Google will invest in scanning orphan books and compiling them into a digital library, which will significantly increase their use. Thus, GBS will create economic value for the orphan books. No change in the production of future books will occur.

The establishment of the BRR will help authors of future works to identify themselves so as to receive their royalty payments. Any division of the revenues arising from the use of orphan books between Google and rights holders is a division of rents with no effect on economic efficiency. We expect that both sides bargained in the settlement negotiations, but antitrust law is not intended to, and should not, be used to divide rents. One could object and say that Google should not be allowed to charge “too high”

⁴³ *Id.* at 398.

⁴⁴ *Id.* (“Competition drives down prices to costs and does not have the effect of maximizing revenues to individual competitors.”).

a price for access to the orphan books. However, the point of Figure 1 is that price regulation has an adverse effect on investment in product innovation because it truncates the economic returns on successful new goods. Further, as we explain below, because the settlement creates no monopoly or exclusivity, the provider should be unconstrained in determination of its pricing, as is the usual situation with a new good or service.

IV. SUBSEQUENT COMPETITIVE ENTRY AND POSSIBLE EXCLUSION

Price regulation has worked poorly in many sectors of the U.S. economy, especially when technology changes rapidly. Most economists agree that entry—as opposed to price regulation—is the solution to potential competitive problems. Professor Picker concentrates on potential entry from firms obtaining licenses for orphan books.⁴⁵ His focus is the most-favored nation (MFN) clause in the settlement, which specifies that, in limited respects, rights holders of orphan books will not treat Google worse than subsequent entrants.

A. The Effects of the MFN Clause on Economic Incentives

Economists recognize that, in different circumstances, MFN clauses can enhance efficiency or limit competition.⁴⁶ In the context of a new product, an MFN clause may be important to promote initial entry and production of the new good. The original entrant takes the risk of demonstrating that sufficient demand exists to make the new product successful. If the original entrant knows that a subsequent entrant can bargain for a better price than the original entrant paid for key inputs (such as the right to scan orphan books), no initial entry may occur. If entry does occur, the first entrant will not invest as much in promoting the new good because it knows that a subsequent entrant can get a lower price for the inputs required to produce that good. Indeed, in some situations, it would be procompetitive to limit subsequent entry for a number of years so that later entrants do not take a free ride on the investments of the original entrant. By comparison, the patent system explicitly limits entry for a number of years as a tradeoff to reward innovation and investment.

Professor Samuelson claims that no other firm can get an equivalent license to Google's without scanning books and hoping for a similar class action lawsuit, which might be too risky.⁴⁷ She also claims that Google will have a monopoly position.⁴⁸ We fail to understand these claims because

⁴⁵ Picker, *supra* note 17, at 402–06.

⁴⁶ See, e.g., Jonathan B. Baker, *Vertical Restraints with Horizontal Consequences: Competitive Effects of “Most-Favored-Customer” Clauses*, 64 ANTITRUST L.J. 517 (1996).

⁴⁷ Samuelson, *Reflections*, *supra* note 17, slide 14.

⁴⁸ Samuelson, *Legally Speaking*, *supra* note 17, at 3.

the settlement allows for subsequent licenses so long as the MFN clause is satisfied. Moreover, Professor Samuelson acknowledges that the Registry can license other firms,⁴⁹ which seems inconsistent with her claims about monopoly and the implausibility of subsequent entry. We would not expect, and courts do not presume, parties to fill carefully drafted commercial contracts with statements addressing factual impossibilities.

Professor Picker recommends that the court reviewing the settlement require rights holders to license the rights to use orphan books in the future.⁵⁰ Otherwise, he argues, the plaintiffs will not have an economic incentive to license subsequent entrants because competition will drive down revenues and decrease income. Professor Picker reaches this conclusion by reasoning that the settlement creates market power that the plaintiffs will use to stop subsequent entry. Professor Samuelson also has concerns over the economic incentives for subsequent licenses, and she raises the possibility that the Antitrust Division could require Google to license other firms to scan orphan books.⁵¹

Professor Grimmelmann has a similar concern, although he thinks that Google may not face future competition because of economies of scale and network effects.⁵² He proposes to remove the MFN clause from the settlement. Professors Picker and Grimmelmann both state that subsequent entrants should receive the same license terms from rights holders that Google receives.⁵³ It bears emphasis, however, that the MFN clause affects only agreements that give *better* terms to subsequent entrants than the plaintiffs have given Google. As we now discuss, the MFN does not deter entry, and the plaintiffs will have an economic incentive to license future entrants, contrary to the commentators' concerns. The commentators have not correctly analyzed the economic incentives underlying future entry.

B. Granting Subsequent Entrants a Free Option

This compulsory licensing proposal of Professors Picker and Grimmelmann is equivalent to granting a free option to subsequent entrants. Professor Picker is aware of potential economic incentive problems that arise here.⁵⁴ Professor Grimmelmann, however, seems unaware of those problems.

An elementary result of option theory is that the value of an option increases with the amount of uncertainty (variance) in the distribution of the underlying returns. This determinant of the value of an option is especially important when the success of a new product is uncertain.

⁴⁹ Samuelson, *Reflections*, *supra* note 17, slide 16.

⁵⁰ Picker, *supra* note 17, at 408–09.

⁵¹ Samuelson, *Reflections*, *supra* note 17, slide 16.

⁵² Grimmelmann, *supra* note 15, at 14.

⁵³ Picker, *supra* note 17, at 405; Grimmelmann, *supra* note 15, at 15.

⁵⁴ See Picker, *supra* note 17, at 408–09.

Alternatively, Google could receive exclusive access to the orphan books for a limited time period to provide incentives for the GBS project, but some decision then would need to be made about the appropriate duration of exclusivity. (The same problem arises for determining the optimal life of a patent or copyright. Economic and legal research has analyzed this problem, but no consensus has emerged in term of the appropriate policy.) Our conclusion is that a wide range of possible settlements potentially exists with differing economic incentive properties. None of the alternative provisions is, however, superior in its probable effect on economic efficiency and consumer welfare.

Thus, we do not see any reason for prospective action by the court at the current time. It is not at all clear that Google will be able to exercise market power in the future. Suppose that the plaintiffs in the future did sign another license with a subsequent entrant, and that the license gave the plaintiffs a share of revenues greater than the 63 percent that they will receive from Google. The plaintiffs might well have an economic incentive to enter into such an agreement: the higher revenue percentage could offset the price-decreasing effect of competition, and the new entrant could also “expand the market” by stimulating demand that Google had not attained. The subsequent entrant also might find the deal attractive because, in its attempt to expand the market, it would face far less uncertainty than Google faced before book search became a successful new product.

Indeed, this outcome is common when a patent holder that manufactures a product licenses firms that will be competitors but will expand the market. An example is SanDisk, a firm that owns much of the intellectual property for flash memory used in cell phones, iPods, and memory sticks that are widely used to transfer data among computers. By licensing its intellectual property to Samsung and other large memory firms, SanDisk has stimulated demand for flash memory chips beyond what it could have achieved alone.⁵⁵

C. Economic Incentives for the Plaintiffs to Make Agreements with Subsequent Entrants

An even more important factor contributing to the willingness of the plaintiffs to license subsequent entrants to use its books is that the plaintiffs are active rights holders. By definition, the rights holders for the orphan books cannot be found. The plaintiffs would have a significant economic incentive to sign an agreement with a subsequent entrant into book search for the use of the orphan books because that entrant would also increase demand for in-print books that many members have authored or will author in the future. That increased demand will lead to greater royalty payment to

⁵⁵ See, e.g., Lance Whitney, *SanDisk, Samsung renew flash memory pacts*, CNET NEWS, May 27, 2009, available at http://news.cnet.com/8301-1001_3-10249949-92.html.

rights holders of these in-print books. Thus, the economic incentives of the plaintiffs will be to set a lower price for use of the orphan books than the “monopoly price” posited by Professor Picker because of the additional revenue that its active members will receive from the increase in demand for non-orphan books still under copyright or for future books. Professor Picker and other commentators have missed this fundamental economic point because they have concentrated only on the revenue from the orphan books and have neglected to consider the revenue to active rights holders from the increased demand that would arise if additional platforms were to offer book search.⁵⁶

An example may be helpful. A publisher of a new book could offer Amazon exclusive rights to sell the book on the web. Alternatively, the publisher could hold an auction for the exclusive rights. The publisher would achieve a higher price per book than if it sold nonexclusive rights to Amazon, Barnes and Noble, and other web-based book platforms. However, we do not observe this behavior in fact. Instead, publishers sell to all of these platforms. The economic rationale for the rights holder to do so is that the increase in profits arising from the increased demand of consumers browsing across multiple book platforms exceeds the profits arising from a higher price on a smaller quantity of books sold.

In economic terms, additional platforms will shift the demand curve outwards, creating greater demand and greater royalties for the plaintiffs. Professor Picker and other commentators have considered only movements along a given demand curve. Consequently, they misunderstand the economic incentives and the economic effects of outward shifts of the demand curve. Further, outward shifts of the demand curve typically increase consumer welfare and economic efficiency.

We therefore recommend that the GBS settlement be permitted to operate in its current form and that, if problems subsequently arise, the court be petitioned to change the settlement in a narrowly tailored manner after a review of the outcomes actually observed. If, to the contrary, the court imposes *ex ante* regulation at the current time, it will distort economic incentives and create a poor precedent for other firms to invest in the future

⁵⁶ This price-reducing effect arises from economies of scope and does not require complementarity of demand between orphan books and books by active rights holders. Even with independence of demand, the ability to use a shared infrastructure to sell both orphan books and active books reduces the Authors Guild’s profit-maximizing price for orphan books under conventional microeconomic pricing analysis. Of course, if orphan books and active books actually are demand complements, then the incentive for the Authors Guild to reduce the price of orphan books will be even stronger. See Dennis L. Weisman, *Assessing Market Power: The Trade-off Between Market Concentration and Multi-Market Participation*, 1 J. COMPETITION L. & ECON. 339 (2005); Dennis L. Weisman, *When Can Regulation Defer to Competition for Constraining Market Power?: Complements and Critical Elasticities*, 2 J. COMPETITION L. & ECON. 101 (2006).

introduction of new products that are based, in part, on intellectual content from rights holders.

V. OTHER CONCERNS: CARTELIZATION AND TECHNICAL CHANGE

Professor Grimmelmann worries that the BRR may create an additional antitrust problem. His concern is that a book cartel may occur, an outcome that we find to be unlikely. The Registry will receive initial funding from Google but will be, as noted, an independent, nonprofit organization designed to locate rights holders and to collect and distribute money earned as part of the settlement. The Registry is designed to increase the known public domain, to decrease the number of orphan books in the future by maintaining an accurate database of rights holders' information, and to lower transactions costs for future license arrangements.

A. Is a Book Cartel Likely?

Professor Grimmelmann worries that the Registry may facilitate the emergence of a cartel that fixes the price of books.⁵⁷ The cartelization of books, however, seems quite unlikely, and the existence of the Registry does not increase the probability that a book cartel will emerge. Books are highly differentiated products sold by numerous book publishers, and these factors severely limit the possibility that a cartel could form and be stable.⁵⁸

Consider the book by Harvard president Drew Faust, *A Sacred Circle: The Dilemma of the Intellectual in the Old South, 1840-1860* (University of Pennsylvania Press 1986) and a book by Boston author Robert Parker in the Spenser detective series, *Valediction* (Dell Publishing 1992), set on the Harvard campus. (The first book is out of print, but it is not an orphan book because the location of the president of Harvard is known.) Differentiation between these products is significant. In discussing coordinated interaction and possible cartels, the Horizontal Merger Guidelines describe three necessary components: reaching an agreement on terms, the ability to detect cheating, and successful punishment of cheating.⁵⁹ Reaching terms of agreement for differentiated products is difficult given the dissimilar demand curves for historical monographs and popular detective series. Indeed, the extent of product homogeneity is an economic factor that the Guidelines emphasize in terms of reaching agreement.⁶⁰

⁵⁷ Grimmelmann, *supra* note 15, at 12–13.

⁵⁸ See, e.g., RICHARD A. POSNER, *ANTITRUST LAW* 69–70, 75 (University of Chicago 2d ed. 2001).

⁵⁹ Department of Justice and Federal Trade Commission, Horizontal Merger Guidelines ¶¶ 2.1–2.12 (rev. Apr. 8, 1997).

⁶⁰ *Id.* ¶ 2.1.

Furthermore, copyright holders have an incentive to cheat outside the confines of a potential Registry agreement, and we see no suitable punishment mechanism by which a cartel could deter such behavior. Under the settlement, each copyright holder can choose its preferred price for Consumer Purchase. Many authors, especially academics, do not write books to make money. By lowering prices and cheating on the cartel, these authors can increase demand for their books without suffering any economics punishment.

An additional point is that, for both consumer purchases and institutional subscriptions, the settlement covers a small portion of the total book sales. The settlement applies only to books in existence as of January 2009. So even if all the authors suddenly elected to sell only through Google (an absurdly unlikely possibility that would entail abandoning bricks-and-mortar retailers, Amazon, and other retailers), and even if cartel cheating were punishable by death, we would still be addressing only a small portion of book sales in terms of revenues. On all the various *New York Times* best seller lists, very few books are published before January 2009. The institutional subscription will undoubtedly be important, but even that is constrained by in-person library use, inter-library loans, and the free terminal access in each library. Moreover, the institutional subscription is a product that cannot exist unless some price is set; and, given that fact, antitrust has little to say about what the price should be.

Thus, for multiple reasons we do not see the Registry posing a danger of cartelization of the book industry. This conclusion finds particular support in the nonexclusivity that allows any book publisher to set an individual price for a given book.

B. Can Regulators or Courts Keep Pace with Technical Change?

Professor Samuelson's recommendation to stop potential problems arising from the Registry is to initiate continuing review by the Antitrust Division of all contracts into which the Registry enters. She argues that "antitrust oversight may be needed because the logic of the settlement makes likely that GBS/BRR may ultimately engage in monopolistic abuses."⁶¹ This recommendation is a distinctly bad idea.

Given the rapid technological change with respect to search and content access and use, Antitrust Division review would lead to significant delays as interested parties and affected constituencies intervened in the process to attempt to cause modifications of contracts in their favor or even to slow down the process to protect their interests. The result of the delays would be the loss of consumer welfare and economic efficiency that can never be

⁶¹ Samuelson, *Reflections*, *supra* note 17, slide 20. However, Professor Samuelson ultimately recommends the court not approve the settlement. *Id.* slide 21.

regained, even after a contract had been accepted as is or modified. Some innovative products may never come to market because the additional cost of Antitrust Division review and negotiation may be prohibitive.

Professor Grimmelmann is also concerned that Google may maintain a dominant economic position in book scanning because of economies of scale and network effects.⁶² He suggests that Google's book search engine should be required "to treat books scans put online by others on an evenhanded basis."⁶³ Again, this type of antitrust intervention has been proposed and has failed before. Four airlines developed computerized reservation systems (CRSs) in the 1980s, and their competitors brought antitrust suits claiming that bias in flight displays and high prices to use the CRSs violated antitrust law.⁶⁴ However, one person's "bias" may be another person's sophisticated search engine that takes account of past user behavior to provide a more useful list of ordered search results. Putting a regulator in charge of determining whether proposed changes in book-search algorithms will create "bias" that may damage competition would be a potential disaster because Google could not upgrade its search algorithms without the regulator's prior approval. Judging from the experience of the MFJ, that prior approval could take many months, if not years, even if the regulator had the expertise to determine how a changed search algorithm would affect future competition. Just as the regulatory delay in the introduction of cell phone service in the United States cost hundreds of billions of dollars of lost consumer welfare, so also would prior regulatory approval of Google's book-search algorithms delay the introduction of improved versions of GBS and cause substantial losses in consumer welfare.

The American Library Association recommends that, because of the "essential facility" nature of the digital library, the court review the pricing of an institutional subscription upon "any library or other possible institutional subscriber's" request.⁶⁵ The GBS, however, does not satisfy the legal test of an essential facility because, at a minimum, it is not economically infeasible to duplicate the service. Although the lower federal courts have flirted with the essential facilities doctrine, many antitrust scholars have criticized it as logically flawed.⁶⁶ In 2004, the Supreme Court said in *Trinko* that forced sharing of the facilities of unregulated firms, typified by *Aspen Skiing*, is at or near the "outer limits" of antitrust jurisprudence and not a

⁶² Grimmelmann, *supra* note 15, at 14.

⁶³ *Id.* at 15.

⁶⁴ Bias was claimed to arise when CRS owners listed their flights before the flights of their competitors. The Ninth Circuit ruled in favor of the CRS owners and against the complaining airlines in *Alaska Airlines, Inc. v. United Airlines, Inc.*, 948 F.2d 536 (9th Cir. 1991), *cert. denied*, 503 U.S. 977 (1992).

⁶⁵ *ALA Comments*, *supra* note 26, at 19.

⁶⁶ See, e.g., Philip Areeda, *Essential Facilities: An Epithet in Need of Limiting Principles*, 58 ANTITRUST L.J. 841 (1990); Abbott B. Lipsky, Jr. & J. Gregory Sidak, *Essential Facilities*, 51 STAN. L. REV. 1185 (1999).

favored approach.⁶⁷ The Court reiterated in *linkLine* in 2009 that judges deciding antitrust cases are not regulatory agencies with the expertise and resources to set regulated prices.⁶⁸ For that reason, courts typically refuse to do so. More important, courts do not have the required expertise to oversee industries when technology is rapidly changing.

The impossibility of judicial oversight of a technologically dynamic industry is epitomized by the experience of Judge Harold Greene, who oversaw the U.S. telecommunications industry from 1984 until 1996, when Congress passed the Telecommunications Act of 1996,⁶⁹ removing Judge Greene's oversight. Although Judge Greene did his best, the rapid pace of technical change caused technology adoption and new services to be retarded in the United States and telecommunications prices to be higher during the period in which he largely determined competition in the U.S. telecommunications industry. The loss of consumer welfare was in the billions of dollars.⁷⁰ The essential problem was that the introduction of fiber-optic cable and digital computer switches in 1976 fundamentally changed the technology, and the introduction of cell phones in 1984 fundamentally changed the framework of competition.⁷¹ In particular, it made a separate long-distance service technologically redundant, yet a separation of long-distance service and local exchange service was the MFJ's guiding principle.

Technical change waits for no judge, and the failure to adapt economic regulation to technical change can severely impair economic efficiency and consumer welfare. Similar losses in economic efficiency and consumer welfare arose from regulation of airlines and railroads. Although network industries such as telecommunications, energy, and transportation will never meet the economic ideal of perfect competition, imperfect competition typically has had a superior outcome to imperfect regulation by the courts or regulatory agencies over the past 35 years in the United States.

⁶⁷ *Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 415 (2004) (discussing *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585 (1985)).

⁶⁸ *Pacific Bell Tel. Co. v. linkLine Communications, Inc.*, 129 S. Ct. 1109, 1121 (2009).

⁶⁹ Telecommunications Act of 1996, Pub L No 104–104, 110 Stat 56.

⁷⁰ See Hausman, *Valuing the Effect of Regulation on New Services in Telecommunications*, *supra* note 38; Jerry A. Hausman, *Competition in Long Distance and Equipment Markets: Effects of the MFJ*, 16 J. MANAGERIAL & DECISION ECON. 365 (1995).

⁷¹ As an example, Judge Greene refused to allow the Bell operating cellular companies to provide their own long-distance service, but instead required cellular customers to purchase service from the long-distance companies that overcharged them by billions of dollars per year. Judge Greene applied the same restrictions to cellular networks as he applied to landline networks, which made no economic sense given the competitive framework of cellular telephony and the separation of cellular networks from landline networks. See, e.g., Hausman, Leonard & Velturo, *supra* note 35; Hausman, *Competition in Long Distance and Equipment Markets: Effects of the MFJ*, *supra* note 70.

VI. CONCLUSION

Technological change always creates winners and losers. AT&T and General Motors were two of the largest corporations in the United States for decades. AT&T no longer exists as the long-distance company it once was, and General Motors will continue to exist in part because U.S. taxpayers have become its involuntary shareholders. Research libraries in their current form, with their dependence on the physical use of books, will need to adapt to a new technological and economic environment. Electronic searching and instant downloading of text to PCs or a book reader is a superior technological solution to traveling to libraries, waiting for books to be transported from the stacks, or—even worse—waiting for a book to be returned or waiting for an inter-library loan. Most libraries and their users will benefit from GBS, and GBS in aggregate will make consumers better off, even though a generation of university librarians may need to adapt their operations to a changed world.

With the advent of GBS, researchers at small universities (such as Colgate and Dickinson) that lack the large endowments to finance libraries found at universities such as Harvard and Yale will have a significantly improved ability to do research. We consider this effect to be very important, as it enables scholarly research to take place in many more locations, regardless of the research institution's historic position or wealth.

No one seriously disputes that the greater use of orphan books arising from the settlement offers a major increase in economic efficiency and consumer welfare. Nonetheless, some academic commentators claim that competitive problems may arise from the GBS settlement. Their primary concern is that Google will use the orphan books settlement so that GBS is able to gain a monopoly position over all book search services.

Currently, there is almost no market demand for orphan books. Orphan books are out of print, and their rights holders cannot be located. Google will create the market demand by making a risky investment of hundreds of millions of dollars in scanning these books into a digital library. When a firm creates demand for a new product, we do not see how it exercises market power by charging “too high” a price, because demand did not previously exist for the product. Market power is the ability to charge more than the competitive price. However, no competitive price exists for orphan books because they are out of print, and insufficient demand existed to keep them in print. Thus, only if future competitors of GBS were unable to negotiate an agreement to use the orphan books would a problem arise. However, as we discussed, the plaintiffs will have an economic incentive to license the ability to use the orphan books to other competitors. Thus, we expect future competitive entry if GBS provides a new and successful service.

The commentators who have raised concerns in this regard have misunderstood the economic incentives that the plaintiffs will have to increase

overall demand for books. When these economics incentives are understood, it becomes evident that no antitrust problem arises. Calls for regulation or continuing oversight by the Antitrust Division are especially misguided because the expected outcome of such intervention with respect to a new product such as GBS is slower technological progress, decreased consumer welfare, and diminished economic efficiency. As most commentators agree, the settlement allows for the introduction of a new service with significant economic benefits to users. Those economic benefits should be the focus of the discussion on whether the settlement should be approved.