

Measuring the True Cost of Privacy: A Rebuttal to "Privacy, Consumers, and Costs" (Abridged)

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Executive Summary

The policy debate surrounding privacy is already murky, as there exists little agreement on the scope of the issues, the problems and how to resolve them, and even how privacy is defined. Robert Gellman's latest contribution to this debate, rather than lending clarity to the issues surrounding privacy, largely serves to further muddy the waters. This is unfortunate, because, if one takes the time to sift through the ill-defined terms, overly-simplistic arguments, and unsubstantiated assertions, there are points worthy of further consideration.

This paper seeks to provide its' readers with an analytical sieve to help filter through the contemporary privacy debate. By reviewing Gellman's recent paper "Consumers, Costs, and Privacy," it will be demonstrated that the umbrella approach to privacy -- categorizing distinct policy concerns into a single preoccupation with privacy - while common, represents a step backward. It will also be established that meaningful solutions to privacy problems can only be developed by clearly specifying individual policy and economic drivers. For instance, the two causal variables in Gellman's report are "commercial data sharing" and "concern for privacy" which are used to explain a wide range of outcomes from identity theft to Internet stalking and all consumer behavior.

It will further be argued that the underlying information grid buttressing today's information economy is a heterogeneous network of business practices that are not conducive to "one-size fits all" approaches. Gellman's failure to disaggregate business processes, leads him to assume without proving, that information sharing is part of an old and now discredited business model. If Gellman's assertion were true, this would completely invert our commonsense understanding of the world - that more information is better. Indeed, major tenets of decision-making theory, including those developed by the most recent winners of the Nobel Prize in economics, would be shattered.

Specifically, it will be shown that Gellman's application of the business processes that are most conducive to "opt-in," to those that are by nature opt-out, exemplifies the danger of viewing data flows as homogeneous. Gellman inappropriately generalizes from two cases, credit reporting and Yesmail.com, in order to posit that privacy concerns are trumping efficiency concerns. Only by relying on two overly narrow cases is Gellman able to conclude that "opt-in" data restriction is not only better at satisfying non-economic consumer desires (privacy concerns and all other values), but in satisfying their consumption preferences as well.

In sharp contrast to his own assertion, the studies that Gellman criticizes in his own report demonstrate that this is clearly not the case. Many of the benefits from commercial data flows routinely enjoyed by consumers are routinely taken for granted, just as electricity is expected to flow when an appliance is plugged into an electrical

socket. Thus, a universal "opt-in" data regime - while potentially satisfying a demand for enhanced personal privacy -- would likely result in the reduction or elimination of many economic benefits. This because consumers are largely unaware of the link between data flows and specific benefits, and are therefore unlikely to opt in.

His deductive logic, finally, is devoid of any attempt to attach relative weights to any of the various concerns he lumps together under the privacy umbrella. Instead of relying on credible social scientific research - including academically rigorous surveys - Gellman asserts the supremacy of privacy as a value. As a result, economic efficiency is subordinated to privacy in all cases.

Section II Summary of Principle Findings

- Gellman's analysis is overly simplistic, as he explains myriad patterns of consumer behavior using a single causal variable - concern for privacy. Nowhere, however, is any evidence presented that actually links actual consumer behavior to concern for privacy.
- Gellman fails to define privacy, but instead, includes disparate issues such as cyber-crimes, hacking, online viruses, Internet stalking, identity fraud, unlawful or renegade Spamming, with a consumer's desire to be left alone.
- Gellman suggests, without a shred of evidence or a single supporting case, that an "opt-in" data regime solves identity theft. In fact, less than 2% of all cases of identity theft could potentially be traced back to online transactions (CALPIRG 2000, GAO 2002).
- Gellman fails to appreciate the complex nature of data flows, and instead applies a one-size fits all solution to a grossly over-simplified set of problems. What may work for online retailers, Gellman asserts, will work universally.
- Gellman's criticism of each individual study is biased, selective, and episodic. His criticisms are backed by unsubstantiated assertions and are the academic equivalent of hitting below the belt.
 - (1) The Hahn study is illegitimately criticized for offering a range of costs yet Gellman entirely ignores the fact that Hahn selected a figure from the low end of the range to yield a conservative estimate.
 - (2) The ISEC/PLI study is criticized for being authored by a staff member of a trade association yet Gellman offers nothing by way of substantive criticism of the study's methodology.
 - (3) The Johnson/Varghese study is criticized for its failure to link data regimes and mortgage rates, despite the fact that the element being criticized is an extrapolation from an underlying study entirely devoted to just that subject.
 - (4) The Ernst & Young study is criticized through a sleight of hand, whereby Gellman asserts that the very benefits examined in the E&Y study are identical to the illegal activities engaged in some years ago by US Bancorp for which the bank was soundly punished. Nowhere in the E&Y study are the benefits equated with illegal practices.
- Gellman claims that the collapse of dotcom retailing cannot be attributed to privacy concerns. Immediately after claiming the two are unrelated, Gellman proceeds to contradict himself by implying that investors were fleeced by Internet retailers with business models based solely on the misplaced belief in the value of "endlessly exploiting" personal data. According to Gellman's logic, the dotcom implosion would have been prevented by an opt-in regime.
- Gellman's "privacy toll" is baseless. He stacks unfounded assertions on top of wild assumptions and personal beliefs. Nowhere is there a shred of evidence or anything reflecting the application of a mathematical formula or the scientific method.
 - (1) Gellman is wrong to attribute all the costs of caller ID to privacy. There are many reasons unrelated to privacy from telemarketers that drive consumers to purchase caller ID devices and services. To lump telemarketers in with ex-spouses, in-laws, pranksters, or past associates is bad social science.
 - (2) Gellman is wrong to attribute \$18 billion in lost online retail revenue strictly to privacy concerns. In reality, consumers abandon virtual shopping carts for a wide variety of reasons, including: unfamiliarity with the process; lack of a valid credit card; security (not privacy) concerns; finding a better deal on another Web site; deciding to wait and see; or simply changing their minds. According to Gellman, however, consumers were firmly committed to buying until they arrived at the checkout point, read the firm's privacy policy, and were frightened away because they weren't offered an opportunity to opt-in.
 - (3) Gellman is wrong to attribute all non-published and unlisted telephone numbers to privacy concerns. As with caller ID, individual consumers pay for unlisted and unpublished telephone numbers for a wide variety of reasons, many of which are totally unrelated to privacy. By including all the costs associated with every unlisted and unpublished number in the U.S., Gellman overstates the magnitude of his "privacy toll."

- As a result of his assertion that privacy concerns trump other values such as economic efficiency, Gellman's position is reducible to the belief that less information is better. This, despite pronouncements from Federal Reserve Chairman Alan Greenspan that the U.S. has enjoyed remarkable productivity growth relative to its major competitors (the European Union and Japan) precisely because of its information infrastructure. This, despite developments in information economics, including theories developed by the most recent recipients of the Nobel Prize for economics that conclusively demonstrate the benefits of access to rich sources of information, is to be believed in the context of policy making decisions.
- Gellman's assertion that the cost of having data subpoenaed is a cost to businesses of inadequate privacy measures is illogical. The implementation of an "opt-in" data regime for the use of personal information in marketing or advertising would be of little to no consequence upon the data needs for any given court case. A subpoena will be issued for data irrespective of the particular choice mechanism.
- Gellman is wrong to assume that unlawful Spam will be at all affected by the implementation of a broad "opt-in" data regime. Spam is not comprised of all commercial e-mail, and is primarily comprised of unwanted and unlawful or "renegade" e-mail sent by parties that are not subject to U.S. law (based offshore) or that knowingly violate the law. Thus, the enactment of an "opt-in" data regime either won't apply to a true Spammer, or won't affect them.

Section III Conclusion: Toward a Comprehensive Framework

Gellman's critique of the disparate group of studies has yielded a valuable contribution in that it forces consideration of a range of additional "costs" that were not factored in to the first generation of quantitative privacy research. And though some of the types of costs identified by Gellman are certainly plausible, they are poorly calculated and are based on a series of questionable assumptions.

If Gellman's costs are even slightly inflated or exaggerated, this will have a major impact on the national "privacy toll" given its supposedly enormous size. Moreover, plausibility is not equivalent to demonstrated proof. While the studies Gellman critiques go to great lengths to substantiate their cost estimations with field research, survey data, and expert interviews, Gellman's own cost calculus does not include even the most basic of economic models.

What can we, then, take away from the Gellman report? Gellman has highlighted the need for a second, and even third generation of research on the costs and benefits of data flows under specific types of regulatory regimes. Because the range of potential costs identified in the first generation of research is so broad - in the California study by Johnson and Varghese the order of magnitude is ten-fold - additional refinements of costs estimates, including the variables addressed by Gellman, becomes necessary for sound policy making.

Gellman also indirectly raises the question of measuring the benefits of additional privacy measures, such as those asserted to accrue to society in general with the enactment of an opt-in type data restriction. Here, however, the benefits are more asserted than demonstrated. It is left, then, to future researchers to measure and assess these benefits to balance an objective and scientific cost/benefit analysis of various data restriction regimes.

Further, it is also necessary to specify the conditions under which certain policy options (e.g. an opt-in regime for the commercial use of personal information) has a desirable effect. For instance, a more restrictive data regime may be less costly to firms in the European Union or Japan because those geographic entities have more concentrated industry structures. As such, massive amounts of data are internalized and firms are less dependent upon external or third-party data. Indeed, it may be found through subsequent comparative analysis that a correlation exists between industry concentration and data regime type, whereby less restrictive regimes are more conducive to open and competitive markets than are more restrictive data regimes. In any event, there is certainly a need for additional cross-national analysis, and indeed for second generation of quantitative privacy research.

As was discussed in the beginning of this paper, the 2001 Nobel prizes were awarded to three economists who revolutionized our understanding of the role of information in the workings of a market economy. Each demonstrated, among other things, the role of information flows and the role of information asymmetries in market failure. Their work shows the matter to be very complex - some sectors can fine tune products so as to elicit information about, e.g., risk from consumers, while others cannot. This new generation of information economics has only recently begun to move from theoretical to sustained empirical studies.

Ironically, policy makers are increasingly deciding to back restrictions on information flows as research is revealing its importance for the economy. While policy cannot wait forever, the plausible costs of privacy legislation do warrant that we wait a little longer, spend time to uncover what these costs may be, and engage in an informed democratic debate as to whether these costs are worth it. As demonstrated by the initial attempts to quantify the benefits of data flows in advanced economies, the stakes involved are tremendous.

What is needed are not further rounds of back-and-forth accusations or false promises of simple solutions, but rather additional research sensitive to the complex nature of data flows, and their implications for privacy and security. This research must build upon the first generation of quantitative data restriction analysis that has emerged over the past few years, learning from past mistakes and seizing new opportunities to advance the public understanding of the issues.

Such research also must be open to constructive criticism, and should include - to Gellman's credit - a more complete accounting system for estimating the costs and benefits of various potential data regimes. The use of the analytic approach laid out in this paper - one that disaggregates specific economic and policy drivers to establish clear cause-effect relationships, and unbundles the heterogeneous web of business practices that rely upon an underlying network of data flows - makes it possible to generate research that genuinely enhances the general understanding of data flows, privacy, and security.

Taking the Gellman paper too much to heart, however, carries with it a very real danger to the national economy. Namely, the costly retooling of key components of the nation's entire information infrastructure -- a process that will certainly be disruptive to firms and consumers alike.

Footnotes

1. Gellman, Robert. "Privacy, Consumers, and Costs: How the Lack of Privacy Costs Consumers and Why Business Studies of Privacy Costs are Biased and Incomplete," Washington, DC. The Digital Media Forum, March, 2002. Funded by a grant from the Ford Foundation.

2. The 2001 Nobel Prize in Economic Sciences was awarded to George A. Akerlof, A. Michael Spence, and Joseph E. Stiglitz "for their analysis of markets with asymmetric information." Applications of the theories of information economics developed by these three economists have been abundant, ranging from traditional agricultural markets to modern financial markets. The Laureates' contributions form the core of modern information economics.

3. The studies examined in Gellman's analysis are: Turner, Michael. "The Impact of Data Restrictions on Consumer Distance Shopping," (2001); Johnson, Peter A. and Robin Varghese. "The Hidden Costs of Privacy: The Potential Economic Impact of "Opt-in" Data Privacy Laws in California," (2002); Barron, John M. and Michael Staten. "The Value of Comprehensive Credit Reports: Lessons from the U.S. Experience," (2000); and Hahn, Robert A. "An Assessment of the Costs of Proposed Online Privacy Legislation," (2001). For a more complete sample of a range of studies, see www.understandingprivacy.org

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