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Goolestroika: Privatizing Privacy

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Googlestroika: Privatizing Privacy

Karl T. Muth*

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I. INTRODUCTION

Google is so ubiquitous that it has become a verb in common parlance. Yet, it is difficult to identify exactly what Google does. Consider the following “one-liner” attempts at explaining what Google’s business might entail:

“Google’s business model is based on advertising[.]”¹

“Google’s business model: video-search dominance.”²

“[T]he . . . process that is at the core of Google’s business model is . . . an opaque ‘black box’ that users cannot see into.”³

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With a network of one million online advertisers as of 2008—versus Yahoo!’s 300,000 and Microsoft’s 75,000—it would be easy to label Google an advertising company, essentially an online evolution of a traditional advertising business model. With Google’s acquisition of YouTube, one might instead label Google an online media outlet. With its obscure auction process and various ad pricing gimmicks, one could simply dismiss Google as yet another dot-com company with a somewhat opaque series of short-term strategies.

This Article presents a very different interpretation of Google’s business model and, by extension, its role in society. Google is not a search company, nor is it a media outlet or an advertising firm. Google instead occupies an impossibly important, inevitably disquieting place in the future global economy: Yahoo! prices and monetizes the privacy rights of the world’s citizens.

Google is a market maker in privacy, controlling the prices (and, in parallel, the rate) at which society commoditizes this fun-

4. Id. at 8.
5. Id.
8. Claudine Beaumont & Matt Warman, Britain’s Hottest Internet Celebrities; You-Tube Is Helping Home-Grown Talent to Find Fame Online and Beyond, DAILY TELEGRAPH, Nov. 27, 2008.
11. A market maker is a non-participant who sets both the bid and ask prices in, for instance, a securities or commodities market. See, e.g., Chasins v. Smith, Barney & Co., 438 F.2d 1167, 1170 n.4 (2d Cir. 1970).
damental right. This Article describes, from a law-and-economics perspective, the market in privacy and explains why Google is the one firm that is ideally positioned to price privacy.

II. SETTING A PRICE FOR PRIVACY

It is difficult to pull a concrete "price regime" out of the privacy ether of the Internet. This issue was spotted early in the legal academic community but has not received much attention in business school circles. As Professor Solove has asked:

How much weight [or value] should our vague apprehensions [concerning privacy] be given, especially considering the tremendous utility, profit, and efficiency of using [large] databases? The answer to this question depends upon how the privacy problem of databases is conceptualized. Unfortunately, so far, the problem has not been adequately articulated.

The question of how much privacy should be available for enjoyment is an abstract, problematic one. Using a traditional economic model for comparison, it is difficult to know how much food is in the sea, but it is relatively easy to price an individual fish in the market. This per instance valuation was, and still is, at the center of the market in privacy. While the value of privacy in the abstract is difficult to ascertain, it is not difficult to find the price at which an individual is willing to negotiate away his privacy.

Before any pricing of privacy emerged, however, a market evolved from a series of barter arrangements. An individual might be willing to trade Web-surfing privacy for the ability to use Google's search engine, to trade the privacy of her weekend vacation plans in exchange for use of Google Maps, or to disclose his whereabouts for the convenience of using Google Maps on his iPhone.

An interesting barter case worthy of brief discussion is that of Integrated Media Measurement, Inc. ("IMMI"). IMMI gives consumers discounted special cellular telephones and free cellular

14. Throughout this Article, the author has alternated between masculine and feminine pronouns to refer to the abstract individual.
telephone service. In exchange, the special cellular telephones listen in on the daily lives of the consumers and report back to IMMI what music, television, radio, Internet, and other media the consumer is exposed to during the course of a day. Even after having IMMI monitor their daily entertainment habits, 96% of IMMI users decided to continue the service in exchange for free cellular telephone service. This high retention percentage suggests that users not only agreed to barter their privacy for services initially but also were willing to continue to barter additional privacy for additional services on an ongoing basis.

III. THE FIRST GOOGLETRACT

It is not difficult to enter into a contract with Google in which one trades a share of his or her privacy rights for access to Google's services. Google's Terms of Service contract provides that acceptance occurs:

(B) By actually using the Services. In this case, you understand and agree that Google will treat your use of the Services as acceptance of the Terms from that point onwards.

7.2 You agree to the use of your data in accordance to Google's privacy policies.

Indeed, anyone who has ever used Google has assented to Google's Terms of Service contract. To terminate the agreement, the user must both notify Google in writing and discontinue use of all Google services and software. Yet, no reports exist of any users who have successfully severed, in their entirety, all of their contractual ties with Google.

16. The special telephone "listens in on" ten seconds of the user's surroundings every thirty seconds, according to IMMI. IMMI, How It Works, http://www.immi.com/dataClctn.html (last visited Jan. 4, 2009). It also uses a special Bluetooth beacon technology to determine whether the user is at home or not, helping IMMI interpret the information it overhears. Id.
19. See id. at § 2.2(B).
20. See id. at § 13.
Of course, the argument that the user assents to a contract or series of contracts merely by using Google's software or services is a sound one.\textsuperscript{21} The user’s acceptance of the terms is effective,\textsuperscript{22} even though the agreement is complex and may operate to the user’s detriment by compromising his privacy after he begins using Google’s services.\textsuperscript{23} A technically unsophisticated user, however, probably will not appreciate the quantity\textsuperscript{24} of privacy sacrificed by using Google’s services,\textsuperscript{25} nor the privacy infringement that continues long after\textsuperscript{26} use of Google’s services ceases.

One might argue that the user should copy\textsuperscript{27} the terms of Google’s privacy agreement into a separate document or, alternatively, print the document. However, the Google tools likely to be most harmful to the user’s privacy (such as Google Toolbar, which monitors the user’s activities when the user’s Web browser is open) disable the cut-and-paste and print functions when the terms of the privacy agreement are displayed.\textsuperscript{28} This limitation

\textsuperscript{21} See ProCD, Inc. v. Zeidenberg, 86 F.3d 1447, 1452 (7th Cir. 1996) (formation of contract may occur by use of software by user, separate from any purchase); U.C.C. §§ 2-204(1), 602(1), 606(1) (2003).

\textsuperscript{22} Consistency around the efficacy of agreements such as these has, itself, a societal and commercial value attributed to it. See 1 E. ALLAN FARNSWORTH, FARNSWORTH ON CONTRACTS § 4.26 (3d ed. 1990).


\textsuperscript{25} This is particularly true in cases where the services provided by Google are “transparent” to the user. For instance, Google’s management of a local section of the power grid. See M. Wald and M. Helft, \textit{Google Taking a Step Into Power Metering}, N.Y. TIMES, February 10, 2009, at B9, available at, http://www.nytimes.com/2009/02/10/technology/companies/10grid.html?th&emc=th.

\textsuperscript{26} See Jason Isaac Miller, Note, \textit{"Don’t Be Evil": Gmail’s Relevant Text Advertisements Violate Google’s Own Motto and Your E-Mail Privacy Rights}, 33 HOFSTRA L. REV. 1607, 1614 n.30 (2005) (noting Google’s potentially perpetual retention of personal data gathered regarding users of Google’s Gmail service).

\textsuperscript{27} There is a long tradition of giving the assenting offeree a tangible copy of the agreement he or she entered into. See generally Foster v. Mansfield, C. & L. M. R. Co., 146 U.S. 88 (1892) (offeree given copy of contract as matter of course); U.S.United States v. Jamison, 31 Cust. Ct. 468, 469 (1953) (Mexican manufacturer doing business with American importer in 1945 copy of contract); Indep. Coop. Milk Producers Assn. v. Comm’r of Int’l Revenue, 76 T.C. 1001, 1003 n.3 (1981) (offeror sent letter to each offeree, stating, “I am enclosing a copy of your contract for your records.”).

effectively guarantees that most users are unable to generate a complete record of their contracts with Google.

This scenario, where the user must assent to the contract with Google immediately upon using the service, is not unique. Take, for instance, the Lloyd's Open Form ("LOF"). The LOF is a contract that maritime salvage outfits ("salvor(s)") use to tie their compensation to the degree of success they enjoy in saving a ship. In a typical situation, a salvor might arrive at the scene of a sinking ship, hand the ship's captain an LOF, and say, "If you sign this, we'll undertake with best efforts to save your ship. If not, good luck." Like the Google users, few captains would take time on the deck of their sinking ships to read the fine print (for instance, the oft-disputed arbitration clauses incorporated by reference on the most-often-used version of the form) of the LOF. Unlike Google's users, however, at least the captains have a copy of the LOF to review later.

IV. MERE BROKER OR MARKET MAKER?

Anyone reviewing Google's business will quickly realize that Google is in the business of both buying and selling privacy. However, the underlying transactions are, somewhat counterintuitively, quite complex. Google first "buys" the user's privacy, usually through privacy-for-services barter arrangements as described previously. It then sells AdWords at auction, allowing

installation screens concerning various browsers and installation information. See also Michael R. Greenlee, Affect of UETA, UCITA, and E-Signature Legislation on Exchange and ASP Agreements, 650 PLI/PAT 271, 287 (2001) (noting that when a user clicks "install the Google Toolbar," Google displays the terms of privacy arrangement but does not allow the user to save or print the contract he or she has agreed to).


30. Many cases involve this fact pattern, or a rushed signing of the LOF under equally dire circumstances. See, e.g., Jackson v. Costa Lines, Inc., 490 F. Supp. 393, 395-96 (S.D. Fla. 1980) (court taking notice that parties executed valid LOF while vessel was in peril).


After Hysitron began use of its HYSITRON trademark, MTS, as part of its internet marketing strategy, purchased the term "hysitron" to generate a sponsored link through Google, Inc.'s . . . AdWords program. When a user types a term into Google or another internet search engine, the search engine provides links to websites that include the term searched. Search engines produce two types of links: sponsored and organic. Organic links are generated when the user keys in a term that matches data
advertisers to reach the user based upon what Google has learned about the user's private attributes. These AdWords auctions are not a reselling of the user's privacy itself, but rather the sale of a "privacy derivative" of sorts, an option that allows the advertiser to invest in Google's appraisal of the customer's wants and needs. In other words, the advertiser is not buying the user's privacy itself, nor is Google simply reselling it.

V. THE OTHER GOOGLETRACT

Google's contracts with advertisers vary, but they essentially provide that an advertiser will pay an auction rate price for an option, which allows the advertiser to communicate with Mr. Doe, and others similar to Mr. Doe, based upon certain information gathered while Mr. Doe's privacy was temporarily compromised or contractually abated by The First Googletract, discussed previously.

In this context, the contract is described as an option contract because this term most aptly describes how it might be priced. However, because the contracts have no market liquidity, they do not behave like market-rate options. Instead, they are individually auctioned by Google.

In essence, Google operates an auction market to price options by what it has determined to be likely outcomes, based upon data it has gathered about individual users. Via this market, advertisers bid for the opportunity to be affiliated with AdWords. By

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33. See Viacom Int'l Inc. v. YouTube Inc., 253 F.R.D. 256, 263 (S.D.N.Y. 2008) ("Google earns most of its revenue from fees it charges advertisers to display advertisements.").

34. A "derivative" means "a financial instrument whose value depends on or is derived from the performance of a secondary source such as an underlying bond, currency, or commodity." BLACK'S LAW DICTIONARY 374 (8th ed. 2004).

35. For an examination of the legal calculus required to determine whether a contract is properly classified, generally, as an option contract, see Dynamics Corp. of America v. United States, 389 F.2d 424 (Ct. Cl. 1968).


becoming affiliated with certain AdWords, the advertiser becomes more visible to certain Google users.

The question arises of whether privacy has a uniform market price or whether the value of privacy varies from consumer to consumer. The canon of law surrounding trade secrets suggests that privacy can be individually priced in the commercial market.\textsuperscript{39} The question of whether the partial compromise of the privacy of a given person can be accurately priced leads to a more basic philosophical question.

VI. INCREASING PRIVACY: PRODUCTION OR PRESERVATION?

This fundamental question has troubled philosophers for centuries: Are people's actions fundamentally public and selectively made private, or are the actions fundamentally private and occasionally shared? In other words, is the natural state of the world a series of spheres of privacy\textsuperscript{40} or an uninterrupted channel of publicity?

The common law seems to support an interpretation that anything that is not public is private.\textsuperscript{41} Within this binary determination, people may arrange to make their private facts and affairs public in exchange for money or services. For instance, a person may choose to publish a memoir\textsuperscript{42} or license the rights to his or her life story.\textsuperscript{43}

In the context of property law, one customarily discusses information rather than privacy. Some would argue that information is generally public, with sections of information made private through copyrights, trade secrets, and other measures.\textsuperscript{44} But in

\begin{itemize}
\item\textsuperscript{39} See Niemi v. NHK Spring Co., 543 F.3d 294, 299 (6th Cir. 2008) (noting that value of trade secrets is "not readily ascertainable" but also not impossible to ascertain).
\item\textsuperscript{40} Privacy, as used in this discussion, refers to the ability to exert control over information about oneself, not privacy in the broader "decision-making" Griswold sense. For an eloquent discussion of this distinction, see Whalen v. Roe, 429 U.S. 589 (1977).
\item\textsuperscript{42} Some states have drafted laws that restrict this freedom to contract, usually under only a very narrow set of circumstances. See, e.g., N.Y. Exec. Law. § 632-a (McKinney 1982 & Supp. 1991).
\item\textsuperscript{43} See, e.g., In re Lorraine Brooke Assoc., Inc., No. 07-12641-BKC-AJC, 2007 WL 2257608, at *2 (Bankr. S.D. Fla. Aug. 2, 2007) (debtor in bankruptcy transferred license covering his "intellectual property rights, consisting among other things, of [debtor]'s name, facsimile signature, nickname, likeness, life story, right of publicity and auto biographical sketch" to creditor-publisher).
\end{itemize}
the realm of personal information, privacy is the more interesting commodity. Unlike information, privacy is, by definition, not inherently public.45

Voting, for example, is typically private until made public. A person may vote in private but then upon leaving the polling place may disclose to an exit pollster how he or she voted46 (or just as easily may refuse to answer the exit poll or even attempt to affirmatively mislead the pollster).

None of these examples, however, deal with the transmutation of privacy into metadata and the control that Google exerts over the market for this metadata. Some users consider pieces of information such as Internet searches, sites visited, and communications with other Internet users to be private,47 even after they have contracted away their privacy rights in this information.48 Many users voiced privacy concerns after Google's Gmail service began displaying ads triggered by the content of e-mails the users had sent and received.49 It would seem, from Google's actions, that Google views all personal information as fundamentally public and eligible for "harvesting." The various contracts between Google and the user, then, are less an arrangement to barter privacy for services and more a mechanism for reducing the risks50 of the harvest.

VII. FROM BOUNTY TO SCARCITY: PRIVACY'S ENDMGAME

"Google . . . will be the [company] to test the limits of what society can tolerate."51

Some readers will undoubtedly recall the 1964 James Bond blockbuster Goldfinger about a plan to blow up Fort Knox in the

45. "Pри-ва-сь при́-ва-сь n, pl –cies (15c) 1 a: the quality or state of being apart from company or observation: SECLUSION" MERRIAM-WEBSTER'S COLLEGIATE DICTIONARY 927 (10th ed. 1998).
46. Exit polling has increasingly become part of the American electoral process, as the Supreme Court noted in Burson v. Freeman, 504 U.S. 191, 222 (1992).
48. This is supported by research showing that better than one-quarter of all Internet searches are designed to produce pornographic results, suggesting that users likely expect some degree of privacy as to their searching. See Supplemental Declaration of Philip B. Stark, Ph.D. § 4, Gonzales v. Google, Inc., 234 F.R.D. 674 (N.D. Cal. 2006) (No. mc-80006-22) (citing Vise & Malseed, supra note 38, at 165).
50. "Risks" here refers chiefly to litigation risks.
hope of increasing gold prices by reducing its supply. Can Google, by comparison, manipulate the “supply” of privacy? Would decreasing the amount of privacy available increase the price people are willing to pay to preserve what little of their privacy remains?

To use another metaphor, suppose that one visualizes the amount of privacy in the world as a forest, with Google as the dominant logging company. The forest would diminish proportionately with the pace of logging operations. The cleared areas would eventually regenerate, but this process would take time.

Extending this metaphor, one could liken corporate, industry, legislative, policy, or judicial privacy protection measures to environmental protection measures protecting a forest. Like environmental protection measures, they would be likely to have unintended second-order effects. Outright control of the quantity of


54. It is interesting to examine this harvest analogy in view of recent work done by Theodore Panayotou and others on growth versus scarcity and damage, particularly if the privacy economy is viewed as a subset of difficult-to-measure transactions within the information economy. See Theodore Panayotou, Economic Growth and the Environment (Ctr. for Intl' Dev. at Harvard Univ., Working Paper No. 56, 2000), available at http://www.cid.harvard.edu/cidwp/pdf/056.pdf.


56. Similarly, once a user's data are harvested, their privacy may grow back as the person's harvested data become stale and less valuable to marketers. For example, the user may obtain new employment, begin using a different e-mail address, mailing address, or telephone number, or become interested in minivans rather than sports cars.


58. For a detailed explanation of what positive and negative effects might result from various levels of privacy safeguards, see F. Schoeman, Philosophical Dimensions of Privacy: An Anthology (Cambridge Univ. Press 1984).
privacy available in the marketplace would be very unlikely to succeed, as its production and consumption could not be directly managed.

Like any other commodity, as the supply of privacy decreases, the costs of harvesting the remaining privacy will increase.\(^5\) Eventually, the supply curve will shift left to account for the increasing marginal cost. Similarly, the cost to contractually obtain the privacy of the first thousand, million, or ten million users might be very small (merely allowing them use of Gmail or the Google Toolbar, for instance).\(^6\) The cost to access the otherwise private information of the hundred-millionth, five-hundred-millionth, or billionth user, by comparison, may be incrementally higher.\(^6\) The value of that privacy may be higher, too. The value of unharvested privacy must increase\(^6\) at the common rate of return on similar assets.\(^6\) Hence, when visualizing yet-to-be-harvested units of privacy, one must consider privacy to be a finite resource in which "the value of [an unharvested unit] is also the present value of future sales from it, after deduction of [the cost to obtain the unit, thus] resource owners must expect the net price of the [unharvested commodity] to be increasing exponentially[.]."\(^6\)

\(^5\) Much theoretical work has been done in this area, primarily in determining when maintaining the extraction of oil from the earth will be physically impossible. See, e.g., Andrei Bazarov, The Peak of Oil Extraction and a Modified Maximin Principle (2006), available at, http://mpra.ub.uni-muenchen.de/1671/1/mpra_paper_1671.pdf.\(^\)

\(^6\) While these Google services had some initial fixed research and development costs associated with them, the marginal cost to Google of giving away a one-gigabyte Gmail e-mail account is likely very close to zero. In addition, the size and structure of the account discourages deletions, thus preserving the data and the user's classifications. See Natalya Yezhkova, Worldwide Disk Storage Systems 2008-2012 Forecast: Content-Centric Customers -- Reshaping Market Demand App. 6 (2008).

\(^7\) Because Internet usage is skewed toward a first-world, global-north audience, it may be that the three-billionth user, for instance, is worth less to Google than the billionth user, but costs more to harvest. This argument, that eventually the trees remaining in the forest are the least valuable ones, is a valid thought experiment, but is not the hypothesis presented here.

\(^8\) This theory may be untrue for users in the developing world. See the market dichotomy illustrated infra.

\(^9\) This value is difficult to monetize, as it is difficult to know what the common rate of return or interest rate would be for the risk class that "privacy" occupies. It is unclear, as a result, whether a Hotelling-Solow equilibrium exists in a market like the one in privacy theorized in this Article.

\(^10\) Robert M. Solow, The Economics of Resources or the Resources of Economics, 64 AM. ECON. REV. (ISSUE1, 2) 1 (1974).
Future generations are unlikely to enjoy anything greater than today's degree of privacy so, for the sake of argument, one could set the finite, "starting" amount of privacy available equal to today's quantity. Google has an effective monopoly over harvesting privacy that it will likely be able to maintain. It is likely, then, that Google would use a species of monopoly finite-resource

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65. For an idea of how future generations' relationships governed by privacy policies might affect the future of privacy, see Corey A. Ciocchetti, E-Commerce and Information Privacy: Privacy Policies as Personal Information Protectors, 44 AM. BUS. L.J. 55, 92-98 (2007).

66. *Monopoly* here refers to a functional monopoly state of market dominance when one considers a Herfindahl-Hirschman-style sum-of-squares analysis of Google's market position as to privacy. This is not the basis on which the Department of Justice scrutinized Google's deal with DoubleClick, however. Note also that one reaches a substantially different conclusion if one defines Google's market concentration footprint traditionally, as "Internet ad spending," for instance (HHI of 650). See David Cohen, The Portal Myth, CLICKZ, Sept. 15, 2004, http://www.clickz.com/3407171. Seen in this context of privacy rather than advertising, any merger between Google and any moderately successful, similar firm would raise the HHI (concentration) of the market by more than 100 points and, as a result, presumptively raise antitrust concerns in the privacy market. See The Herfindahl-Hirschman Index, http://www.usdoj.gov/atr/public/testimony/hhi.htm (last visited Jan. 25, 2009).
calculation\(^67\) that estimated its revenue to be very close to total industry revenue.\(^68\)

Until the number of users successfully recruited reaches a very high value, the marginal cost of harvesting additional privacy is likely to be near zero. By manipulating auction rules and, to the extent allowable by law, auction outcomes,\(^69\) Google will be able to maintain, or even increase, its reference price spread.\(^70\) Over time, this scheme will allow Google to manage the market in privacy throughout the developed world very profitably, if not sustainably.

\(^67\) Examining which calculations might portray the value of a “privacy monopoly” is the next logical step from Posner’s thinking in this area that predated Google’s success by two decades. See Richard A. Posner, The Economics of Privacy, 71 AMER. ECON. REV. (ISSUE 2) 405-08 (1981).

\(^68\) In other words, Google would likely look to an “eat the whole pie” calculation, rather than slicing and dicing the area beneath the demand curve.

\(^69\) There is pending litigation over whether Google can expand the auction market for trademarked and copyrighted terms. For instance, Google could get a higher auction price for the words “American Airlines” if United Airlines were allowed to bid on those words at auction. As the number of potential suitors for any given word combination increases, the median winning bid for any given set of contested combinations would presumably increase superlinearly. By engineering the number of participants in a given auction and the rules under which they partake in the auction, Google can presumably engineer the auction’s ending value with some degree of accuracy.

\(^70\) Reference price spread is a net expression used in auctions of closing auction price, less fees or costs attributable to third parties triggered by the close of the auction, less marginal cost. SOTHEBY’S GUIDE TO MODERN AUCTIONS 208-11 (9th ed.).
The maximum useful privacy harvest, for the foreseeable future, is placed at above 50% but substantially below 75% of the developing world's population. Many populations will be willing to trade their privacy for Google's services, but exploration of that privacy will not yield substantial returns because of government interference (China), insufficient marketing utility associated with the resulting information (much of sub-Saharan Africa), insufficient demographic and other sympathetic datasets, and other problems. Some populations will remain too geographically remote, too often engaged in armed conflict, or too distant from the rule of law to partake in the privacy-for-services bargain. Still others will face challenges such as illiteracy or niche languages that will make their privacy unharvestable or of substantially limited economic value if harvested.

VIII. EASTER ISLAND ECONOMICS

"Why, then, can one desire too much of a good thing?"72

One can also visualize the fundamental question as one of equilibrium—optimizing a preservation interest against a production interest. Consider the following table showing a variety of production possibilities73 for the Rapanui74 civilization:

<table>
<thead>
<tr>
<th>Preservation of Trees (%)</th>
<th>97</th>
<th>85</th>
<th>75</th>
<th>55</th>
<th>25</th>
<th>12</th>
<th>5</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moai75 Statues Erected</td>
<td>0</td>
<td>100</td>
<td>250</td>
<td>500</td>
<td>600</td>
<td>700</td>
<td>800</td>
<td>900</td>
</tr>
</tbody>
</table>

The basic functioning of any society at the Rapanui level of technological advancement will require some utilization of available lumber resources. However, the erection of moai statues proved a particularly resource-intensive activity for the Rapanui. In Table Alpha, supra, tree preservation falls off superlinearly against moai erection, as incrementally more moai erection causes disproportionately more deforestation. Also, the negative hydrologic and soil implications of deforestation tend to accelerate further tree loss.76

There is, however, a sustainable77 rate at which the Rapanui civilization could have utilized lumber and erected moai statues without completely exhausting its forestry resources. The problem, of course, is finding a production horizon at which sustainable management of the underlying resources remains possible.

72. WILLIAM SHAKEsPEARE, AS YOu LIKE IT act 4, sc. 1.
73. Values chosen are arbitrary and for illustration purposes only.
74. Rapanui (alternatively, Rapa Nui) is a native Polynesian culture and ethnic group.
75. Moai are monolithic human figures found on Rapa Nui, better known as Easter Island.
One could create a similar table representing the trade-off between the amount of privacy preserved and the number of people in privity of contract with Google. As a higher percentage of the world’s population contracts to barter its privacy for Google’s services, the worldwide amount of privacy eligible for preservation declines.

**Table Beta.**

<table>
<thead>
<tr>
<th>Privacy Preservation (%)</th>
<th>90</th>
<th>50</th>
<th>20</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td># in Privity with Google</td>
<td>0</td>
<td>500M</td>
<td>1B</td>
<td>3B</td>
</tr>
</tbody>
</table>

Just as a grove of palms on Easter Island is more likely to survive than a single tree, the impact of a contract with Google is not wholly individual or insulated. This trend of “collateral damage”\(^78\) to a group’s privacy interests can be seen in the following table. Consider, for example, a group of ten friends who use e-mail to communicate with one another. The following table describes what might happen to the privacy preservation within the group as individuals within the group begin to use Gmail, a service that requires the user to agree that Google may read all e-mails sent or received.

**Table Gamma.**

<table>
<thead>
<tr>
<th>Privacy Preservation (%)</th>
<th>100</th>
<th>75</th>
<th>50</th>
<th>20</th>
<th>10</th>
<th>0</th>
<th>0</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friends on Gmail (#/10)</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>8</td>
<td>9</td>
<td>10</td>
</tr>
</tbody>
</table>

Note that in the scenario where two individuals in the group have not entered into a contract with Google, the entire group’s privacy is compromised because a critical mass has been reached among the counterparts to the various e-mail messages. Therefore, Google can compromise the privacy of a group completely without the entire group’s assent. From an economic perspective, the individuals contributing information to Google without assenting to the Gmail contract are a collateral benefit.

Google’s services, Gmail and Google Talk\(^79\) for instance, rely upon both singular decisions and pairs of participants. One per-

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\(^{79}\) Google Talk is Google’s brand-name instant messaging application.
son might assent to a bargain that exchanges a measure of privacy for a specific set of services. If a pair of people uses Gmail, each has assented to such a bargain, and all e-mail messages between the two will be monitored with their consent. However, if a pair of people, only one of whom uses Gmail, converses via e-mail, each exchange will be monitored by Google as though each had consented. The aggregate deleterious effect on the privacy of the group is many times that of the Gmail-to-Gmail correspondences.

Presuming that individuals who accept Google's terms do so knowingly, the subsequent limitations placed upon their privacy are not particularly problematic. Hence, pairs of people where each is a Gmail user cause little collateral damage. Meanwhile, pairs in which one correspondent uses Gmail, while the other does not, present a problematic scenario. It is through these scenarios—millions of them—that Google has extended its reach beyond any limitations of privity. This bleed of information from individuals who have not accepted Google’s bargain are a collateral harvest for Google’s network.

IX. CONCLUSION

Google pans for data in streams of information and looks for patterns in the bits it gathers. Google’s core business, over the long term, is pricing and monetizing the privacy rights of the world’s citizens by acquiring the right to prospect in otherwise-inaccessible areas and to sell option contracts related to the patterns it finds. Just as the clarity of a digital photograph is dependent on the number and accuracy of the pixels of which it is comprised, so the value of Google’s product is dependent on a constant stream of more and more specific data. The clearer Google’s picture of our lives becomes, the more invasive the next step of data gathering will become. Whether society’s relationship with Google is durable enough to bear the trade-offs required for a market rooted in the harvest and sale of privacy to function is a question whose answer will not be apparent for years, or decades, to come.