Definitions and inequalities of the information society

Ian Brown, with thanks to Claire Warwick
Course rationale

- Vital to think about the impact of systems and technologies on the people and societies that use them
- Does technology determine society?
  - Or the reverse?
Important course details

- Remember SLAIS attendance policy!
- My details at http://people.oii.ox.ac.uk/brown/
- Course timetable, lecture notes, reading list all linked from SLAIS pages
Assessment

- 50% examination (breadth)
- 50%: Construction of a briefing document on a current information policy issue (depth) – deadline is Wednesday 10 December
Schedule

2. Copyrights and copywrongs / 6 Oct
4. Internet governance and standards / 20 Oct
5. Healthcare informatics / 27 Oct
6. Internet regulation / 10 Nov: Chris Marsden, Essex
7. Biometrics / 17 Nov: Angela Sasse, UCL
8. Software patents / 24 Nov: Rufus Pollock, Cambridge
9. Electronic voting / 1 Dec
10. Privacy and security / 8 Dec
So what is the Information Society?

- Who defines it?
  - government
  - academics
  - the media

- Who promotes it?
  - as above?
When did the info society begin?

• Communication
  – Does info exist if not recorded?
  – Oral cultures
• Cave paintings (40,000BC)
• Writing (6,600BC)
• Printing (AD 868), with movable type (AD1455)
When did the info society begin?

- C17 ’new science’ and news culture
  - writers preoccupied with technology
  - café society
  - Royal Society founded
When did the info society begin?

- telegraphy (1837) / telephony (1875)
- C19 library and information boom
- Turing and Enigma
- The computer
- The Web?
What is an info professional?

- Priests, monks, doctors, lawyers, teachers, librarians, programmers, traders?
- “The new barbarians” (Angell) / symbolic analysts?
- Uniquely mobile?
- Vulnerable to outsourcing?
The Information Economy

- Info is the raw material
- IT becomes pervasive across society
- reliant on data storage, processing power and communications networks
- based on flexibility and ability to reconfigure
- high speed of convergence

(Castells 1996)
Is change necessary?

- Should we change to suit the info society?
- Or should we adapt Info systems to suit us?
- Will we?
  - Consumer resistance
  - increased demands for ‘real things’
Information inequality

- Developed and developing world
- Social exclusion
- Gender
- Age
- Race

Top 20 economies (ranked by total subscriber numbers) as at 31 December 2005

<table>
<thead>
<tr>
<th>Economy</th>
<th>Total mobile cellular subs. (000s)</th>
<th>Of which, total mobile broadband subs. (000s)</th>
<th>Penetration (per 100 Inhabitants)</th>
<th>OECD low-user Basket (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. China</td>
<td>393,428</td>
<td>*</td>
<td>29.9</td>
<td>$2.90</td>
</tr>
<tr>
<td>2. United States</td>
<td>201,650</td>
<td>4,360.4</td>
<td>67.6</td>
<td>$5.21</td>
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<tr>
<td>3. Russia</td>
<td>120,000</td>
<td>*</td>
<td>83.6</td>
<td>$5.96</td>
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<tr>
<td>4. Japan</td>
<td>94,745.0</td>
<td>17,926.0</td>
<td>74.0</td>
<td>$20.51</td>
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<tr>
<td>5. India</td>
<td>90,000.0</td>
<td>*</td>
<td>8.16</td>
<td>$2.39</td>
</tr>
<tr>
<td>6. Brazil</td>
<td>86,210.0</td>
<td>175.0</td>
<td>46.25</td>
<td>$26.52</td>
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<tr>
<td>7. Germany</td>
<td>79,200.0</td>
<td>2,289.0</td>
<td>95.8</td>
<td>$17.34</td>
</tr>
<tr>
<td>8. Italy</td>
<td>72,200.0</td>
<td>10,262.0</td>
<td>124.3</td>
<td>$14.43</td>
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<tr>
<td>9. United Kingdom</td>
<td>60,091.0</td>
<td>4,563.8</td>
<td>102.2</td>
<td>$14.02</td>
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<tr>
<td>10. France</td>
<td>48,058.4</td>
<td>1,583.0</td>
<td>79.4</td>
<td>$30.00</td>
</tr>
<tr>
<td>11. Mexico</td>
<td>47,462.1</td>
<td>*</td>
<td>44.3</td>
<td>$14.00</td>
</tr>
<tr>
<td>12. Indonesia</td>
<td>46,910.0</td>
<td>*</td>
<td>21.1</td>
<td>$4.30</td>
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<tr>
<td>13. Turkey</td>
<td>43,609.0</td>
<td>*</td>
<td>59.6</td>
<td>$12.57</td>
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<tr>
<td>14. Spain</td>
<td>41,328.9</td>
<td>939.0</td>
<td>96.6</td>
<td>$22.14</td>
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<tr>
<td>15. Korea (Rep.)</td>
<td>38,342.3</td>
<td>12,530.9</td>
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<tr>
<td>16. South Africa</td>
<td>33,960.0</td>
<td>216.1</td>
<td>71.6</td>
<td>$13.26</td>
</tr>
<tr>
<td>17. Philippines</td>
<td>32,810.0</td>
<td>*</td>
<td>39.5</td>
<td>$5.29</td>
</tr>
<tr>
<td>18. Poland</td>
<td>29,166.4</td>
<td>129.0</td>
<td>75.7</td>
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<td>19. Thailand</td>
<td>27,379.7</td>
<td>*</td>
<td>43.0</td>
<td>$4.35</td>
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<tr>
<td>20. Taiwan, China</td>
<td>22,171.7</td>
<td>113.9</td>
<td>97.4</td>
<td>$26.29</td>
</tr>
<tr>
<td>WORLD</td>
<td>2,168,434.0</td>
<td>60,248.1</td>
<td>33.5</td>
<td>$12.77</td>
</tr>
</tbody>
</table>

Note: * 3G not commercially available, as of 31 December 2005. / ... Data unavailable. 
'Mobile broadband' is ≥ 256 kbit/s in one or both directions.
Missed economic opportunities

• ICT can give countries something else to sell
• Labour force as well as products and software
• Infrastructure costs high
  – ISPs pay to connect to commercial backbones
  – Uneconomic telecoms monopolies
• Education levels low
On the other hand

• Is this as serious as food and health? (Bill Gates!!!)

• Areas of high ICT development eg Bangalore
  – High skill base
  – Exports workers to the UK
  – Dominance of English important

• No reason for complacency!
Social exclusion

- New information elite (Angell 2001)
- Social exclusion problematic
- As information increasingly digital exclusion gets worse
  - Local libraries close
  - Most people use Internet at home
  - Levels of use of ICT drop with social class and income
Income and Internet use

Source: Dutton & Helsper (2007) p.11
Education and Internet use

OxIS 2007: N=2,350 (Basic: N=1,176; Further: N=640; Higher: N=405) (Note the same data are available excluding current students but percentages are very similar)
Reasons for not using the Internet

- Among ex-users, most claim not-interested
- Non-users worry about skills, access, relevance, cost
- Low level of education, and general literacy
  - Lack of confidence with information handling as well as tech?
Problems

• Providing access not enough
• Motivation necessary,
  – understanding views and use patterns
• Training needed,
  – but socially excluded may fear education
• Do we know what the benefits are?
Questions

• Education expensive
  – so increased social exclusion

• What about jobs for those who aren’t well educated?
  – Not everyone can reach necessary educational level

• Should the underclass pay for elite’s education via taxes?
Global gender divides

- Women traditionally thought less keen on ‘techie’ things
- New technologies often directed at men, marginalizing women
- Women under-represented at every level of science and technology.
Women and information

• Illiteracy: Women comprise 543 of the 854 million illiterates in the world – 63% (OECD 2000)
• Girls constitute 2/3 of children without access to basic education (Huyer 2004)
• S&T subjects not considered “suitable” for girls
Effect of technologies

• Technology (including ICT) can improve women’s production and income

• Consequences
  – children’s well-being improves
  – school enrolment rises
  – birth rates decrease
  – environmental conservation increases (Huyer 2004)
Incentives to involve women

• Increasingly aging population
  – Workforce shrink, women need to work
• Danger of adding to technological underclass
• Women often gifted as associative thinkers, collaborators, communicators
  – All vital skills in service, information economy
Age

• Generational difference in IT literacy
  – 50% of all over 50s are not IT literate
• May mean their access to info is simply different?
• Education level and work experience key
• Danger of marginalisation
  – Made worse by increased longevity
  – May need to work for longer
Internet use by life stage

Source: Dutton & Helsper (2007) p.11
Effects

- Altered power relationships
  - Different family dynamics
  - Age of employees in organisations
    - Older manager, to younger staff member
  - Teacher to pupil relationships
    - Assuming technological trend continues.
Age

- Rise of Silver Surfer
- Self help and teaching for older adults
  - Specific to needs
- How common is this?
  - Lowest access to DTV and computers amongst oldest
  - Access to e-government initiatives?
Race

- Whites have highest use levels
  - Particularly noted in USA studies
  - Latinos and African Americans fastest growing groups
- Links to complex social problems
  - Class more significant than ethnic origin?
- Higher level of education
  - correlates with higher computer/Internet use
  - Higher income/information intensive work
Conclusions

• Definitions and impact of information society controversial
• Radical 20th century post-industrial model of economy, or long evolution over hundreds or thousands of years?
• Digital divide exists along geographical, racial, age and gender lines
• Solutions less evident
  – Can’t simply be technocratic
• Need sense of priorities and motivation in the use of ICT
References


