A user perspective on value
or
how much do researchers care?

Michael Jubb

e-journals are forever?

26 April 2010

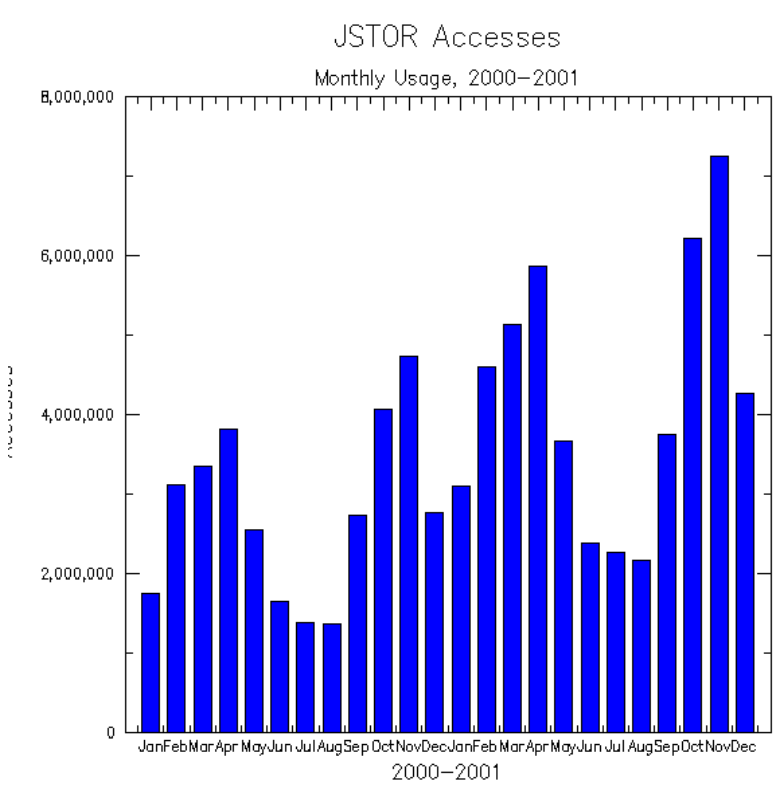
Usage of e-journals

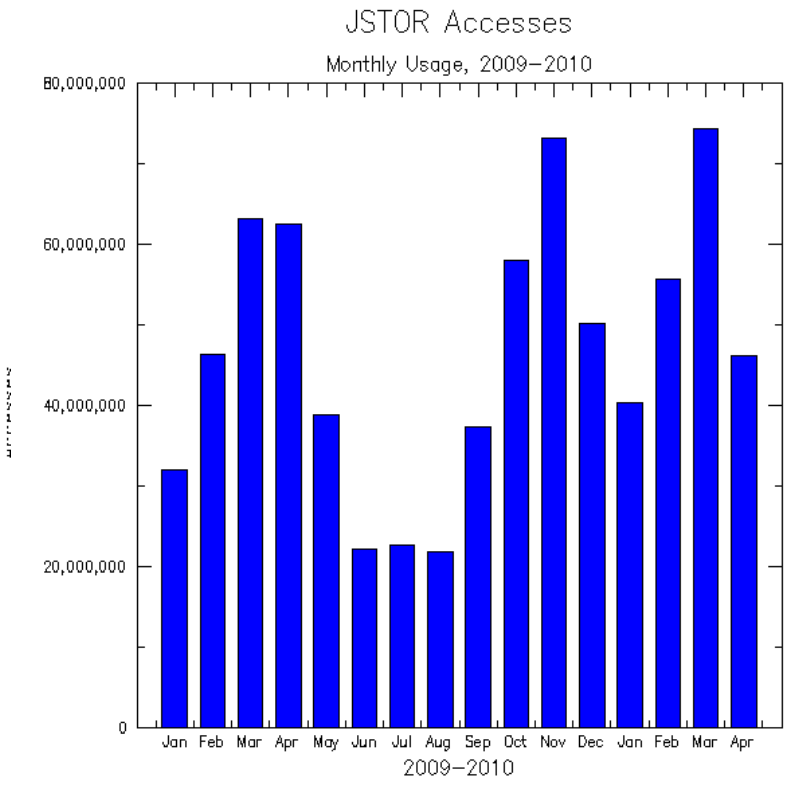
Table 22: Annual COUNTER downloads (CIBER estimates based on Sconul)

	Mean for sector (Huber's M-estimator)				
YEAR	**2004**	**2005**	**2006**	**2007**	**2008**
Russell Group	783,870	1,377,603	1,846,121	2,211,245	2,795,825
Pre-1992 institutions	439,813	632,144	665,926	819,335	1,001,521
Post-1992 institutions	283,760	332,251	443,027	521,350	592,253
Total	**432,693**	**632,758**	**772,600**	**930,415**	**1,134,165**

	Index 2004=100				
YEAR	**2004**	**2005**	**2006**	**2007**	**2008**
Russell Group	100	175.7	235.5	282.1	356.7
Pre-1992 institutions	100	143.7	151.4	186.3	227.7
Post-1992 institutions	100	117.1	156.1	183.7	208.7
Total	**100**	**146.2**	**178.6**	**215.0**	**262.1**

JSTOR Usage





Created Tue Jan 1 12:22:44 GMT by JStat 1.0, Copyright 2002 JSTOR

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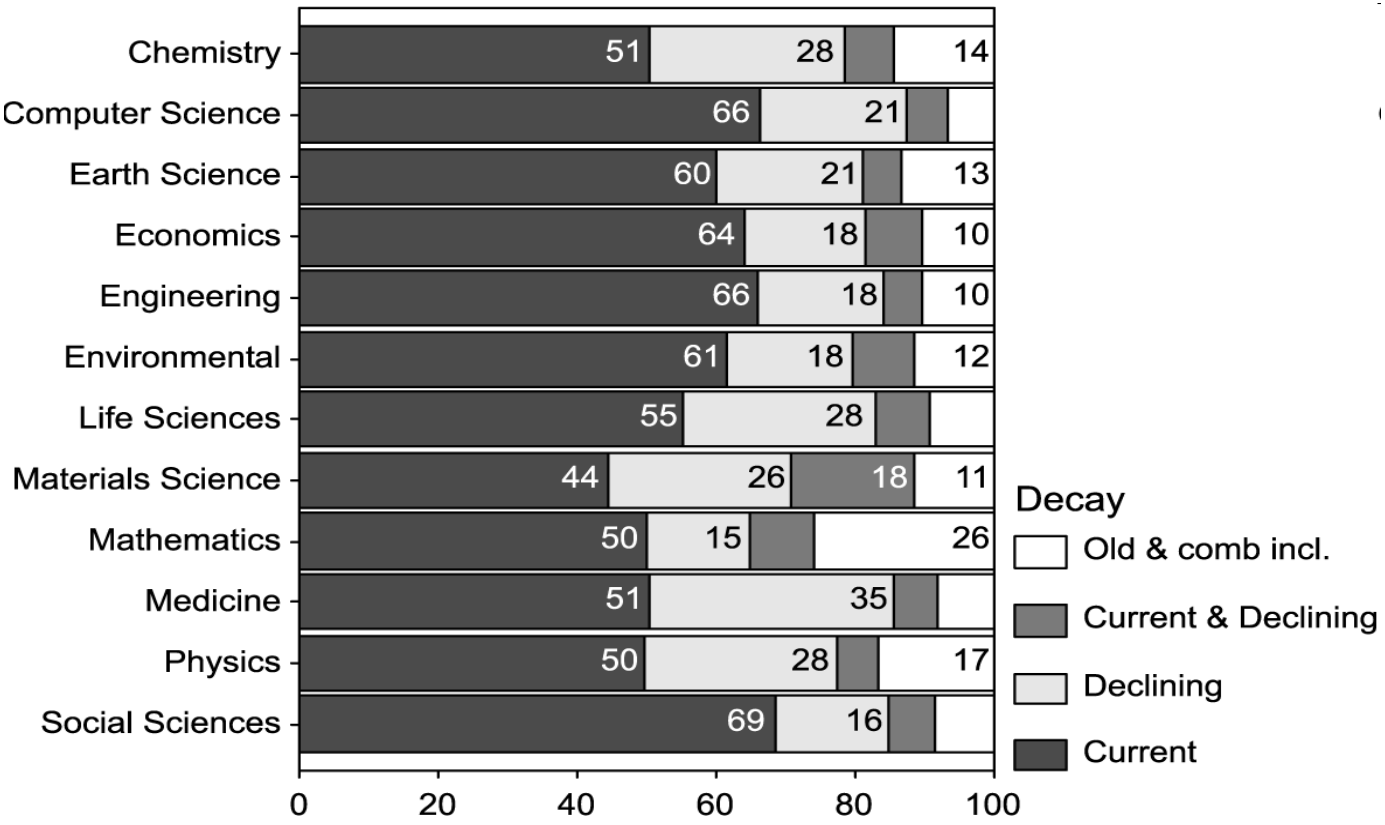
Usage of e-journals

Age of articles viewed

(Nicholas, Huntington and Jamali 2008)



Usage of e-journals

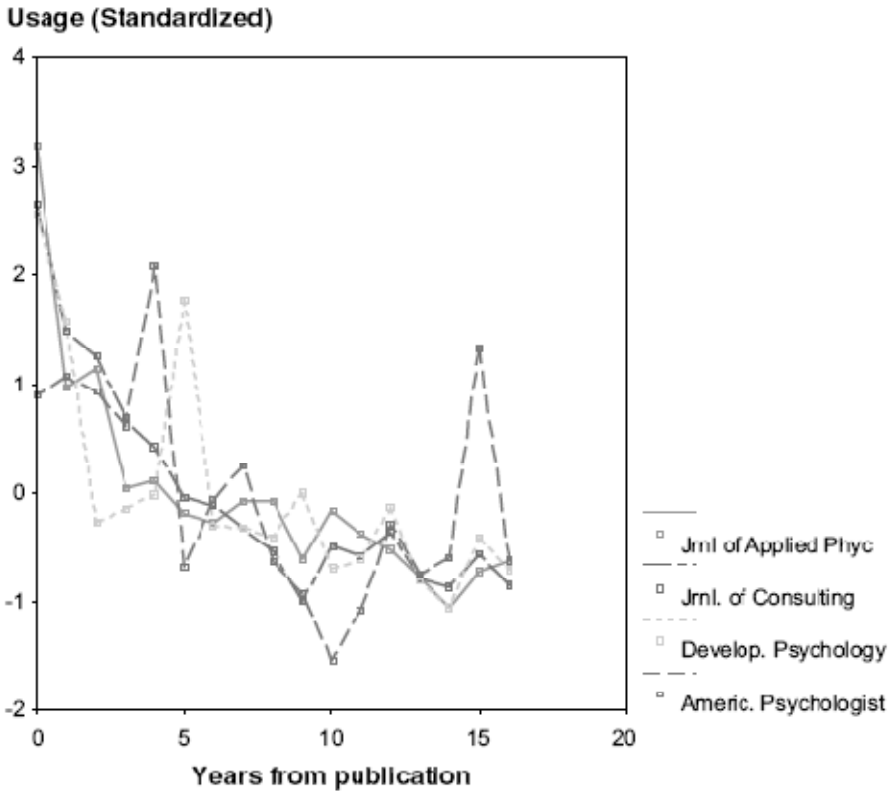


FIG. 6. Historic use of article by age of article over the period June to December 2004.

Usage of e-journals

Science Direct: Average age of article viewed (days)

	Life Sciences	Chemistry	Earth Sciences	Economics	Physics
Aberdeen	579	423	732	1,049	629
Bangor	1,007	871	1,175	1,471	876
Cambridge	722	967	1,167	1,756	1,099
Edinburgh	788	1,167	942	1,736	1,045
Manchester	828	1,213	988	1,746	1,416
Strathclyde	900	733	812	1,731	952
Swansea	737	693	748	1,431	1,045
UCL	507	561	739	1,266	739
CEH	309	833	355	729	302
Rothamsted	477	541	525	1,011	448

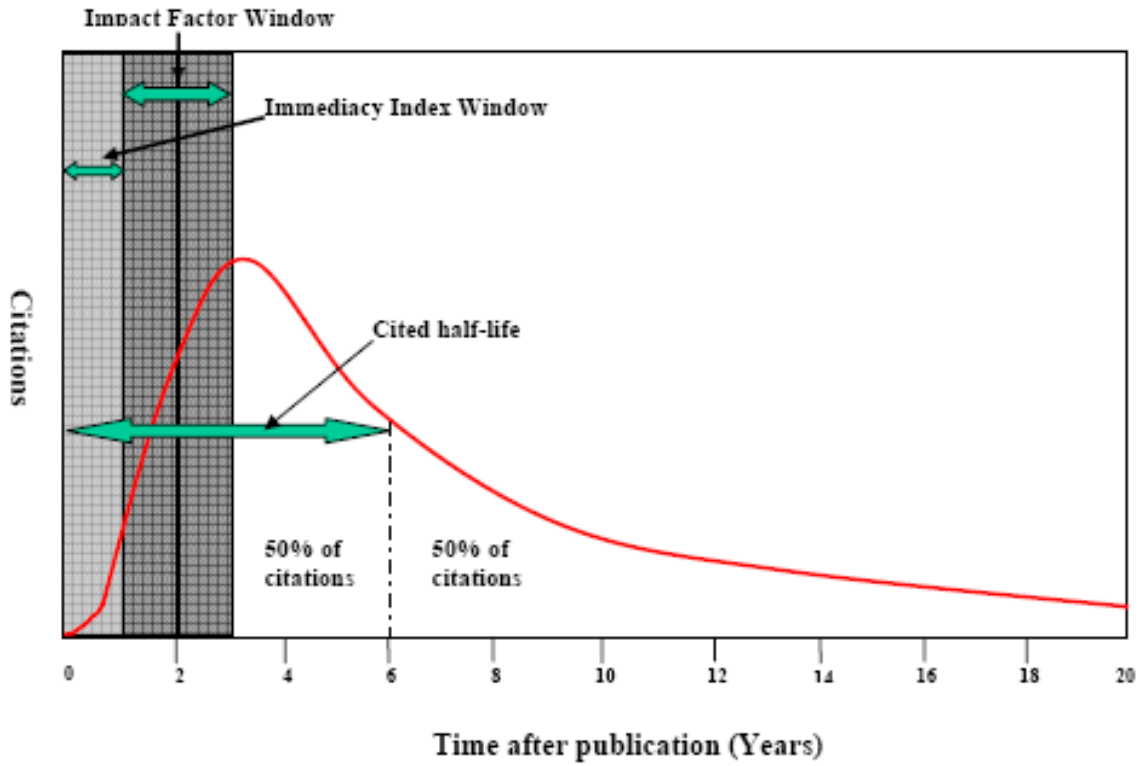
Usage conclusions?

- it's increasing
- usage of older content more prevalent than many thought, even in the sciences
  - 20-25% of STM journal usage is of content >5yrs old
  - significant disciplinary differences
  - significant institutional differences

Citation studies

- measure of usage but also of *relevance* to the research community
- usage over time can be measured, and analysed in terms of ‘citation half-life’

Generalised citation curve



- Source: Mabe and Amin, 2007

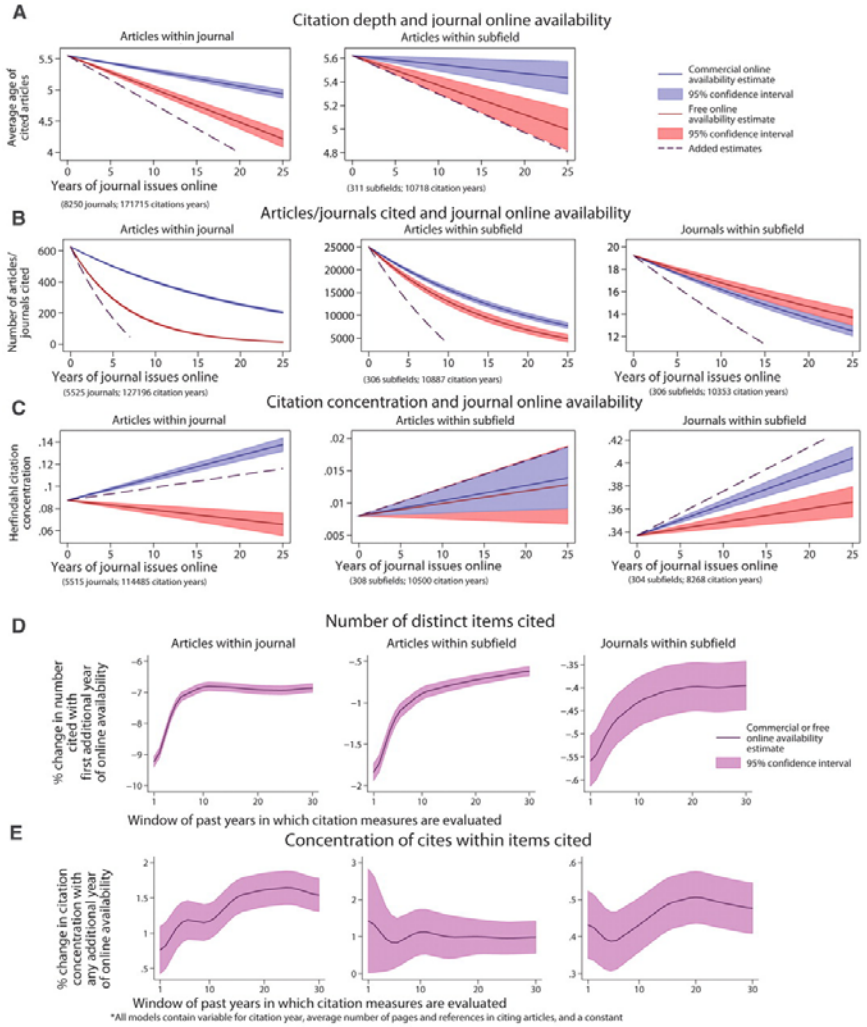
Median citation ages

Table 2 Median citation ages for different subject areas

Field	Median age of citations (years)
Metallurgical engineering	3.9
Chemical engineering	4.8
Genetics	5.0
Information systems	5.0
Physics	5.2
Mechanical engineering	5.2
Desalination	5.6
Chemistry	8.1
Archaeology	9.5
Botany	10.0
Mathematics	10.5
Geology	11.8
Music education	12.5
Music theory	12.5
Biblical criticism	21.6

- Source: Nicholas, Rowlands, Huntington and Jamali, 2010, based on Cunningham and Bocock , 1995

Impact of digitisation on citation age?



J. A. Evans
Science 321, 395 -399 (2008)

Impact of digitisation on volume of citations?

Biological sciences

Table VII: Biological sciences *worldwide* (raw data)
(ISI SUBJECT CATEGORY=BIOLOGY

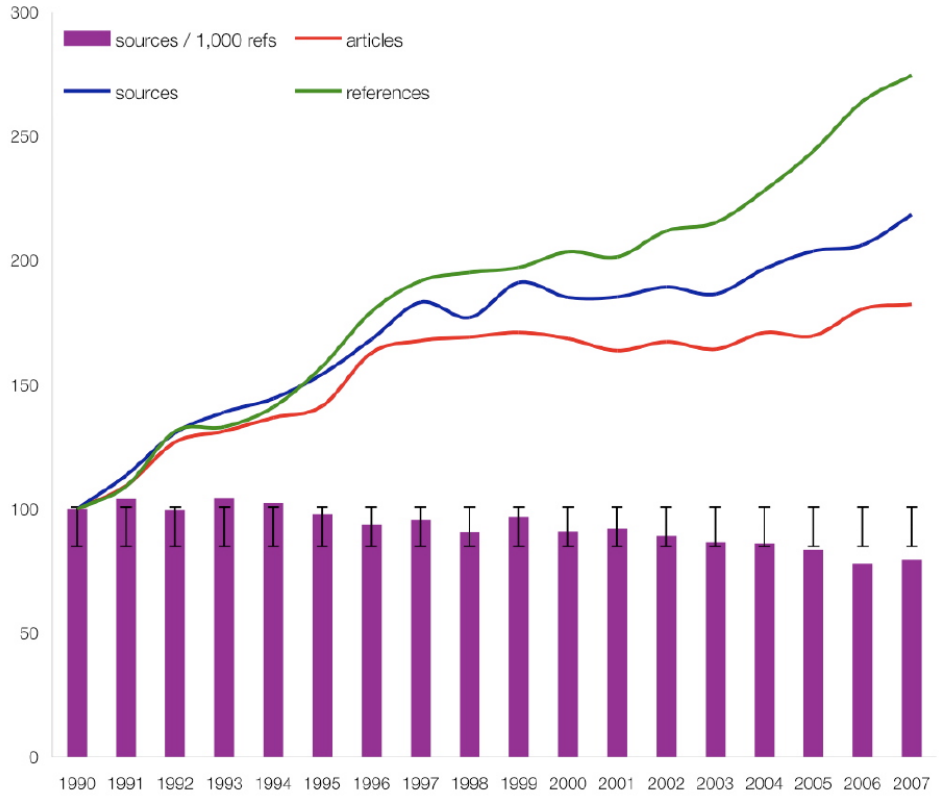
Year	Articles	References	Sources	Refs /article	Sources / article	Sources / 1,000 refs
1990	38,057	1,127,486	90,261	29.63	2.37	80.06
1995	56,012	1,929,483	156,748	34.45	2.80	81.24
2007	78,373	3,149,215	263,487	40.18	3.36	83.67

Table VIII: Biological sciences *worldwide* (Index=1990)

Year	Articles	References	Sources	Refs /article	Sources / article	Sources / 1,000 refs
1990	100	100	100	100	100	100
1995	147	151	174	116	118	101
2007	206	279	292	136	142	105

Impact of digitisation on volume of citations?

Figure 3: Chemistry, *UK*



Citation conclusions?

- researchers value older content enough to want to cite it
- citation half-lives vary by subject
- some evidence that availability of backfiles reduces citation age
- evidence also that availability of backfiles increases number of articles cited, and sources from which they are cited

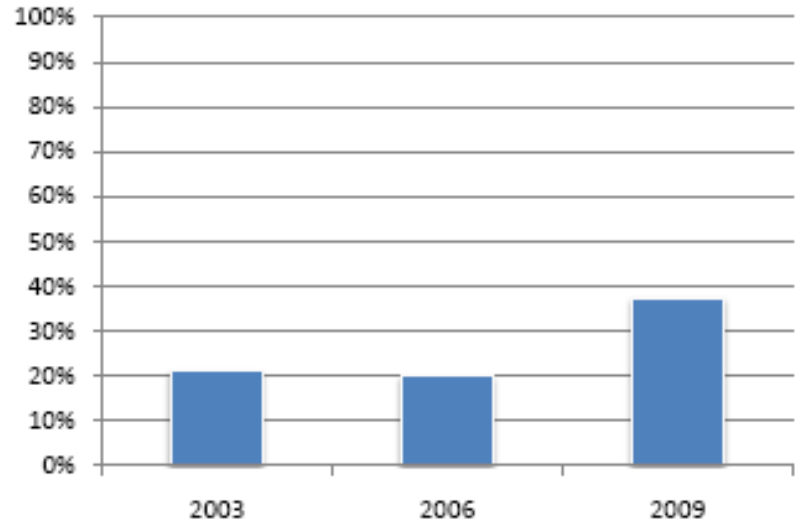
Researchers' attitudes?

print and digital preservation

- UK Research Reserve
- JSTOR dark stores
  - the cautionary principle, or researchers' need for a comfort blanket?

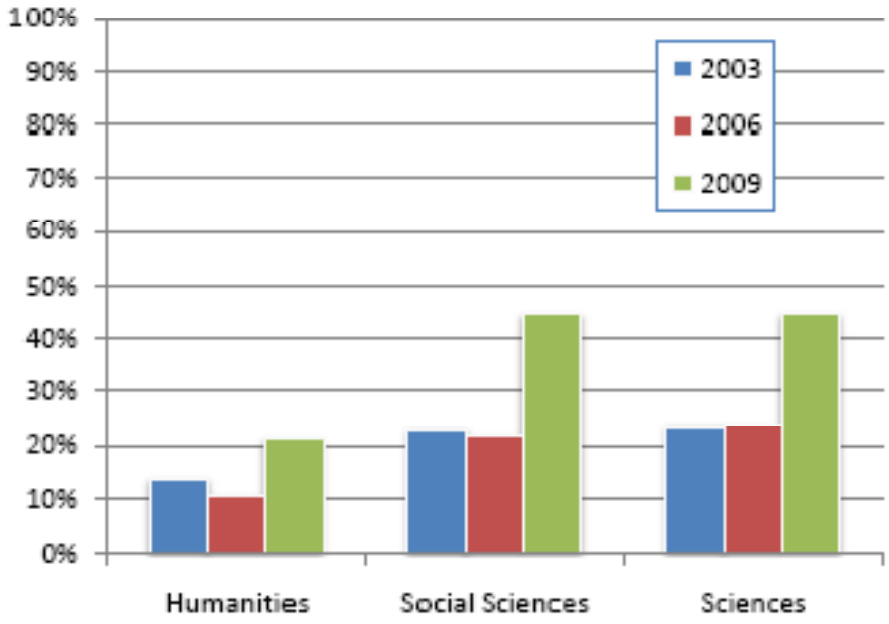
Discard hard copy collections?

Figure 15: Percent of faculty agreeing strongly with the statement: "Assuming that electronic collections of journals are proven to work well and are readily accessible, I would be happy to see hard-copy collections discarded and replaced entirely by electronic collections," in 2003, 2006, and 2009



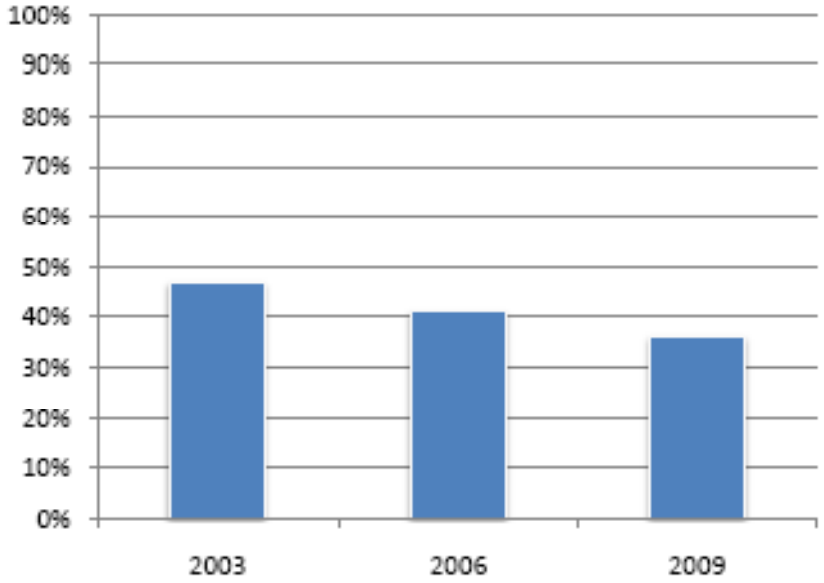
Discard hard copy collections?

Figure 16: Percent of faculty agreeing strongly with the statement: "Assuming that electronic collections of journals are proven to work well and are readily accessible, I would be happy to see hard-copy collections discarded and replaced entirely by electronic collections," by disciplinary grouping in 2003, 2006, and 2009



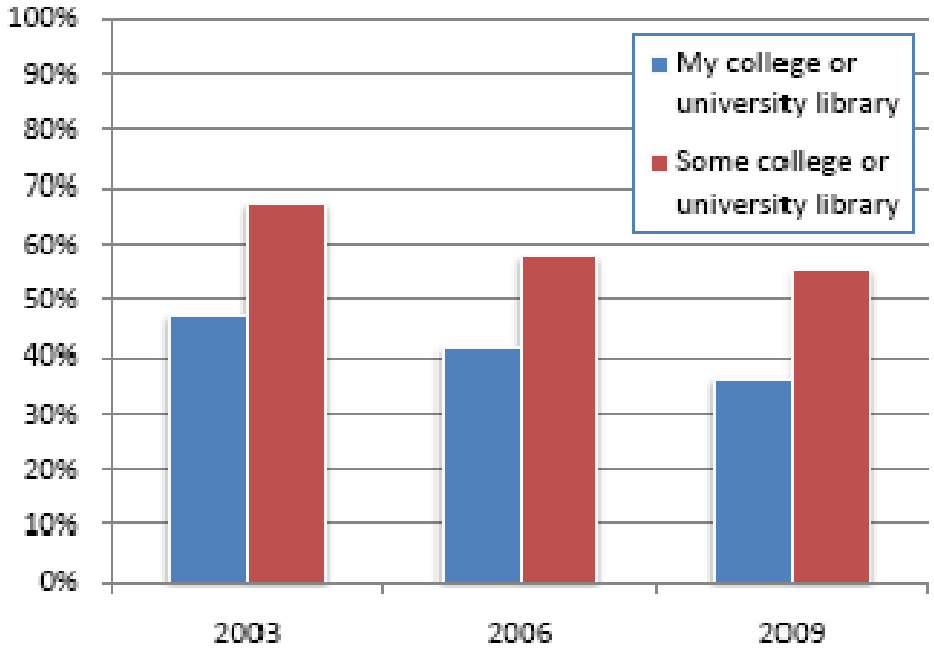
Keep hard copy collections?

Figure 17: Percent of faculty agreeing strongly with the statement: "Regardless of how reliable and safe electronic collections of journals are, it will always be crucial for my college or university library to maintain hard-copy collections of journals," in 2003, 2006, and 2009.



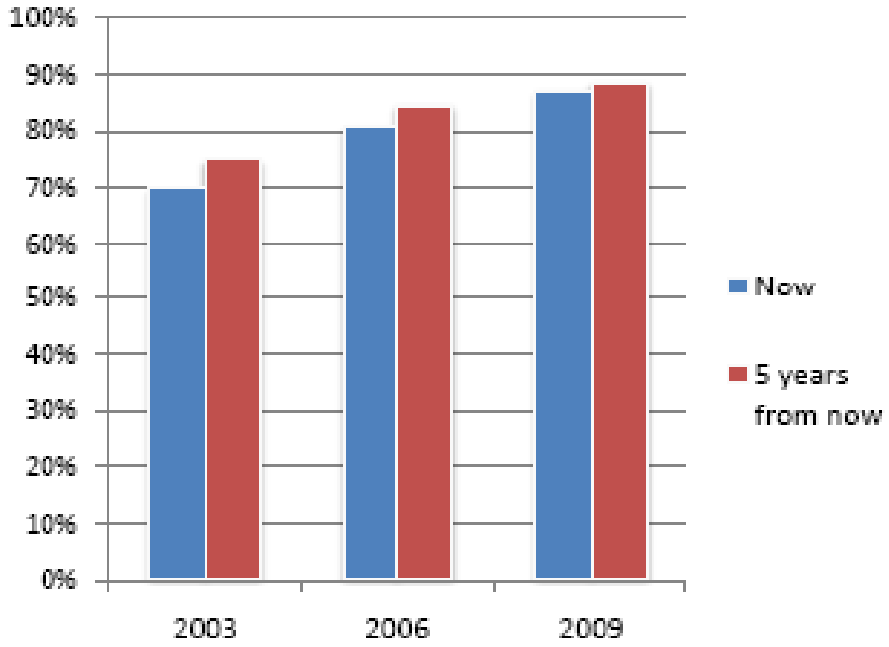
Keep hard copy collections *somewhere*?

Figure 18: Percent of faculty agreeing strongly with the statement: "Regardless of how reliable and safe electronic collections of journals are, it will always be crucial for _____ to maintain hard-copy collections of journals," in 2003, 2006, and 2009



Preserve e-journals?

Figure 19: Percent of faculty responding "very important" to the question "How important is the long-term preservation of electronic journals to you?" today and to the question "Thinking about 5 years from now, how important do you think the long-term preservation of electronic journals will be to you?" in 2003, 2006, and 2009



Researchers' attitudes?

- increase in proportion of researchers 'happy' to see print discarded
  - but still a minority, and important disciplinary differences
- decrease in proportion of researchers who regard print preservation and access as 'crucial'
  - but >50% still regard preservation *somewhere* as crucial; and dramatic disciplinary differences
- almost unanimous agreement on the importance of long-term e-journal preservation
- unanswered question: how does behaviour shape attitudes?

Thank you

Michael Jubb
RIN

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