

## The Quality of information 2: Quantity

1. Housekeeping
2. Introduction
3. Reading 1:  
    Shanon & Weaver, Brown & Duguid, Nunberg
4. Reading 2:  
    Lyman (next week)
5. Next class:  
    Rotten information

## 1: Housekeeping

New students?

Website

[http://www.sims.berkeley.edu/academics/  
courses/is290-10/f04/](http://www.sims.berkeley.edu/academics/courses/is290-10/f04/)

Blog

<http://infoqual.blogspot.com>  
volunteers?

Mailing list

[quality@sims](mailto:quality@sims)

## 1: Housekeeping

### Office

South Hall 303B

510 643 4757

### Office hours

Nunberg: Wed 10:30-12

Duguid: Mon 10-12

### Readings

Online

Photocopies, South Hall, Rm

Course reserve

## Grad Services, Infosys 290 Sect 10.

- Plagiarism in Early Modern England. Kewes, Paula, ed.  
London: Palgrave, 2003
- Shamans, software, and spleens : law and the construction of  
the information society Boyle, James Cambridge,  
Mass. : Harvard University Press, 1996.
- Scientific authorship : credit and intellectual property in  
science. Biagioli & Peter Galison, eds. New York, NY  
: Routledge, 2003.
- Stolen words, Mallon, Thomas. San Diego : Harcourt, 2001.
- Printing technology, letters, & Samuel Johnson. Kernan,  
Alvin B. Princeton, N.J. : Princeton, 1987
- Textual strategies : perspectives in post-structuralist  
criticism. Harari, Josue V. ed. Ithaca, N.Y. : Cornell  
University Press, 1979.
- The Mathematical Theory of Communication. Shanon, Claude &  
Warren Weaver. Urbana: University of Illinois, 1949.
- The author's due : printing and the prehistory of copyright  
Loewenstein, Joseph. Chicago : University of Chicago  
Press, 2002.
- The Long Revolution. Williams, Raymond. New York :  
Columbia, 1961
- Discovering the news : a social history of American  
newspapers. Schudson, Michael. New York : Basic, 1978

## 2: Apologies & Introduction

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To: eh.net-review@eh.net  
Date: Thu, 26 Aug 2004 10:04:06 -0400  
X-Mailman-Approved-At: Thu, 26 Aug 2004 10:10:33 -0400  
From: eh.net-review@eh.net  
Subject: Re: Gabel on Brock, \_The Second Information Revolution\_  
X-BeenThere: eh.net-review@eh.net  
X-Mailman-Version: 2.1.5  
Reply-To: admin@eh.net  
Sender: eh.net-review-bounces@eh.net  
Status: 0  
X-Status:  
X-Keywords:  
X-UID: 81

----- EH.NET BOOK REVIEW -----

I look forward to reading Brock's new book. But should the title have been "The Fourth Information Revolution"? Surely, well before the United States became an independent nation, globally there had been two prior information revolutions: The first involved literacy and the alphabet, writing as such. The second involved printing, which dramatically lowered the cost of obtaining (distributing) information. Gabel writes that "According to Brock, there have been two times in history when information technology has dramatically changed daily life by lowering the price of obtaining information. The first 'information revolution' involved the use of telephones and telegraphs for integrating national markets. The second information revolution...involves the use of computer-enhanced communications." Surely, it should be four times in history and Brock is only dealing with the third and fourth revolutions.

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----- FOOTER TO EH.NET BOOK REVIEW -----

EH.Net-Review mailing list  
EH.Net-Review@eh.net  
<http://eh.net/mailman/listinfo.cgi/eh.net-review>

Brock, Gerard. 2003. [The Second Information Revolution](#).  
Cambridge, MA: Harvard University Press

### 3: Reading: Shannon & Weaver

- 8: two messages, one of which is heavily loaded with meaning and the other of which is pure nonsense, can be exactly equivalent
- 9: King James Version of the Bible, and ...  
"Yes"
- 9: the amount of information is defined, in the simplest cases, to be measured by the logarithm of the number of available choices

### 3: Shanon & Weaver, Communication

3: The word *communication* will be used here in a very broad sense to include all the procedures by which one mind may affect another. This, of course, involves not only written and oral speech, but also music, the pictorial arts, the theatre, the ballet, and in fact all human behavior ... one which would include the procedures by means of which one mechanism (say automatic equipment to track an airplane and to compute its probable future positions) affects another mechanism (say a guided missile chasing an airplane).



### 3: Shanon & Weaver, Communication, Control, and Cybernetics

Possibilities for democracy, fear of propaganda  
(cure or disease?)

Dewey, Lippman, James, Lasswell

Habermas, Williams

Theories of *Control*

Beninger, Control Revolution

Yates, Control through Communication

Eisenstein, Printing Press as an Agent of  
Change

Latour, Science in Action

Foucault, Birth of the Clinic

failure of control

de Certeau, Practice of Everyday Life

Johns, Coming of the Book

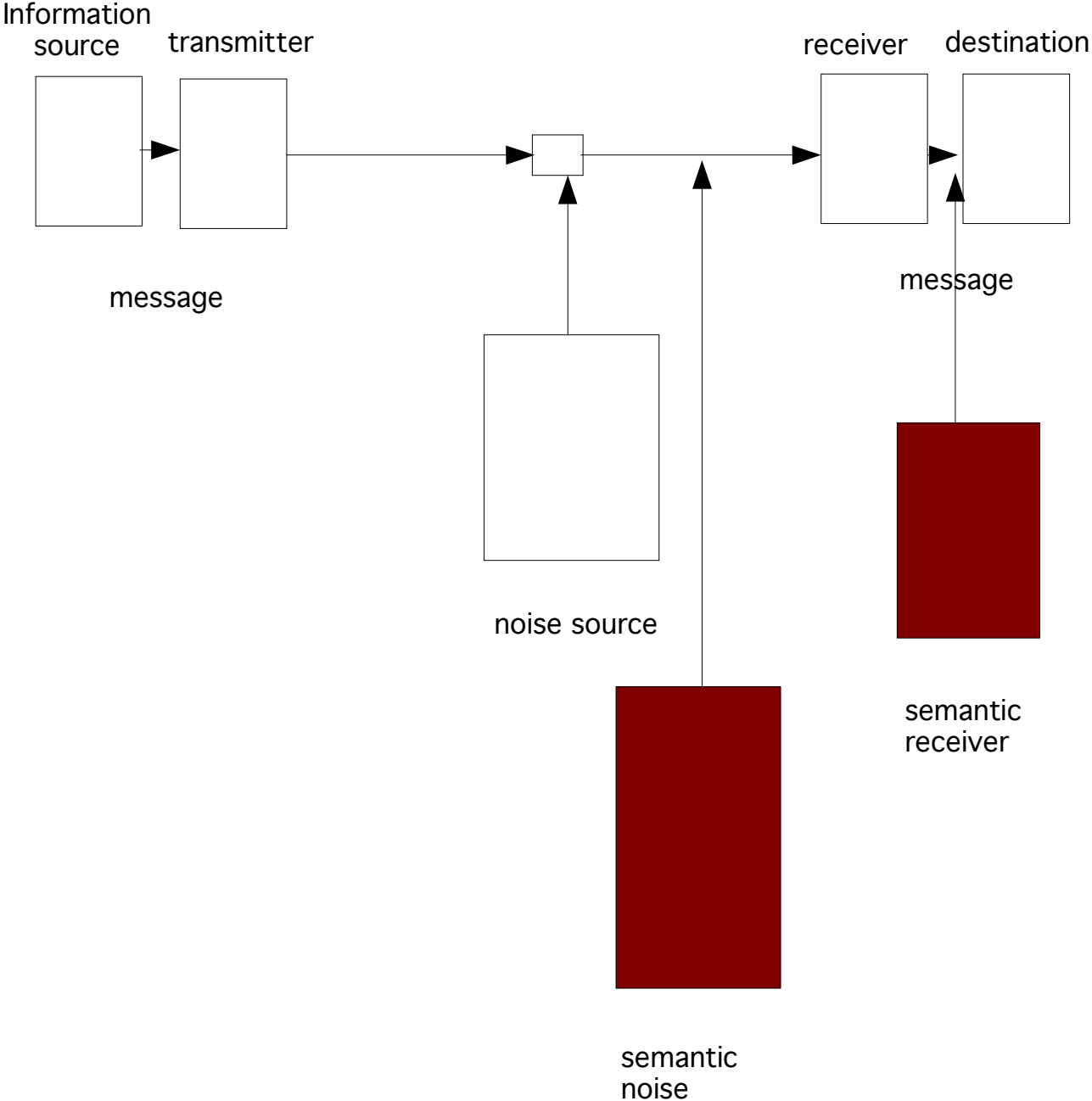
Fish, Self-Consuming Artefact Quality of Information 2, 9/8 -- 9

### 3: Shanon & Weaver, Quantity & Quality

8 [quoting Shannon]: "the semantic aspects of communication are irrelevant to the engineering aspects" ... but this does not mean that the engineering aspects are necessarily irrelevant to the semantic aspects

25: one's final conclusion may be that the separation into the three levels is really artificial and undesirable.

26: consideration of communication on levels B and C will require additions to the schematic diagram ... minor additions, and no real revision.



### 3: Brown & Duguid: Limits to Information

Quantity & quality

Redefinition:

the transferred epithet

S&W, 27: either one must say that such a computer "thinks," or one must substantially modify the conventional implication of the verb "to think"

Revolution - Supersession

Constraint/resource

good and the bad (noise and information)

useful knowledge [1525]; useful information

[1775]?



## 5: Next Class: Rotten Information

Rajagopal, Indhu & Nis Bojin. 2002. Digital Representation: Racism on the World Wide Web. First Monday 7.10. October.

[http://firstmonday.org/issues/issue7\\_10/rajagopal/](http://firstmonday.org/issues/issue7_10/rajagopal/)

Loewenstein, Joseph. 2002. Authentic Reproduction, pp 249-262 in *The Author's Due: Printing and the Prehistory of Copyright*. Chicago: University of Chicago Press.

Mallon, Thomas. Afterword, pp 239-253 in *Stolen Words*. New York: Harvest Books.

Ricks, Christopher. 2003. Plagiarism, pp 21-40 in P. Kewes, ed., *Plagiarism in Early Modern England*. London: Palgrave.

Sokal, Alan. 1996. A Physicist Experiments with Cultural Studies. *Lingua Franca*, May/June.

[http://www.physics.nyu.edu/faculty/sokal/lingua\\_franca\\_v4/lingua\\_franca\\_v4.html](http://www.physics.nyu.edu/faculty/sokal/lingua_franca_v4/lingua_franca_v4.html)

## 5: Next Class: Rotten Information

Also See:

Eric Allman, The Economics of Spam, ACM Queue 1(9) Dec/Jan 2003-4.

Anderson, David. 2001. [SETI@home](#), Anderson, David. 2001. pp: 67-76 in A. Oram ed., Peer-to-Peer: Harnessing the Benefits of a Disruptive Technology. Cambridge, MA: MIT Press.

Chartrand, Sabra. 2004. New Way to Combat Online Piracy. New York Times. May 17.

Friess, Steve. 2003. "He Made a Fatal Error". Newsweek. January 14.

Game "Virus" Bites Mobile Phones. BBC Website  
<http://news.bbc.co.uk/1/hi/technology/3554514.stm>

Horn, John, et al. 2003. Point and Bet. Newsweek. October 28.

Levy, Steven. 2003. Pirates of the Internet. Newsweek. August 3.

Nordland, Rod, et al. 2001. The Web's Dark Secret. Newsweek. March 19.

Paul, Pamela. 2004. The Porn Factor. Time. January 19

## 5: Next Class: Rotten Information

Also See:

Ricks, Christopher. The Moral Imbecility of a Would-be Wunderkind. Saturday Review January 15, pp 31-33 & 49.

Rogers, Michael. 2003. Practical Futurist: Are Computers Wrecking Schools. Newsweek. Oct 14.

Schenker, Jennifer L. et al. 2002. Busting Software Pirates. Time. November 18.

Schwartz, John. 2004. On the Web, Vengeance is Mine (and Mine). New York Times. March 28.

Stone, Brad. 2002. Is the Boss Watching? Newsweek. September 30.

Stone, Brad, et al. 2003. Soaking in Spam. Newsweek. December 8.

Taylor, Chris. 2002. What Spies Beneath. Time. October 7.



# The Birth of the Information Age:

The popular sense of information a 19th-c. development, blending two older senses.

1. Content regarding a particular fact, “bit of news.” Cf French “voilà une information!”

"The book contains a lot of useful information" *Le livre contient beaucoup de renseignements (d'informations) utiles.*

"A letter from your old acquaintance, the housekeeper at the Grange," I answered.... She would gladly have gathered it up at this information, but Hareton beat her. Emily Brontë, *Wuthering Heights*

2. Information as Bildung -- cf Austen's “man of information.”

Mr. Martin, I suppose, is not a man of information beyond the line of his own business? He does not read?" Jane Austen, *Emma*

[G]reat and heroic men have existed, who had almost no other information than by the printed page. Ralph Waldo Emerson, "The American Scholar"

# A Conceptual Creolization, 1

ca.1840 “news” and “Bildung” blend(via metonymy) to form a notion of abstract public information

# New technical senses emerge

Ca. 1940:

c. Separated from, or without the implication of, reference to a person informed: that which inheres in one of two or more alternative sequences, arrangements, etc., that produce different responses in something, and which is capable of being stored in, transferred by, and communicated to inanimate things.

Information in this sense may at the same time be, or be regarded as, information in the following sense.

d. As a mathematically defined quantity (see quot.); now esp. one which represents the degree of choice exercised in the selection or formation of one particular symbol, sequence, message, etc., out of a number of possible ones, and which is defined logarithmically in terms of the statistical probabilities of occurrence of the symbol or the elements of the message.

The latter sense (introduced by Shannon, quot. 1948, though foreshadowed earlier) is that used in information theory, where information is usually regarded as synonymous with entropy.

# A Conceptual Creolization, 2

ca. 1970 Public information blends with the new technical sense:

We can glean it from the pages of a book or the morning newspaper and from the glowing phosphors of a video screen. Scientists find it stored in our genes and in the lush complexity of the rain forest. And it's always in the air where people come together, whether to work, play, or just gab. (Business Week, 1994)

Communication will be] redeemed from all the inefficiencies, pollutions, and corruptions attendant to the process of moving information attached to things. — Michael Benedikt, "Cyberspace"

# The Properties of Information, 1

- Information is corpuscular (morselized), quantifiable, commoditized  
“A daily issue of the The New York Times contains more ~ than the average 17th-century Englishman came across in a lifetime.” (Saul Richard Wurman, 100+ sources)

“Every year, better methods are being devised to quantify information and distill it into quadrillions of atomistic packets of data” - Bill Gates

- Information is objective, as opposed to knowledge

:

Cf human knowledge/??human information

medical knowledge = knowledge possessed by medical community

medical information = information about medicine

# The Properties of Information, 2

- Information is noble (transferable, /interconvertible)  
...the computer's ability to reduce all conventional information forms into one big digital stew... Business Week
- Information is transparent, autonomous  
The intelligence that came from afar ... possessed an authority which gave it validity, even when it was not subject to certification. Information, however, lays claim to prompt verifiability. The prime requirement is that it appear 'understandable in itself....' It is indispensable for information to sound plausible. Walter Benjamin, "The Storyteller"  
Note that transparency is crucial, not truth (compare "incorrect information"/"incorrect knowledge")

# The Properties of Information, 3

- Information is public, “institutional”  
“Could you give me some information about your family?”

"A letter from your old acquaintance, the housekeeper at the Grange," I answered.... She would gladly have gathered it up at this information, but Hareton beat her. (Wuthering Heights)

Cf “How much information is there in the world?”