

SCHOLARLY JOURNAL
&
DIGITAL DATABASE PRICING:
THREAT OR OPPORTUNITY

DONALD W. KING
CAROL TENOPIR

THE ECONOMICS & USAGE OF
DIGITAL LIBRARY COLLECTIONS
CONFERENCE

UNIVERSITY OF MICHIGAN
ANN ARBOR

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TOPICS COVERED IN TALK

- ARE SCIENTIFIC SCHOLARLY JOURNALS WORTH SAVING?
- SCHOLARLY JOURNALS EXAMINED FROM A SYSTEMS PERSPECTIVE
- TO UNDERSTAND PRICE, ONE MUST UNDERSTAND PUBLISHING COSTS
- WHAT DO AVERAGE PRICES MEAN?
- WHY HAVE JOURNAL PRICES SPIRALED UPWARD?
- WHAT FACTORS AFFECT DEMAND?
- WHAT ARE WE REALLY BUYING?
- SOME ALTERNATIVE PRICING POLICIES

ARE SCIENTIFIC SCHOLARLY JOURNALS WORTH SAVING?

- SCIENTISTS RELY MORE ON JOURNALS THAN ANY OTHER SOURCE (STUDIES 1956 THROUGH LATE '90S)
- ON AVERAGE, SCIENTISTS MAY HAVE INCREASED THEIR READING OF JOURNAL ARTICLES (1977 TO LATE '90S)
- READINGS PER ARTICLE APPEAR TO HAVE INCREASED (1977 TO LATE '90S)
- INFORMATION IS FOUND TO BE IMPORTANT FOR MANY PURPOSES OF READING
- VALUE OF INFORMATION IS HIGH
- SCIENTISTS WHOSE WORK HAS BEEN FORMALLY RECOGNIZED TEND TO READ MORE

SCHOLARLY JOURNALS EXAMINED FROM A SYSTEMS PERSPECTIVE

- SEVERAL SYSTEMS STUDIES FOR NSF (1970'S)
- IDENTIFIED/CHARACTERIZED FUNCTIONS, PARTICIPANTS, INPUT RESOURCES & OUTPUTS OF HUNDREDS OF ACTIVITIES
- ASSESSED "CURRENT" & FUTURE EFFECTS OF TECHNOLOGIES & OTHER RESOURCES
- SUMMED COSTS OF ALL ACTIVITIES
- TOTAL COSTS (EXCLUDING \$'S EXCHANGED):
 - \$4.8 BILLION TO \$16.4 BILLION IN 1998 \$'S
 - \$45 BILLION
- AVERAGE COSTS (E.G., PER READING)
 - SCIENTISTS TIME UP
 - LIBRARY RESOURCES DOWN
 - PUBLISHING DOWN

THE QUESTION!!!

WHY HAVE AVERAGE PRICES RISEN BY A FACTOR OF NEARLY 9 TIMES OVER A PERIOD OF TIME IN WHICH THE RELATIVE COST OF PUBLISHING HAS ACTUALLY DECREASED?

TO UNDERSTAND PRICE ONE MUST UNDERSTAND PUBLISHING COSTS

- FIVE PUBLISHING FUNCTIONS:
 - ARTICLE PROCESSING (\approx \$190,000)
 - NON-ARTICLE PROCESSING (\approx \$19,500)
 - REPRODUCTION (\approx \$101,000)
 - DISTRIBUTION (\approx \$80,500)
 - SUPPORT (\approx \$168,500)
 - TOTAL (\approx \$559,500)
- COST PER SUBSCRIPTION
- COST PER PAGE:
 - 1977 \$385 PER PAGE (1995 \$'S)
 - 1995 \$250 PER PAGE

WHAT DO AVERAGE PRICES MEAN?

- PRICE PER JOURNAL
- PRICE PER SUBSCRIPTION
- PRICE PER ARTICLE
- PRICE PER PAGE

WHY HAVE JOURNAL PRICES SPIRALED UPWARD?

- SIZE & INFLATION—56%
- DROP IN PERSONAL SUBSCRIPTIONS
- ADDITION OF NEW, LOW-CIRCULATION JOURNALS—17%
- COSTS OF LOW-CIRCULATION JOURNALS

| <u>DROP</u> | <u>REQUIRED COST</u> |
|---------------|----------------------|
| 2,500 – 2,400 | \$6 |
| 2,000 – 1,900 | 8 |
| 1,500 – 1,400 | 18 |
| 1,000 – 900 | 41 |
| 500 – 400 | 186 |

- McCABE THESIS
- HIGH PROFIT/NET REVENUE

WHAT FACTORS AFFECT DEMAND?

- PRICE
- JOURNAL ATTRIBUTES
- AVAILABILITY & RELATIVE COST OF ALTERNATIVES
 - OTHER INFORMATION (ODLYZKO)
 - SAME RESEARCH RESULTS IN SEVERAL CHANNELS
 - ARTICLES IN ALTERNATIVE DISTRIBUTION MEANS & MEDIA
- COMBINATIONS OF DISTRIBUTION MEANS & MEDIA ARE FINDING A NICHE DUE TO:
 - ATTRIBUTES
 - PRICE
 - SCIENTISTS' TIME

WHAT ARE WE REALLY BUYING?

- TWO COMPONENTS OF COSTS/PRICE
 - ARTICLE PROCESSING
 - DISTRIBUTION/ACCESS
- ARTICLE PROCESSING
 - WIDE RANGE OF QUOTED COSTS
 - COSTS SIMILAR FOR PAPER & ELECTRONIC VERSIONS
 - RANGE OF COSTS A MOOT POINT
- DISTRIBUTION/ACCESS
 - ELECTRONIC DISTRIBUTION/ACCESS COSTS NEGLIGIBLE
 - PAPER SUBSCRIPTION (\$25-\$35 PER SUBSCRIPTION)
 - PAPER SEPARATE COPY (\$15-\$30 PER ITEM)
 - PAPER SUBSCRIPTION COSTS PER READING IS LOW FOR FREQUENTLY READ JOURNALS
 - PAPER VERSIONS MAY COST LESS FOR SOME JOURNALS WHEN SCIENTIST COSTS ARE INCLUDED
- SOME MERIT IN CONSIDERING ALTERNATIVE SOURCES OF REVENUE TO RECOVER ARTICLE PROCESSING COSTS

SOME ALTERNATIVE PRICING POLICIES

- SITE LICENSES
- DIFFERENTIAL PRICING
- UNIT PRICING
- NO MAGIC BULLET?