The role of libraries in the new information order

Lee Rainie – Director Pew Internet Project
MnLINK User Group
November 12, 2008

May 2005
The Death of Libraries?
Digitization of print could reduce today's libraries to musty archives.
By TR. Stoff
"If you plopped a library down...30 years from now...there would be cobwebs growing everywhere because people would look at it and wouldn't think of it as a legitimate institution because it would be so far behind."  
-- Experienced library user.

"Many Americans would just as soon turn their local libraries into museums and recruit retirees to staff them."

1996 Benton Foundation report: "Buildings, books, and bytes"
New information ecosystem: Then and Now

**Industrial Age**
- Info was:
  - Scarce
  - Expensive
  - Institutionally oriented
  - Designed for consumption

**Information Age**
- Info is:
  - Abundant
  - Cheap
  - Personally oriented
  - Designed for participation

The internet is the asteroid: Then and now

**2000**
- 46% of adults use internet
- 5% with broadband at home
- 50% own a cell phone
- 0% connect to internet wirelessly
- <10% use “cloud”
- = slow, stationary connections built around my computer

**2008**
- 77% of adults use internet
- 58% with broadband at home
- 82% own a cell phone
- 62% connect to internet wirelessly
- >53% use “cloud”
- = fast, mobile connections built around outside servers and storage
Media ecology – then

<table>
<thead>
<tr>
<th>Product</th>
<th>Route to home</th>
<th>Display</th>
<th>Local storage</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV stations</td>
<td>phone</td>
<td>TV</td>
<td>Cassette/ 8-track</td>
</tr>
<tr>
<td>Broadcast TV</td>
<td>broadcast TV</td>
<td>radio stereo</td>
<td>Vinyl album</td>
</tr>
<tr>
<td>Broadcast radio</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>News</td>
<td>mail</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advertising</td>
<td>newspaper delivery</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radio Stations</td>
<td></td>
<td>non-electronic</td>
<td>paper</td>
</tr>
</tbody>
</table>

Adapted from Tom Wolzien, Sanford C. Bernstein & Co

Media ecology – now

<table>
<thead>
<tr>
<th>Product</th>
<th>Route to home</th>
<th>Display</th>
<th>Local storage</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV stations</td>
<td>cable DSL</td>
<td>cable TiVo (PVR)</td>
<td>VCR</td>
</tr>
<tr>
<td>Info</td>
<td>wireless/phone</td>
<td>TV</td>
<td>Satellite radio player</td>
</tr>
<tr>
<td>“Daily me” content</td>
<td>broadcast TV</td>
<td>radio</td>
<td>DVD</td>
</tr>
<tr>
<td>Cable News</td>
<td>broadcast radio</td>
<td>PC</td>
<td>Web-based storage</td>
</tr>
<tr>
<td>Web sites</td>
<td>satellite</td>
<td>iPod</td>
<td>Server/ TiVo (PVR)</td>
</tr>
<tr>
<td>Local news</td>
<td>email</td>
<td>iPod storage</td>
<td>PC</td>
</tr>
<tr>
<td>Content from individuals</td>
<td>express delivery</td>
<td>monitor</td>
<td>Satellite radio player</td>
</tr>
<tr>
<td>Peer-to-peer</td>
<td>iPod / storage</td>
<td>headphone</td>
<td>DVD</td>
</tr>
<tr>
<td>Advertising</td>
<td>satellite player</td>
<td></td>
<td>Cell phone memory</td>
</tr>
<tr>
<td>Radio stations</td>
<td>camcorder/camera</td>
<td></td>
<td>MP3 player / iPod</td>
</tr>
<tr>
<td>Satellite radio</td>
<td></td>
<td></td>
<td>Pagers - PDAs</td>
</tr>
</tbody>
</table>

Adapted from Tom Wolzien, Sanford C. Bernstein & Co
Nine hallmarks of the new digital ecosystem

Ecosystem change – 1

Volume and variety of information grow … and the “long tail” of information expands and becomes more visible
The role of libraries in a networked world

It’s a “long tail” world – Chris Anderson

Amazon, Rhapsody/iTunes, Netflix

20%-40% of traffic or sales in the “long tail”

http://longtail.typepad.com/

The internet rises in a fragmented media environment

(% of all Americans who “regularly” go to news source: PRC People/Press)

- Local TV -25%
- Natl TV news -52%
- Cable news +18%
- Newspapers -41%
- Radio -27%
- Online News +1,850%
**Velocity** of information increases and “smart mobs” emerge

– Howard Rheingold

A “political” gathering in Belarus

http://www.smartmobs.com/2006/10/03/ice-cream-politics-flash-mob-in-belarus/
Venues of intersecting with information and people multiply and the availability of information expands to all hours of the day and all places we are

People’s vigilance for information changes in two directions …
– attention is truncated
   “continuous partial attention” -- Linda Stone
– attention is elongated (deep diving)

age of the amateur expert – Terry Fisher
age of the narcissistic idiot – Andrew Keen
**TABLE 1.** SURVEY RESPONSES TO MEDIA MULTITASKING QUESTIONS: PERCENT OF 7TH–12TH GRADERS WHO SAY THEY...

<table>
<thead>
<tr>
<th>Activity</th>
<th>Most of the Time</th>
<th>Some of the Time</th>
<th>Most/Some</th>
<th>Little of the Time</th>
<th>Never of the Time</th>
<th>Little/Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multitask other media while reading</td>
<td>28</td>
<td>30</td>
<td>58</td>
<td>26</td>
<td>16</td>
<td>42</td>
</tr>
<tr>
<td>Multitask other media while watching TV</td>
<td>24</td>
<td>29</td>
<td>53</td>
<td>28</td>
<td>19</td>
<td>47</td>
</tr>
<tr>
<td>Multitask other media while listening to music</td>
<td>33</td>
<td>30</td>
<td>63</td>
<td>25</td>
<td>12</td>
<td>37</td>
</tr>
<tr>
<td>Multitask other media while using the computer</td>
<td>33</td>
<td>29</td>
<td>62</td>
<td>23</td>
<td>14</td>
<td>37</td>
</tr>
<tr>
<td>Do multiple things at the same time on the computer</td>
<td>39</td>
<td>25</td>
<td>64</td>
<td>19</td>
<td>14</td>
<td>33</td>
</tr>
</tbody>
</table>

**Ecosystem change – 5**

**Valence** (relevance) of information improves – search and customization get better
- “Daily Me” and “Daily Us”
  – Nicholas Negroponte
The voice of information democratizes and the visibility of new creators is enhanced
– identity and privacy change
-- a “5th estate” emerges

62% of young adult internet users have uploaded photos to the internet

34% of all users have done this
58% of online teens have created their own profile on a social network site like MySpace or Facebook

33% of online adults have such profiles

33% of college students keep blogs and regularly post
54% read blogs

12% of online adults have a blog
35% read them
20% of online young adults say they remix content they find online into their own artistic creations.

11% of online adults have done this.

19% of online young adults have created an avatar that interacts with others online.

6% of all adult internet users have done this.
Voting on and ventilating about information proliferates as tagging, rating, and commenting on material is enabled and collective intelligence asserts itself.

37% of young adult internet users have rated a person, product, or service online.

32% of all adults have done so.
34% of online young adults have tagged online content

---

28% of all adults have done that

Ecosystem change - 8

Different people use these technologies in different ways
Why a tech-user typology?

PIP’s tech-user typology

- **Assets**
  - Internet (and broadband at home)
  - Computer use (laptop & desktop)
  - Cell phones
  - iPods
  - Web cams
  - Video recorders & digital cameras

- **Actions**
  - User-generated content
  - Gaming
  - Cell phone applications

- **Attitudes**
  - Help me be productive?
  - Give me more control?
  - Information overload?
### High end – Group 1

**OMNIVORES** (8% of the population)

They have the most information gadgets and services, which they use voraciously to participate in cyberspace and express themselves online and do a range of Web 2.0 activities such as blogging or managing their own Web pages.

**Data Profile**
- Age: late 20s
- Gender: Male dominant
- Race: Diverse
- Home b-band: 89%
- Special traits
  - Students
  - Wireless
  - Photo and video freaks

### High end – Group 2

**CONNECTORS** (7% of the population)

Between featured-packed cell phones and frequent online use, they connect to people and manage digital content using ICTs – all with high levels of satisfaction about how ICTs let them work with community groups and pursue hobbies.

**Data Profile**
- Age: late 30s
- Gender: Female dominant
- Race: Diverse (blacks)
- SES: Upscale
- Home b-band: 86%
- Special traits
  - Email fanatics + IM
  - Cell phones
  - Media experiences by other means
  - Suspect their gadgets can do more; sometimes need help
High end – Group 3

**LACKLUSTRE VETERANS** (8% of the population)

They are frequent users of the internet and less avid about cell phones. They are not thrilled with ICT-enabled connectivity.

**Data Profile**
- Age: 40ish
- Gender: Male dominant
- Race: Diverse, trending white
- SES: Upscale
- Home b-band: 77%
- Special traits
  - Tech is necessary, not exiting
  - Dislike “always on” world
  - Parents (child at home)
  - Trad. channels of chatter and info predominate

High end – Group 4

**PRODUCTIVITY ENHANCERS** (8% of population)

They have strongly positive views about how technology lets them keep up with others, do their jobs, and learn new things.

**Data Profile**
- Age: 40ish
- Gender: Parity
- Race: Diverse (Latino)
- SES: Upscale
- Home b-band: 71%
- Special traits
  - Flip side of lackluster vets
  - Love tech for work use
  - Don’t have time or inclination to create or browse for fun
Middle end – Group 1

**MOBILE CENTRICS** (10% of the population)

They fully embrace the functionality of their cell phones. They use the internet, but not often, and like how ICTs connect them to others.

**Data Profile**
- Age: early 30s
- Gender: Parity
- Race: Minorities rule
- SES: Middle income
- Home b-band: 37%
- Special traits
  - Phone texters and photo takers
  - Not early adopters
  - More likely to be single
  - Not as many gadgets

Middle end – Group 2

**CONNECTED BUT HASSLED** (10% of population)

They have invested in a lot of technology, but they find the connectivity intrusive and information something of a burden.

**Data Profile**
- Age: mid-40s
- Gender: Female dominant
- Race: White
- SES: Middle income
- Home b-band: 80%
- Special traits
  - Go online less frequently
  - Tech is not fun – it’s stressful
  - Experience info overload
Low end – Group 1

INEXPERIENCED EXPERIMENTERS (8% of pop.)

They occasionally take advantage of interactivity, but if they had more experience, they might do more with ICTs.

Data Profile

- Age: 50ish
- Gender: Female dominant
- Race: Diverse
- SES: Middle income
- Home b-band: 15%
- Special traits
  - Less online experience
  - Fewer tech assets
  - Fascinated with tech, and willing to try gadgets with coaching

Low end – Group 2

LIGHT BUT SATISFIED (15% of population)

They have some technology, but it does not play a central role in their daily lives. They are satisfied with what ICTs do for them.

Data Profile

- Age: mid-50s
- Gender: Parity
- Race: Whites
- SES: Below average
- Home b-band: 15%
- Special traits
  - Traditional media occupies time
  - Tech doesn’t do much for them
  - Late adopters
**Low end – Group 3**

**INDIFFERENTS** *(11% of population)*

Despite having either cell phones or online access, these users use ICTs only intermittently and find connectivity annoying.

<table>
<thead>
<tr>
<th>Data Profile</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Age: late 40s</td>
</tr>
<tr>
<td>• Gender: Parity</td>
</tr>
<tr>
<td>• Race: Whites</td>
</tr>
<tr>
<td>• SES: Below average</td>
</tr>
<tr>
<td>• Home b-band: 12%</td>
</tr>
<tr>
<td>• Special traits</td>
</tr>
<tr>
<td>- Active tech resistors surrounded by gadgets</td>
</tr>
<tr>
<td>- Time pressed</td>
</tr>
<tr>
<td>- Truthful?</td>
</tr>
</tbody>
</table>

**Low end – Group 4**

**OFF THE NETWORK** *(15% of population)*

Those with neither cell phones nor internet connectivity tend to be older adults who are content with old media.

<table>
<thead>
<tr>
<th>Data Profile</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Age: mid-60s+</td>
</tr>
<tr>
<td>• Gender: Female dominant</td>
</tr>
<tr>
<td>• Race: Diverse (blacks)</td>
</tr>
<tr>
<td>• SES: Poorest group</td>
</tr>
<tr>
<td>• Home b-band: 0%</td>
</tr>
<tr>
<td>• Special traits</td>
</tr>
<tr>
<td>- Old media and tech are everything</td>
</tr>
<tr>
<td>- Tech wary or even hostile</td>
</tr>
</tbody>
</table>
Social networks become more vivid and meaningful. That changes the structure of friendship and the basic norms of human encounters
-- “networked individualism” takes hold

-- Barry Wellman

A new kind of social networking is possible and all kinds of institutions from libraries to companies to churches to social organizations can become “nodes” in people’s social networks
How did libraries fare?

Background of research

• Institute for Museum and Library Services grant
• UIC partnership
• Government Printing Office query

http://www.pewinternet.org/PPF/r/231/report_display.asp

Information searches that solve problems

How people use the internet, libraries, and government agencies when they need help

DECEMBER 10, 2007
Survey logistics

- Fielded June 27–Sept 4, 2007
- 2,796 completed interviews – oversample of 733 low-access respondents
- Margin of error 3 percentage points
- Response rate 27.1%

Visited library in the past year

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>% who visited a public library</td>
<td>62%</td>
<td>59%</td>
<td>57%</td>
<td>46%</td>
<td>42%</td>
<td>32%</td>
</tr>
</tbody>
</table>
Public library patrons are more likely to be …

- Those who are internet users
  - Internet user = 61%
  - Non-user = 28%
  -----
- 60% of online teens use the internet at libraries – up from 36% in 2000

Focus on problem solving

- How do people get information to help them solve problems that could have a government connection or be aided by government resources?
  - Not a look at general-interest information searches
<table>
<thead>
<tr>
<th>Problem – 1 (... in the past two years)</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dealt with a serious illness or other health condition, either yourself or someone close to you</td>
<td>45%</td>
</tr>
<tr>
<td>Made a decision about schooling, paying for education, or getting training for yourself or for a child</td>
<td>39</td>
</tr>
<tr>
<td>Needed information about property taxes or income taxes</td>
<td>34</td>
</tr>
<tr>
<td>Changed jobs, retired, or started your own business</td>
<td>25</td>
</tr>
<tr>
<td>Needed information about Medicare / Medicaid / food stamps</td>
<td>23</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Problem – 2 (... in the past two years)</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Needed information about Social Security / military benefits</td>
<td>20%</td>
</tr>
<tr>
<td>Wanted information about voter registration or a government action, program, or policy</td>
<td>19</td>
</tr>
<tr>
<td>Look for help from local government with a problem like traffic or schools</td>
<td>15</td>
</tr>
<tr>
<td>Involved in a criminal matter, a lawsuit, or other legal action</td>
<td>10</td>
</tr>
<tr>
<td>Became a citizen / helped someone with immigration</td>
<td>5</td>
</tr>
</tbody>
</table>
79.5% had experienced at least one problem

= Approx. 169 million adults and that is the target population for this research

Concentrate on special information hubs

• What is the role in such searches that is played by libraries and government agencies?
What sources did you use for most recent problem?

• 58% of those who had recently experienced one of those problems said they used the internet to get help (not including secondary internet users)
• 53% said they turned to professionals such as doctors, lawyers or financial experts
• 45% turned to friends and family members

What sources did you use …? (2)

• 36% consulted newspapers, magazines, books
• 34% directly contacted a government office or agency
• 16% consult television and radio
• 13% went to the public library
• 11% used another source not mentioned in survey
Who turns to libraries for problem solving

- Young adults (18-29) = 21%
- Oldest (over 70) = 15%
- Blacks = 26%
- Latinos = 22%
- Lower income (HH <$40,000) = 17%

Once they are at the library, they are active AND happy

- 69% got help from library staff
- 68% used computers – 38% got one-on-one instruction
- 58% sought reference materials
- 42% used newspapers and magazines
Most popular problem-solving searches at libraries

- Made a decision about schooling, paying for education, or getting training for yourself or for a child
- Jobs
- Serious illness
- Taxes
- Medicare / Medicaid / food stamps

<table>
<thead>
<tr>
<th>Problem</th>
<th>Health</th>
<th>Edu.</th>
<th>Tax</th>
<th>Medicare / Medicaid</th>
<th>Chng. job status</th>
<th>Social Security</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet</td>
<td>46%</td>
<td>77%</td>
<td>60%</td>
<td>45%</td>
<td>66%</td>
<td>41%</td>
</tr>
<tr>
<td>Professionals</td>
<td>83%</td>
<td>40%</td>
<td>48%</td>
<td>43%</td>
<td>27%</td>
<td>38%</td>
</tr>
<tr>
<td>Family or Friends</td>
<td>51%</td>
<td>50%</td>
<td>26%</td>
<td>28%</td>
<td>58%</td>
<td>31%</td>
</tr>
<tr>
<td>Government Agency</td>
<td>15%</td>
<td>27%</td>
<td>56%</td>
<td>60%</td>
<td>27%</td>
<td>71%</td>
</tr>
<tr>
<td>Library</td>
<td>10%</td>
<td>20%</td>
<td>10%</td>
<td>10%</td>
<td>11%</td>
<td>7%</td>
</tr>
</tbody>
</table>
Search success in problem solving

<table>
<thead>
<tr>
<th>Source</th>
<th>Very Successful</th>
<th>A lot of information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government agency</td>
<td>65%</td>
<td>49%</td>
</tr>
<tr>
<td>Public library</td>
<td>64%</td>
<td>36%</td>
</tr>
<tr>
<td>Internet</td>
<td>63%</td>
<td>55%</td>
</tr>
<tr>
<td>Professionals / experts</td>
<td>61%</td>
<td>NA</td>
</tr>
<tr>
<td>Newspapers, mags, books</td>
<td>57%</td>
<td>NA</td>
</tr>
<tr>
<td>Family and friends</td>
<td>56%</td>
<td>NA</td>
</tr>
<tr>
<td>TV and radio</td>
<td>55%</td>
<td>NA</td>
</tr>
</tbody>
</table>

Future intentions on library visits to solve problems

- 29% said they likely would go to libraries
  - Less well off – 40% (under $40,000)
  - Gen Y – 41%
  - Less educated – 41%
  - Latinos – 42%
  - Blacks – 48%
- Regular library patrons – 68%
What new role does this create for libraries?

• Libraries can plug into people’s social networks
  – Be a “node” in people’s networks – or “weak tie”

Librarian blogger Pam Berger’s list
http://www.infosearcher.com/

1. Graphic literacy – the language of the screen.
2. Navigation – the transition to non-linear format.
3. Context – the importance of seeing connections.
4. Focus – the value of reflection.
5. Skepticism – the capacity to evaluate
6. Ethical behavior – the will to be responsible
7. Personal literacy – understanding your digital footprints

Thank you!

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