The Web as a Digital Reflection of Reality – Distorting Factors

Panel Discussion

David A. Bray
Goizueta Business School
Emory University

http://userwww.service.emory.edu/~dbray

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The Web as a Digital Reflection of Reality – Distorting Factors

1. Malformed Context for Human Emotions

2. "Publicizing" of Private Workplace Discussions

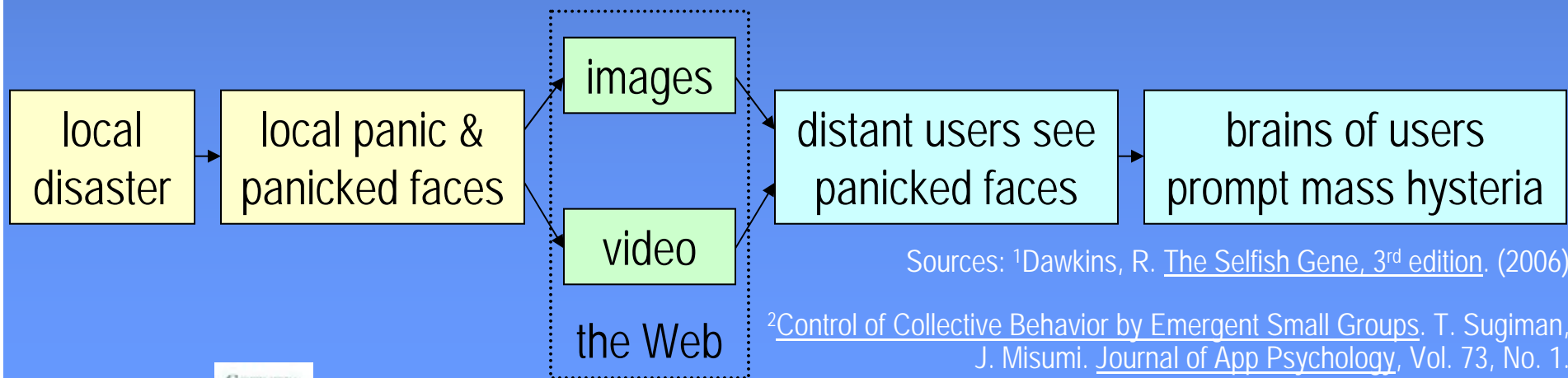3. Information Overload – an Evolutionary View

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1. Malformed Context for Human Emotions

- ## Web interfaces strip cues to human emotions:
  - ✓ Message Equivocality, Media Selection, and Manager Performance: Implications for Information Systems. R. Daft, R. Lengel, L. Trevino. MIS Quarterly, Vol. 11, No. 3.
  - ✓ Communication and Trust in Global Virtual Teams. S. Jarvenpaa, D. Leidner. Organization Science, Vol. 10, No. 6.

- ## Web interfaces can also trigger emotions:
  - disasters 1000+ miles away can be "felt" as near and real via the Web
  - human brain wired to panic when it sees panicked expressions
  - such "wiring" a result of evolutionary biology (survival instinct)[1,2]

| local disaster | → | local panic & panicked faces | → | images / video | → | distant users see panicked faces | → | brains of users prompt mass hysteria |

the Web

Sources: [1]Dawkins, R. The Selfish Gene, 3rd edition. (2006)

[2]Control of Collective Behavior by Emergent Small Groups. T. Sugiman, J. Misumi. Journal of App Psychology, Vol. 73, No. 1.

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1. Malformed Context for Human Emotions

- ## Incorrect context for emotions can have side-effects:
  - example #1: "stadium stampede" phenomena at sports events
  - example #2: <u>nationwide</u> panic in response to bioterrorism

    In 2001, even though NYC, DC, and Miami were the believed targets of the anthrax letters, the <u>entire nation panicked</u>[3]

- ## Web can help "fight" fear:
  - provide timely information; inform individuals to overcome their fear instinct

[3]Source: <u>Fighting Fear of a Bioterrorism Event with Information Technology</u>, D. Bray and B. Konsynski. <u>IEEE 2006 Lecture Notes in Computer Science</u>.

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1. Malformed Context for Human Emotions

- Questions:
  - when are emotions (e.g., fear) propagated by the Web?[4]
  - can Web technologies help mitigate in-group spread of negative emotions?

Fear of illness could be spread by internet

By Howard Witt
Tribune senior correspondent

July 24, 2006, 7:50 PM CDT

AUSTIN, Texas -- The symptoms sound like something straight out of a horror movie: crawling and biting sensations all over the skin, dementia and insomnia, painful sores that never heal and, most terrifying of all, mysterious tangled fibers pushing out through the open wounds.

Thousands of victims concentrated in Texas, California and Florida claim to be afflicted by the debilitating malady, for which there is no known cause and no certain cure. One young Austin man apparently committed suicide when the agony grew too acute, while many others, spurned by disbelieving doctors, are suffering in silence.

But whether the symptoms constitute a frightening new disease suddenly surfacing across the nation, or a case of mass hysteria abetted by Internet message boards and breathless local TV news reports, is a question that experts at the federal Centers for Disease Control and Prevention in Atlanta are urgently trying to answer.

Depending on the CDC's conclusions, the ailment known as Morgellons disease might soon displace Ebola and bird flu as the world's newest nightmare disease. But unlike those illnesses, which are still far from U.S. shores, Morgellons cases have already been reported in every state, as well as in Europe, Japan, Australia and other countries.

"We don't know yet what it is, so our first aim is to try to characterize it scientifically," said Dan Rutz, a CDC spokesman. "There's a concern that there's an infectious process going on. It would be very disturbing from a public health standpoint if that turns out to be case. We don't have any evidence to support that, but we are approaching this with an open mind."

For the moment, many health officials consider Morgellons a puzzling set of symptoms; only if the CDC experts can establish a definitive diagnosis and rule out other causes would Morgellons rise to the level of an official disease.

But whatever it is, more than 4,500 sufferers of the syndrome, the symptoms of which were first described in France more than 400 years ago, have registered with the Morgellons Research Foundation, an advocacy group founded by a South Carolina mother whose 2-year-old son came down with the mysterious symptoms. Morgellons researchers believe the actual number of those afflicted is far higher.

[4]Source: http://www.chicagotribune.com/news/custom/newsroom/chi-060724disease,1,6630979,print.story?coll=chi-news-hed

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2. "Publicizing" of Private Workplace Discussions

- Several companies have fired employees over blogs:
  - includes firings at Google, Microsoft, Friendster, and Delta Airlines[5]
  - according to the Electronic Frontier Foundation: "They're saying the same things [as] around the water cooler… in a forum… read by millions of people" <u>are they</u>?

Have a blog, lose your job?

Workers with Web logs are everywhere, and they're starting to make corporate America very nervous.

February 15, 2005: 2:01 PM EST

By Krysten Crawford, CNN/Money

NEW YORK (CNN/Money) - Mark Jen landed a dream job with Google Inc. in January. He was fired less than a month later.

His infraction? He ran a Web log, where he freely gabbed about his impressions of life at the Mountain View, Calif.-based Internet search giant.

Web logs, or blogs, the online personal diaries where big names and no names expound on everything from pets to presidents, are going mainstream. While still a relatively small piece of total online activity, blogging has caught on with affluent young adults. As Forrester Research analysts recently noted, blogging will become increasingly common as these consumers age.

For companies, the growing popularity of blogs is a double-edged sword. On the one hand, corporate managers recognize the power of word-of-mouth as a sales tool. On the other hand, they're acutely aware of the dangers inherent in the rapid and widespread dissemination of company information.

"Blogs are enabling people to have a conversation with a much wider audience," said Kurt Opsahl, a staff attorney with the Electronic Frontier Foundation, a group that monitors Internet use and privacy rights. "They're saying the same things that people would routinely say around the water cooler, only now they're saying them in a forum that can be read by millions of people."

Even though employee blogging ranks behind personal Internet and e-mail use at work, Google and other companies are starting to crack down.

A former Delta Air Lines flight attendant claims she was fired in November over pictures she posted on her personal blog that she says the airline deemed "inappropriate." Friendster, an online social networking site, canned an employee last summer for her online musings about the company. And a Microsoft contractor lost his gig after posting on the Web photos of Apple computers arriving at the software giant's Redmond, Wash., headquarters.

[5]Source: http://money.cnn.com/2005/02/14/news/economy/blogging

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2. "Publicizing" of Private Workplace Discussions

- Some workplace blogs have allowed anonymous postings:
  - CDCchatter.net is an public blog hosted by a Federal government employee at the U.S. Centers for Disease Control and Prevention (Robert Keegan)[6]
  - the site allows anonymous postings, without requiring registration

[6]Source: http://www.cdcchatter.net

2. "Publicizing" of Private Workplace Discussions

- Questions:
  - do public blogs (with identifiable or anonymous posters) <u>hinder or help</u> firms and government agencies by increasing transparency and public pressures?
  - are there any social norms to workplace blogs?

Senator Grassley
Posted by: anonymous on Tuesday, June 06, 2006 - 06:32 PM   Print article   Email to a friend

If Congressman Grassley only talks to the Director's inner circle during his investigation of CDC, it will be no different than asking Ken Lay and his inner circle about the state of Enron. For the sake of the health and welfare of the citizens of this country, I pray he does a complete and full investigation.

Senator Grassley | Log-in or register a new user account | 20 Comm

Display [Thread]   Order [Oldest first]   Refres

Post comment

Comments are statements made by the person who posted them.
They do not necessarily represent the opinions of the site editor.

Re: Senator Grassley

(Score: 1, Interesting)
by Anonymous on Jun 06, 2006 - 07:15 PM

I don't understand why no one is contacting the Office of the Inspector General OIG if there is something to investigate. By going to Congress aren't you potentially putting CDC at risk for further budget cuts. I thought official whistleblowing channels were to the OIG. Is that avenue being pursued as well or just Congress.

To be honest I believe CDC's woes are not really as much in the forefront of Congress as chatterbloggers hope when we are at war soldiers are dying and Members face mid term elections. Clearly what you want is regime change but is more damage being done with a scorched earth approach or do the leaders of this effort not care about long term effects of their push to expose CDC (what I am not sure) because they are about to retire and or have already.

Lets say AJC investigative efforts are successful and Congress stays engaged -- what is success to you people anyway. Do you really think if this works long term it won't negatively impact CDC beyond Dr. Gerberding's tenure?

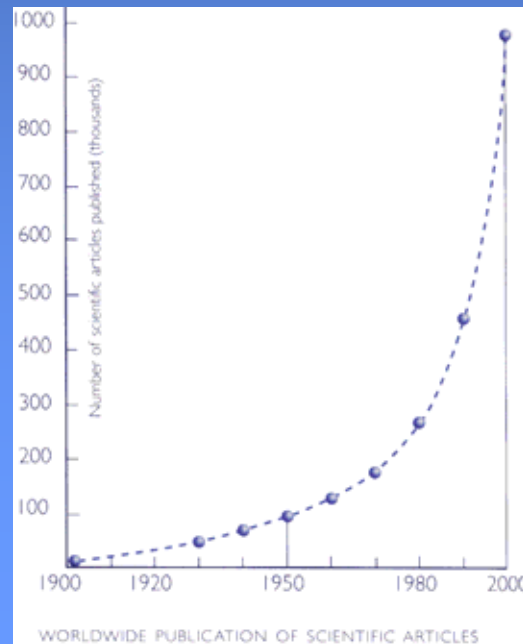**What is the current state of morale at CDC?**

Very high   2.35 % (29)
High   0.49 % (6)
OK   3.00 % (37)
Low   18.09 % (223)
Very low   76.07 % (938)

Total votes: 1233
One vote is allowed per day

[Voting booth | Other polls]

3. Information Overload – an Evolutionary View

- Evolution shaped how humans process information:
  - our brains are wired for environmental cues as to what is important <u>locally</u>
  - our brains are used to dealing with a small community of 80-100 individuals[7,1]

- The Web changes our environment dramatically
  - now part of a <u>global</u>, 24/7 community of millions of participants

WORLDWIDE PUBLICATION OF SCIENTIFIC ARTICLES

1900 = 9,000 scientific articles/year

1950 = 90,000 scientific articles/year

2000 = 900,000 scientific articles/year[7]

Sources: [7]Hawking, S. <u>The Universe in a Nutshell</u>. (2001)

[1]Dawkins, R. <u>The Selfish Gene, 3rd edition</u>. (2006)

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3. Information Overload – an Evolutionary View

• A view: <u>all of life</u> is information exchange and processing[8]

Localized Transmission of Information	Global Transmission of Information
Genes:	**Language:**
• Transmission: very slow (generations)	• Delay: fast (minutes or days)
• Optimality: determined by natural selection	• Optimality: determined by logic and motivations
• Replication: nucleotide chains	• Replication: written or spoken lexemes
Memes:	**Information Systems:**
• Transmission: slow (lifespans)	• Transmission: very fast (nanoseconds)
• Optimality: determined by natural selection	• Optimality: determined by logic
• Replication: demonstrated behaviors or ideas	• Replication: binary form

Figure 2: An example demonstrating the universality of information processing

... So what biological mechanisms for optimizing information processing can be employed for the digital world?

• imbue some awareness and <u>artificial intelligence to files</u>, akin to ants

• allow files to begin to "self-organize" themselves into neighborhoods

[5]Source: <u>Government as an Information Processing System</u>. D. Bray. (2006, work in progress)

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3. Information Overload – an Evolutionary View

- Files as Biological Analogs, two simple rules:
    1. attempt to self-propagate to as many hospitable environments as possible
    2. make friends with files of similar attributes (content, editors, use patterns, etc.)

- Example:

    File B is like A & C = neighbors
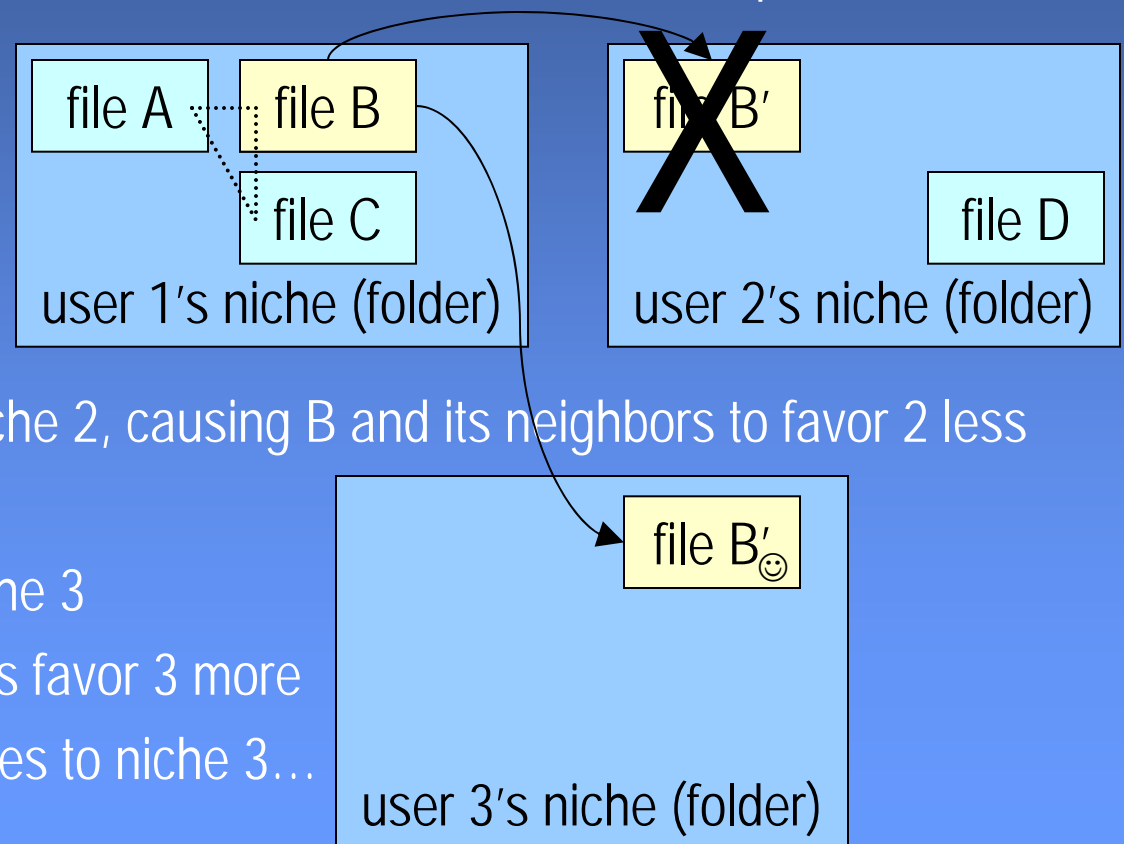
    File B′ sends copy to niche 2

    User "kills" (deletes) copy in niche 2, causing B and its neighbors to favor 2 less

    File B′ sends copy to niche 3

    User regularly uses copy in niche 3

    This causes B and its neighbors favor 3 more

    Files A & C will try to send copies to niche 3…

file A   file B

file C

user 1′s niche (folder)

file B′   **X**

file D

user 2′s niche (folder)

file B′ ☺

user 3′s niche (folder)

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Questions? Comments?

Contact Info:

dbray (at) bus.emory.edu, or
http://userwww.service.emory.edu/~dbray

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