25-YEAR TRENDS IN INFORMATION SEEKING & READING PATTERNS OF CHEMISTS

Donald W. King
University of Pittsburgh
School of Information Sciences

Carol Tenopir
University of Tennessee
School of Information Sciences

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BACKGROUND

Over 50 readership surveys (1974 - 2004)

- Over 25,000 survey responses (some include authorship)
- NSF (3 national surveys - 1974, 1977, 1984)
- Journals (e.g., *Science*)
- Societies (e.g., American Astronomical Society)
- Universities (e.g., Drexel, Tennessee, Pittsburgh)
- Elsewhere (e.g., NIH, Bell Labs, DuPont, Eastman Chemicals)

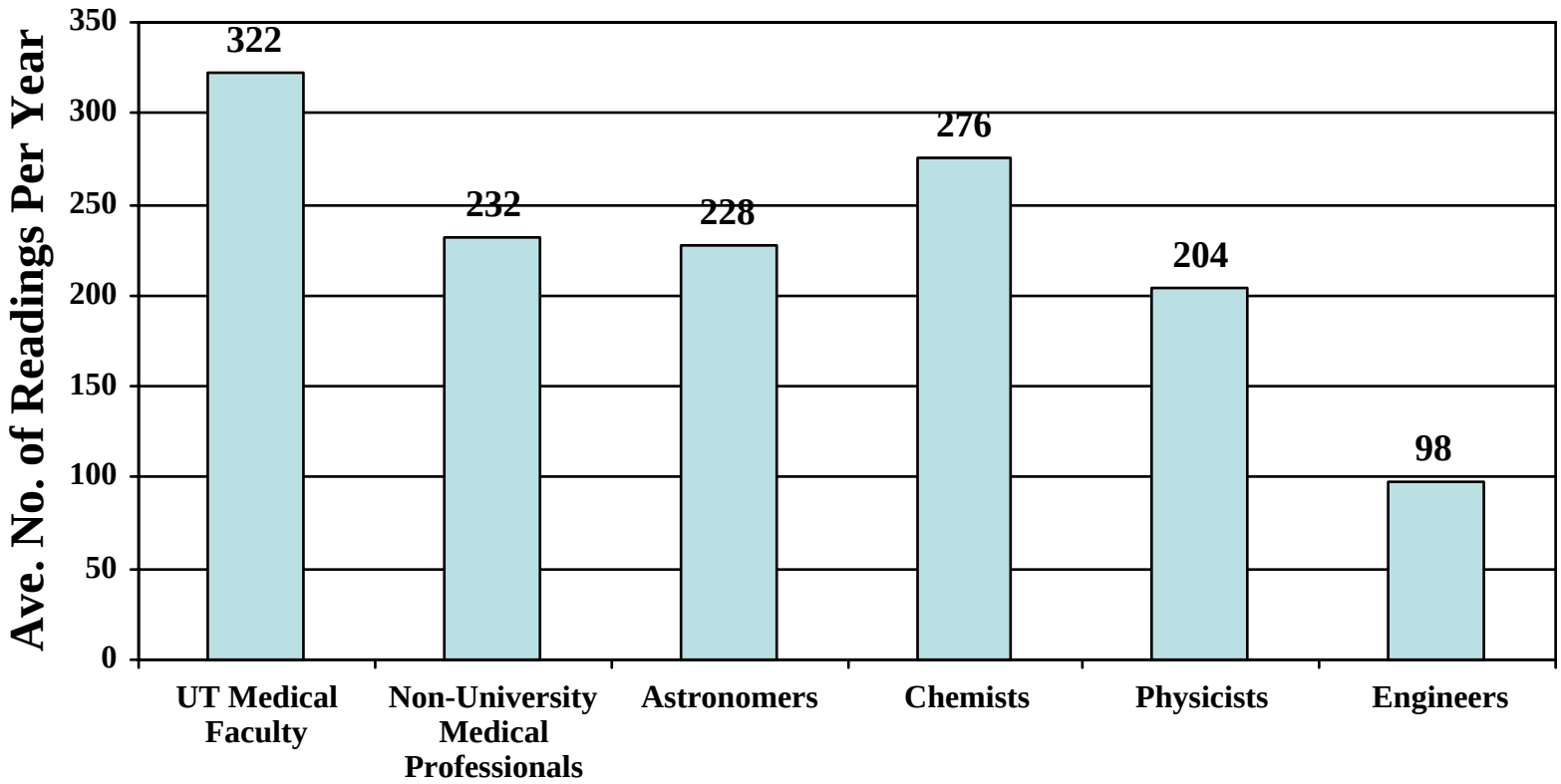
Scientists Information Seeking & Reading Patterns

- How much do they read?
- Where readers obtain articles that are read?
- What format do readers use?
- How do readers learn about articles?
- Trends are revealing

AMOUNT OF JOURNAL READING

- Varies by profession
  - Medical professionals: 246 readings per year
  - Engineers: 98 readings per year
- Varies by where readers work
  - University scientists: 216 readings per year
  - Non-university scientists: 113 readings per year
- About 75% of science articles authored by university scientists
- About 75% of all science readings are by non–university scientists

Fig.1 - Average Amount of Reading by Medical Faculty, Non-University Medical Professionals and Scientists



How Do Readers Learn About Articles?

	Scientists (%)	Chemists (%)	
		1977	2000 - 2003
Browse	49	49	51
Online Search	24	1	23
Citations in publications	11	12	11
Someone told reader	13	3	14
Other (e.g., printed indexes)	3	35	1
	100	100	100

Where Do Readers Obtain Articles?

	Scientists (%)	Chemists (%)	
		1977	2000 - 2003
Personal Subscriptions	38	76	51
Library Collections	43	22	43
From another person	7	2	3
Author Websites	1	--	--
Free Web journal	6	--	3
Preprint	2	--	--
Other	3	--	--
	100	100	100

Table 1 - Age of Articles Read by University Faculty by Format: 2000 - 2003

Age of Article	Scientists (%)	Chemists (%)	
		1960	2000 - 2003
1st Year	64.7	61.5	67.6
2 – 5 Years	22.0	24.3	14.7
6 – 10 Years	6.2	10.2	5.9
11 – 15 Years	3.2	1.7	5.9
Over 15 Years	4.0	2.3	5.9

Source: University of Tennessee (n = 96), Drexel University (n = 92), University of Pittsburgh (n = 209), ORNL (n = 83)

Age is Important

Source of Article	1st Year	2-5 Years	Over 5 Years
Library	33.5	53.2	73.3
Personal	56.3	28.8	9.2
Separate	10.3	18.1	17.5
Total	100.1	100.1	100.0

Source: University of Tennessee (2000), Drexel University (2002), University of Pittsburgh (2003)

Format by Source

	Scientists	**Chemists**
• Personal Subscriptions		
– subscriptions in print	93%	89%
– reading in print	90%	78%
• Library Collections		
– reading electronic	80%	74%
– Saves readers about 20 hours per year		

Trends in Chemists' Reading Patterns

- They appear to be reading more

1977	198 readings
2000 - 2003	276 readings

- They rely on libraries more
- Reasons for increased library use

Fig 2 - Average No. of Articles Read per Scientist

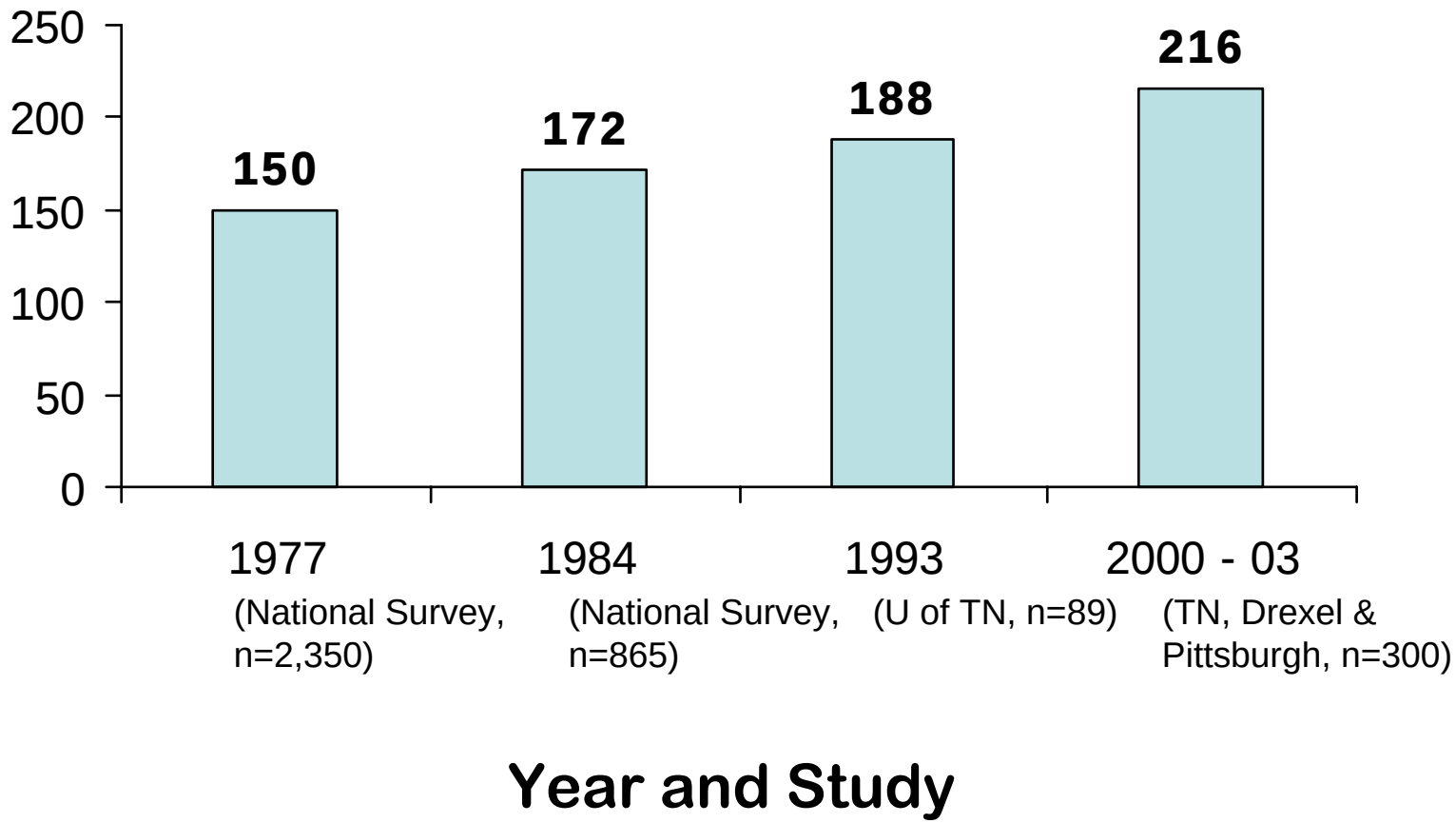


Fig 3 - Source of Additional Readings

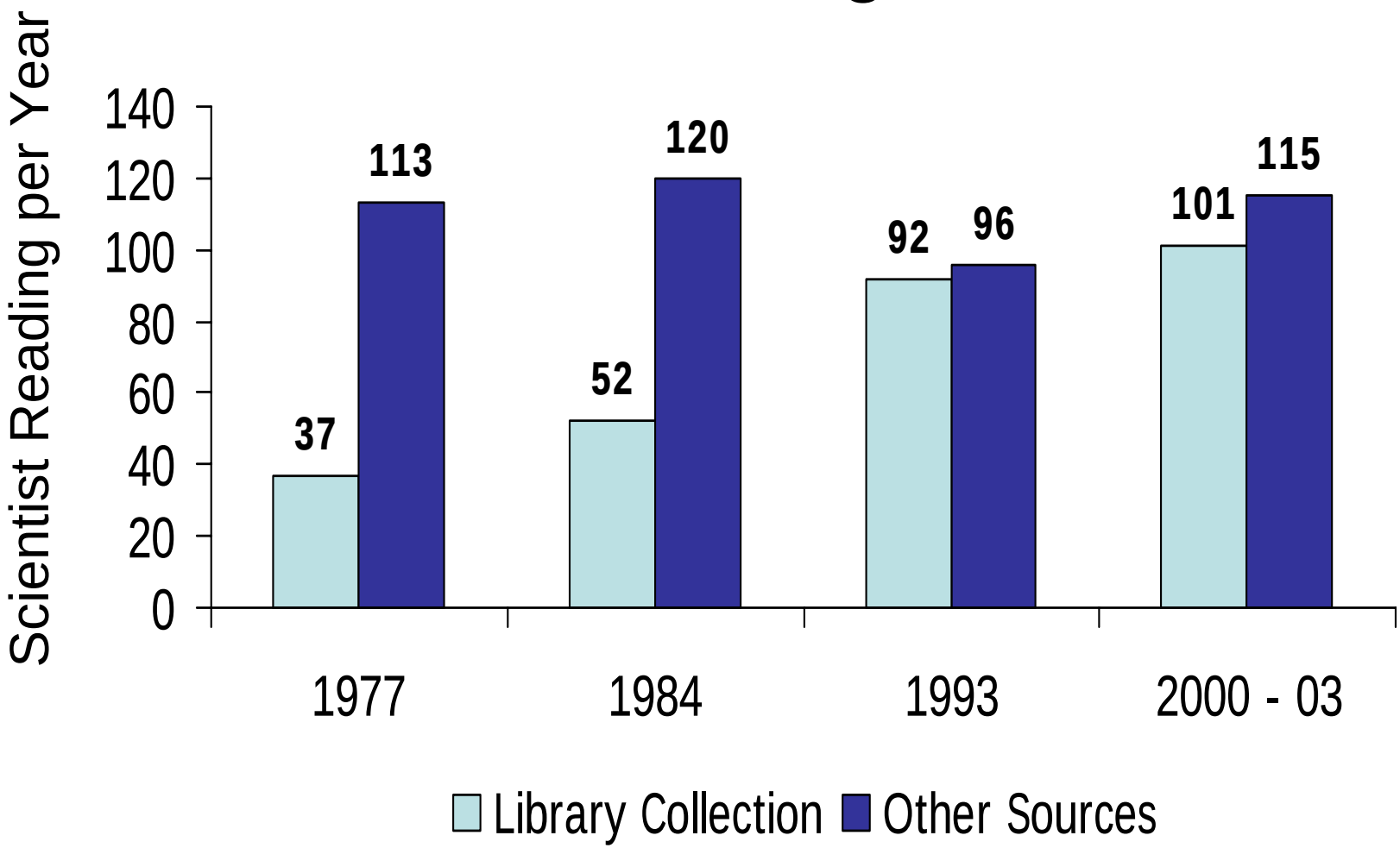


Fig 4 - Average Number of Personal Subscriptions per Scientist

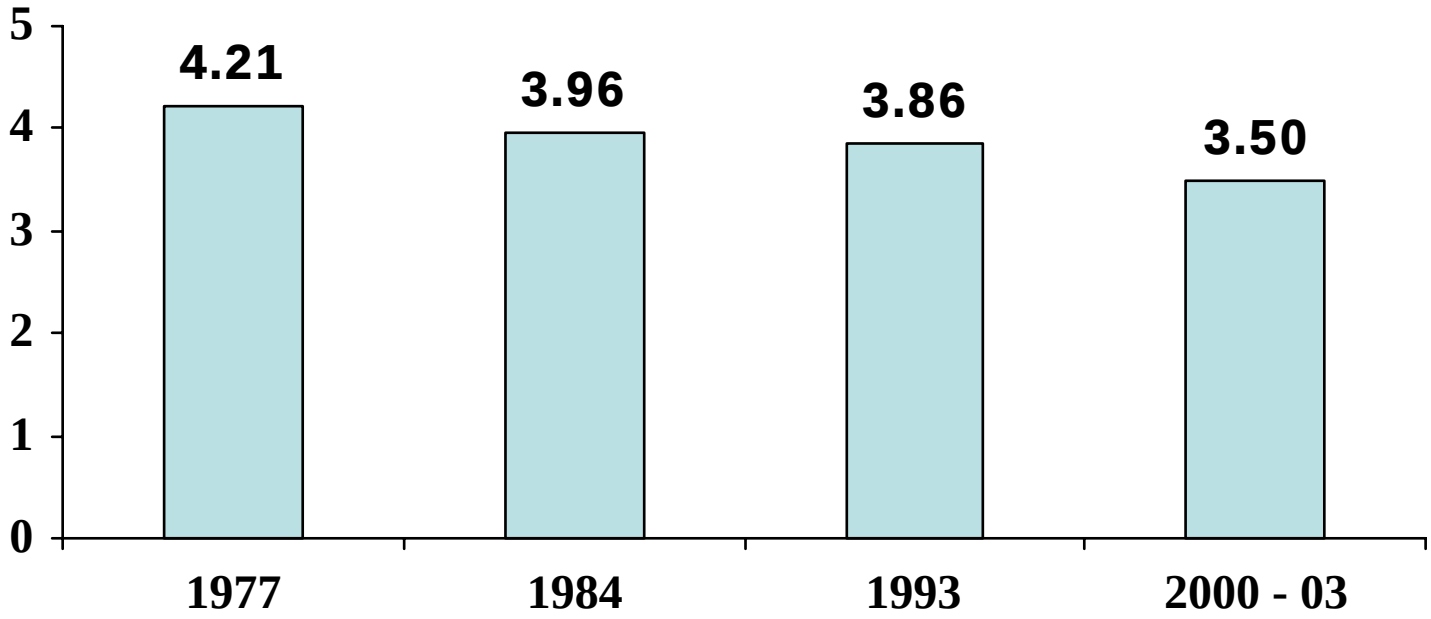
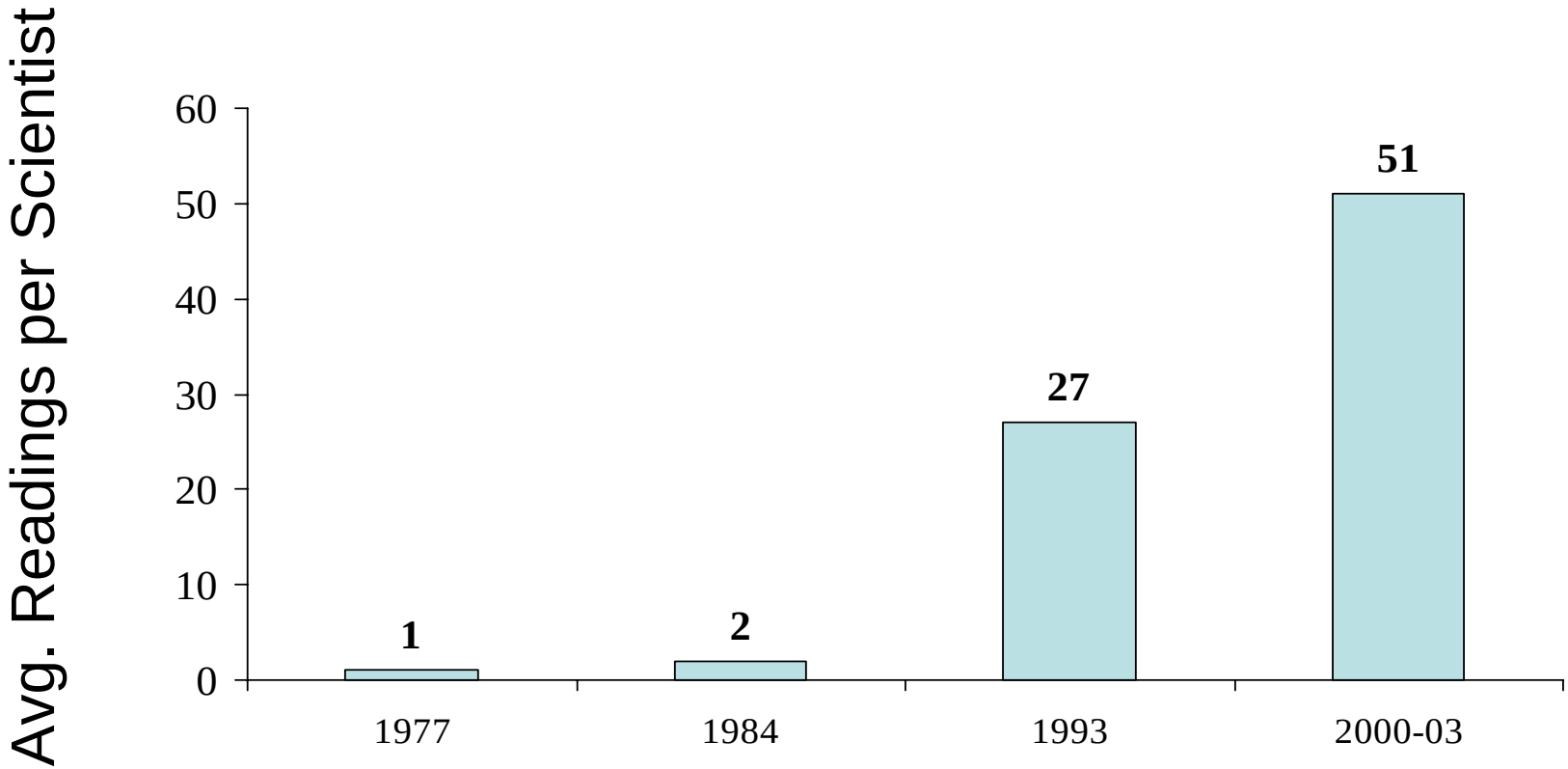


Fig 5 - Average Number of Articles Identified by Automated Searches Per Scientist



Breadth of Reading Increased

- Drexel as an example

- Scientists' Reading
  - Read from about 13 journals in 1977
  - Over twice that amount now

USEFULNESS & VALUE OF SCIENCE JOURNALS

- Purpose of use
- Importance in achieving principal purposes
- Ways article affected the principal purpose
- How much do readers “pay” for the article?
- Achievers read more then others
- Readers are more productive than non-readers
- Helps achieve parent organization goals