

**Unforgettable In Every Way:
Personal and Social Implications of
Pervasive Omniscient Surveillance**

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Computers, Privacy, and the Constitution
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Paper #2, Spring 2005

“He told me: *I have more memories in myself alone than all men have had since the world was a world. And again: My dreams are like your vigils. And again, toward dawn: My memory, sir, is like a garbage disposal.*”

- Funes, *the Memorious*¹

Millennium Flux

The physical sciences make frequent use of a measurement known as flux: the rate of flow of “stuff” passing through a given surface. The flow of particles, fluids, heat, and electro-magnetic fields can all be quantitatively described by this analysis, yielding interesting generalizations and predictions². The description of this flow has a geometric representation that is useful for imagining the logical space of possibilities. Important laws have been formulated based on the rate and net passage of “stuff” across the boundaries of the surfaces being studied³.

This form of analysis can help us conceptualize the quality and shape of the surveillance society that we are in the midst of co-constructing. While the sheer quantity of information changing hands is certainly an important factor in the current transformation we are witnessing, arguably as important is the gradient of the information flow, and whether the flux is negative, positive, or neutral.

Consider our “personal information clouds” as metaphoric enclosing surfaces⁴. The information flux is all the information that passes through this boundary. We are incontrovertibly on a trajectory towards a world where data collection and analysis is ubiquitous and pervasive⁵. However, there are three variations in the *net* flux of information whose future character is not yet determined.

Simply put, regardless of the quantity of the information being captured, identity-space can be divided into three possible outcomes, in geometrical terms: 1) Others know more about you than you do – likely corporations, governments, or the power elite. 2) You know more about yourself than others do – e.g. the BioPort⁶. 3) Everyone has equal access to everyone else’s information – total transparency⁷.

1 Borges, Jorge Luis. Funes, The Memorius. *Labyrinths*. (NY: New Directions, 1969)

2 Halliday, David, and Robert Resnick, *Fundamentals of Physics* (New York,: Wiley, 1974)

3 e.g. Newton, Issac. *Philosophiae Naturalis Principia Mathematica* (1687), and Maxwell, James Clerk, "On Physical Lines of Force". (1861).

4 *Personal InfoClouds* is a term introduced to describe the data that person interacts with daily, which accompanies them wherever they go. Sometimes attributed to: Mik Lamming and Mike Flynn. Forget-me-not: Intimate Computing in Support of Human Memory. In Proceedings of the '94 Symposium on Next Generation Human Interface. Feb, 1994

5 Jay Stanley and Barry Steinhardt, [Bigger Monster, Weaker Chains, The Growth of an American Surveillance Society](#), ACLU Technology and Liberty Program, January 2003.

And, Robert O'Harrow, Jr., *No Place To Hide* (2005).

6 Introduced in the first part of this paper: *Becoming Your Own Big Brother: A Paradoxical Approach for Retaining Control of Personal Freedom*

http://studyplace.ccnmtl.columbia.edu/Members/jonah/papers/bioport_1

7 Chris Nolan, *Can Exposing Personal Info Preserve Privacy?*, e-week, December 2, 2004
<http://www.eweek.com/article2/0,1759,1734667,00.asp>.

A corollary of this detailed and permanent history is an increasing ability to predict and foretell future behavior⁸. Again, the variations of information flux will determine who has access to these predictions, potentially impacting our traditional understanding of determinism and freedom, and in turn, personal responsibility.

We will return to these three possible futures after we explore some of the personal and social consequences that might accompany a world where memory is permanent, and forgetting is a thing of the past.

Secrets and Lies

The relationship between Memory and Identity has been a mainstay of Science fiction, psychology, and philosophy for centuries⁹. The terrain most often explored is the connection between the loss of memories or amnesia and the ways which this compromises and threatens personal identity¹⁰. However, an exploration of permanent memories, the flipside of memory loss, has been sorely neglected. This is the specter raised by total surveillance, and is an idea that we ought to focus our imaginations on sooner rather than later. Permanent memories are sure to have implications as severe and disruptive as any of the ones depicted in the classical treatments of this theme.

Freud and his followers postulated a depth model of psychology in which suppression, repression, and the ability to forget is a vital aspect of our psychological makeup. These defense mechanisms, which allow us to maintain our sense of self, rely upon our ability to selectively recall and subconsciously filter the personal narratives that are consistent with the reality we want to believe. Our ability to cope with trauma and stress depends upon the function of forgetting. I doubt I am alone in contemplating the horror of revisiting the details of grade school with the precision of modern day surveillance apparatus. And yet, this is the world that we are on the verge of establishing, without the slightest consideration of the consequences, for every child born in the 21st century.

Perhaps more shocking than memories that can't be filtered and don't dissipate, is the impact that surveillance might have on deception. Arguably, modern day society is founded on lies¹¹, ranging from small little white lies between friends and neighbors, to corporate advertising and marketing, to Orwellian political

⁸ Computer Scientists and Artificial Intelligence researchers have been working on this problem since the dawn of the discipline. Simulations, Games, Time-series analysis, Markov Models, Neural Networks, etc, are all the precursors of predictive behavior modeling. All that is missing is the input data, which we are in the process of remedying.

⁹ A seminal 20th century analytical treatment of personal identity is: *Reasons and Persons* . Derek Parfit. Oxford University Press. *Oxford Scholarship Online*. Oxford University Press. 1986

¹⁰ Memento (1996), Eternal Sunshine of the Spotless Mind (2004), La Jetée (1962), Twelve Monkeys (1995), Vertigo (1958), Total Recall (1990), Paycheck (2003), etc etc.

¹¹ Or, more accurately, founded on bullshit, balderdash, and lies. Frankfurt, Harry. "On Bullshit." *Raritan* 6 (1986): 81-100.

spin, to the lies we tell ourselves to preserve and maintain a likeable version of our self (in spite of any evidence to the contrary). Pervasive surveillance threatens to rip apart the fabric of deception that currently binds together social groups, nations, and individuals.

Demonstrating the central role of deception in our society is beyond the scope of this paper, but consider a few categorical examples. Consider the power of shame and embarrassment evident in blackmail and the tabloids. Consider the cover-ups and disclosures that ruin relationships, careers, and reputations. Consider the importance of secrecy in business and love. All of these forms of deception could potentially be impacted by the transition to a surveillance society. Instead of allowing these changes to overtake us by surprise, we should actively be studying and anticipating their effects.

The net flux of information described earlier will have a significant impact upon the constructs that form the basis for our current model of western society. Depending upon whether the net information flux is negative, positive, or neutral we will begin to see dramatic shifts in the balance of knowledge and power that exists between citizens and governments, consumers and corporations, and even individuals and others.

Preliminary Conclusions

Considering what is at stake, we have an obligation to proceed with rigor and caution when introducing technologies whose implications can potentially disrupt the structure of our personal identities and social networks. The differences between a negative, positive, and neutral information flux need to be analyzed in greater depth.

Intuitively, it seems that knowing more about yourself than anyone else does is something that we have traditionally taken for granted, and may even form a central aspect of our identities. The perturbation of this traditional balance has implications we are just now beginning to perceive.

It also seems clear that a technology like the BioPort, which allows individuals to maintain a positive information flux, describes a markedly different reality than a transparent society. A society in which the flow of information is centered around the individual, as opposed to away from them. Prevailing currents are attempting to steer this flow away from the individual, into the waiting hands of those who would benefit from the power and control that this negative flux would provide them.

I am not optimistic that under perfectly free market conditions, a transparent society would effectively provide every individual with choices mirroring their best interests. Herbert Marcuse has argued that the Western liberal democracies are, 'totally administered societies' permeated by the values of consumerism, in which the manufacture and satisfaction of 'false needs' serve to prevent the

working class from gaining any genuine insight into their situation¹². I am deeply concerned that a negative or even a neutral information flux will compound this situation, and result in increased domination and subjugation of the oppressed.

This preliminary analysis indicates that maintaining a positive information flux is essential for us to maintain any semblance of autonomy and freedom. Even with this condition met, the quantity of information will undoubtedly alter our sense of self, as we lose the ability to hide information from ourselves, and collectively embark on journeys of self-discovery. The application of predictive modeling to our own behavior, will also allow for greater opportunities for reflection and planning, and provide us with a greater understanding of the consequences of our actions.

The future is still up for grabs.

¹² Herbert Marcuse. *One Dimensional Man: Studies in the Ideology of Advanced Industrial Society*. (1964) Boston: Beacon Press, 1991.