

# Open Access in Asia: A Japanese perspective

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# *An Asian Perspective*

- “Modernization” and scholarship
  - Scholarship(=R&D in STM(A)) for a nation to grow
- Ethnoscietific knowledge NOT useful for “modern” nation, so must learn from outside, which is the “Western civilization”
- So scholarly communication is, or at least was, “import” business in Asia in many ways

If Asia is an issue now at all, that is due to change in this socio-historical structure and takes deep thinking. We are sorry we have started writing papers

# Import business in many ways?

1. Passive scholarship: University teachers are students, not researcher or scientists, thus no role for research libraries
2. “Sole agent”: Windows to the West control domestic flow of information, thus not only book importers, but scholars want to be sole agents
3. Knowledge enclosure: Don't let others know! Restricted sharing rather than dissemination, hence society self-publishing
4. Classroom predilection: Attend classes! Don't work outside! Learn everything by heart! This worded pretty well in Japan's modernization

# Unpleasant changes

- Increased and still increasing government funding for R & D in Asian countries
  - Reached the stage where Asian university teachers can produce new knowledge
- Free flow of people, free market for researchers
- Free flow of information over the Internet
  - Can't control by importation logistics

# Open Access in Asia almost realized

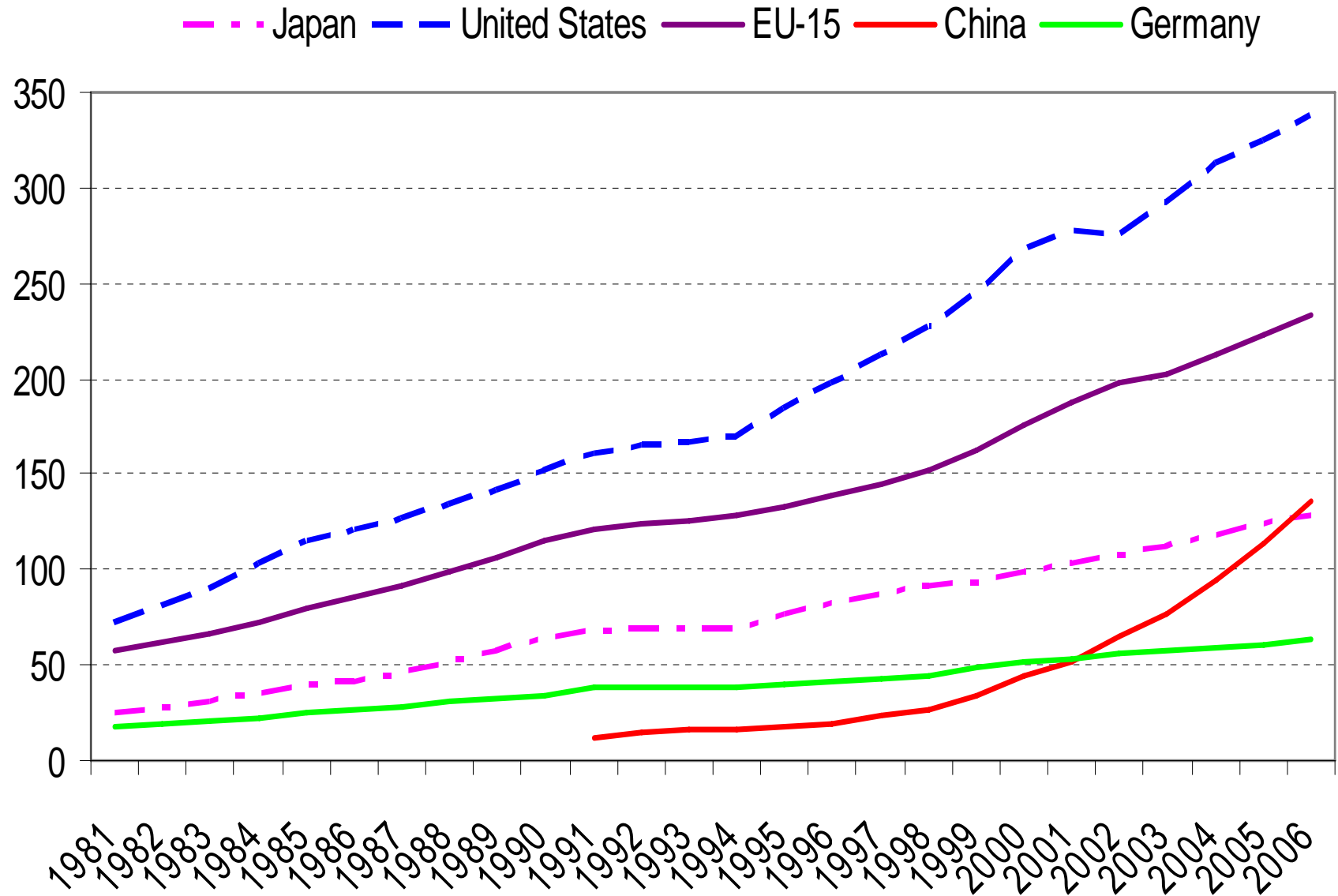
- Scholarly research and communication has been paid for, ie. supported by government or from pockets, so publications can be made open access in some sense (Authors fee-page charge, offprints or whatever can be paid from (direct) research money)
- Commercially supplied journal articles have been made electronic online almost completely, purchasable by “big deals,” available to most “relevant researchers,” so these restricted people have open access, paid by government

# What's left

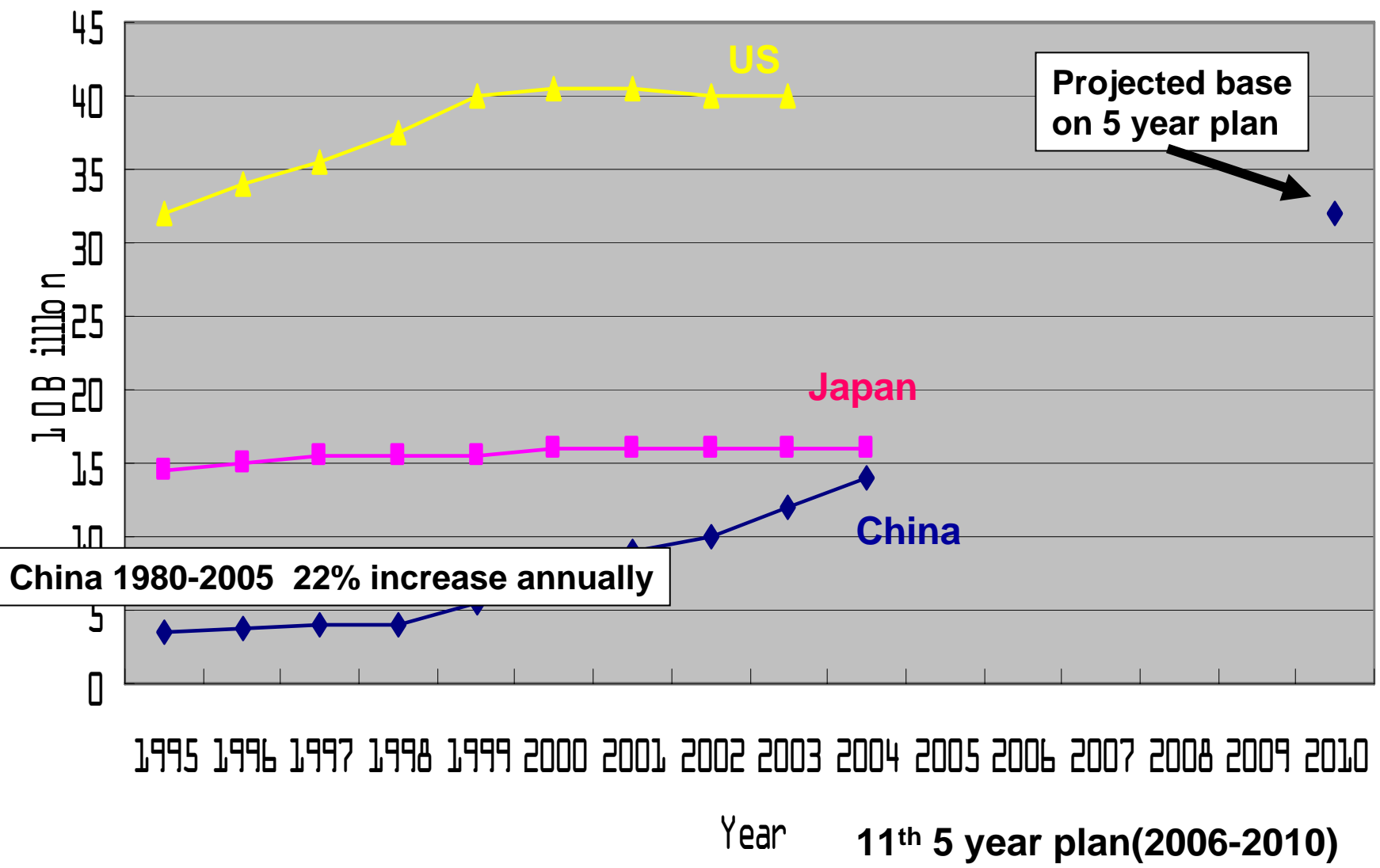
- Conversion to digital: China maybe leading, Japan way behind, Korea maybe catching up soon
- Journal prices: If funding increases papers and if more papers means higher unit prices, then researches should abstain from writing or government should decrease research funding.....uhm, logical but ....

# China overtook Japan in R&D funding (billion current PPP \$)

(The Science, Technology and Industry Outlook 2006, OECD)



# S & T Funding





# Number of researchers

- US 1,300,000
- China 926,000
- Japan 800,000
- Russia 600,000
- In terms of production:
  - 10+% of quality papers come from Japan, Germany and UK
  - 50+% of course from US
- Must expect more from China and other Asian countries. Please don't write, China!

# Research money distribution in Japan and actually elsewhere

- 1600BJPY total
  - 70% For-profit
  - 10% Public sector research institute
  - 20% Universities(300bJPY)
    - Direct cost: Growing
    - Infrastructure, in which library budget is categorized : Decreasing

# Now on Japan

1. Historical backgrounds and current demography
2. Money flow and “market” size
3. Library situations
4. “Foreign journals” made online
5. “Domestic journals” through ILL analysis
6. Institutional repositories: future libraries?
7. Japanese publishing industry, about which I don’ talk today though I have a lot to say
8. Future of research in Japan itself, about which I don’ talk today

# Japanese Backgrounds

- Meiji Restoration -> modern universities in Japan
  - focus on agriculture, medicine, engineering and jurisprudence toward Japan as modern country: Imperial universities and “hochschules”
- Losing WWII, postwar restoration in focus
- Babyboomers and growth of universities in the 1970s
- Reforms began in 1990s in liberal “general” education and graduate schools

# Higher Education Geography

(2004)

	# of U	# of Undergrad	# of Grad	# of Faculty
National	87	459,496	146,913	60,897
Local Gov	80	105,176	13,575	11,188
Private	542	1,941,251	83,536	86,685
Total	709	2,505,923	244,024	158,770

# In short

- More research in national than in private universities
- More education in private than in national universities
- Science, engineering medicine in national universities
  - flat tuition system
  - policy decision for 1970s bulge for private to take in students

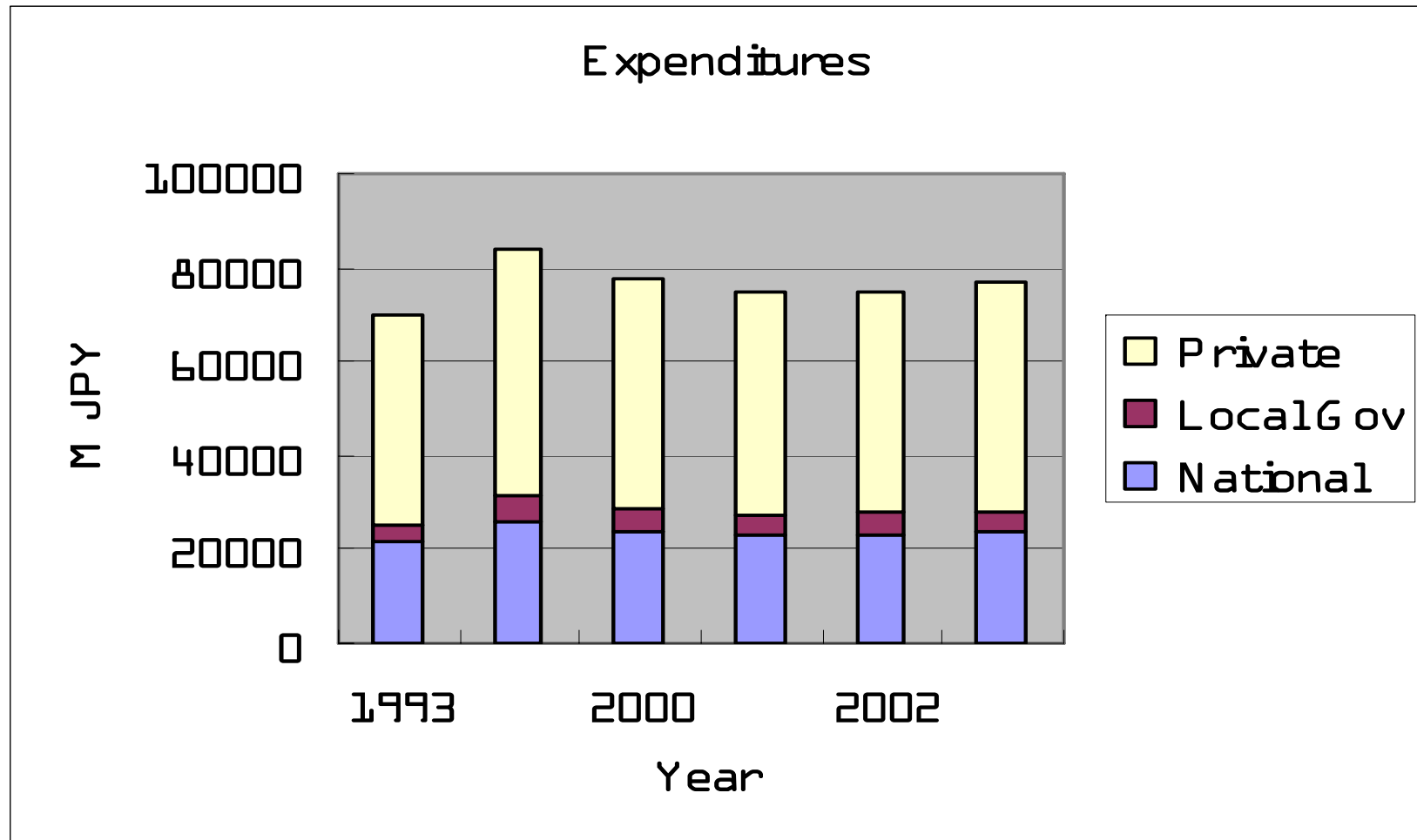


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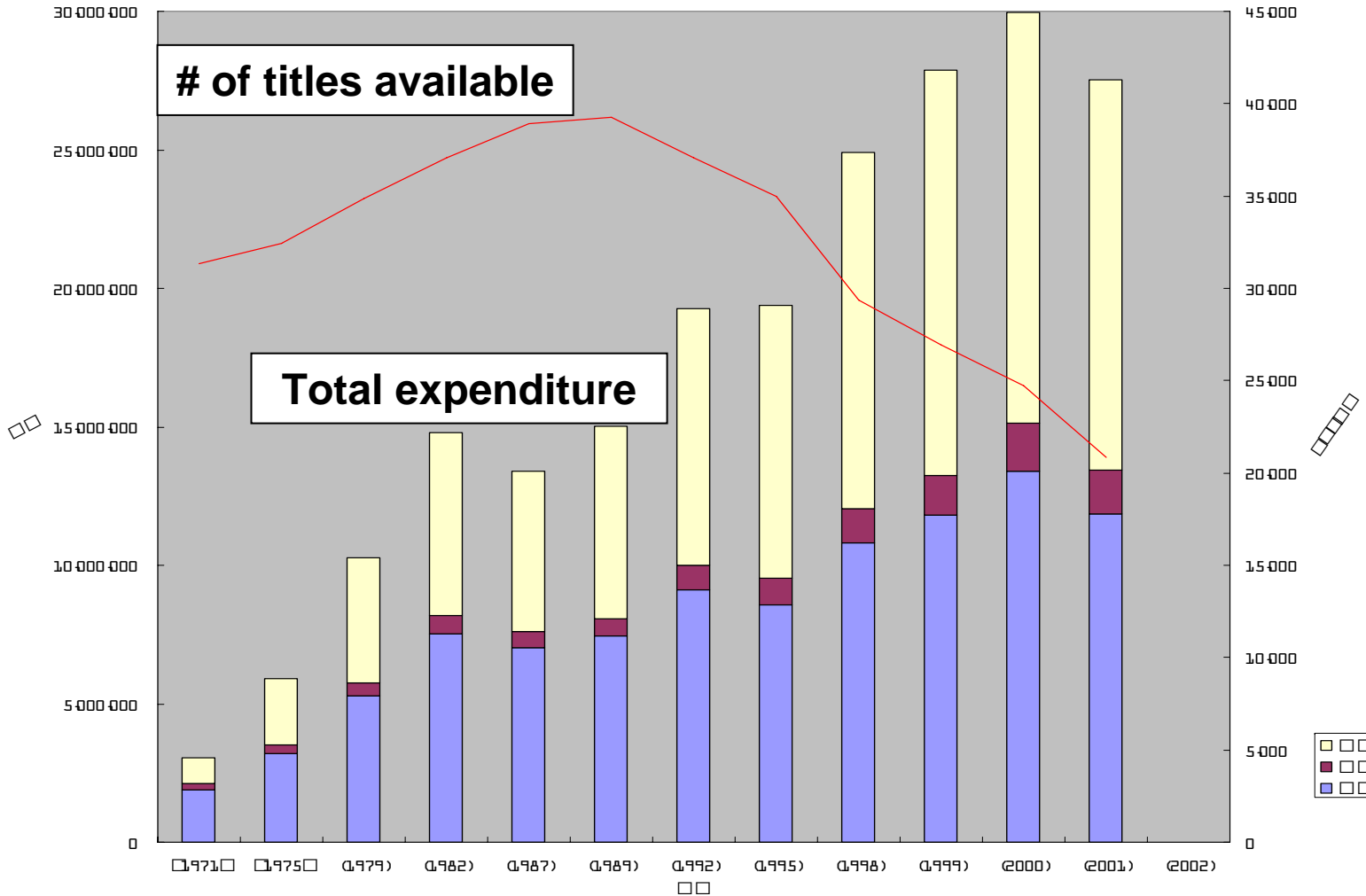
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# Library statistics



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	Books		Serials			Others	Total
	Japanese	Foreign	Japanese	Foreign Current	F Back issues		
National univ.	4,074,669	3,056,204	1,760,221	11,901,186	98,469	2,835,113	23,725,862
Loc Gov	1,184,717	525,729	335,164	1,665,584	41,129	242,793	3,995,116
Private	14,484,176	9,141,558	3,956,284	16,082,589	394,045	5,357,020	49,415,672
	19,743,562	12,723,491	6,051,669	29,649,359	533,643	8,434,926	

# Decision making on campus

- Libraries do not have or control budgets
- Faculty alone decides both on serials and books. Books for students learning are selected by libraries but the portion is small. In those cases, libraries normally selects Japanese books.
- Faculty selects as they like. As a result, lots of duplicates, no principled collection etc

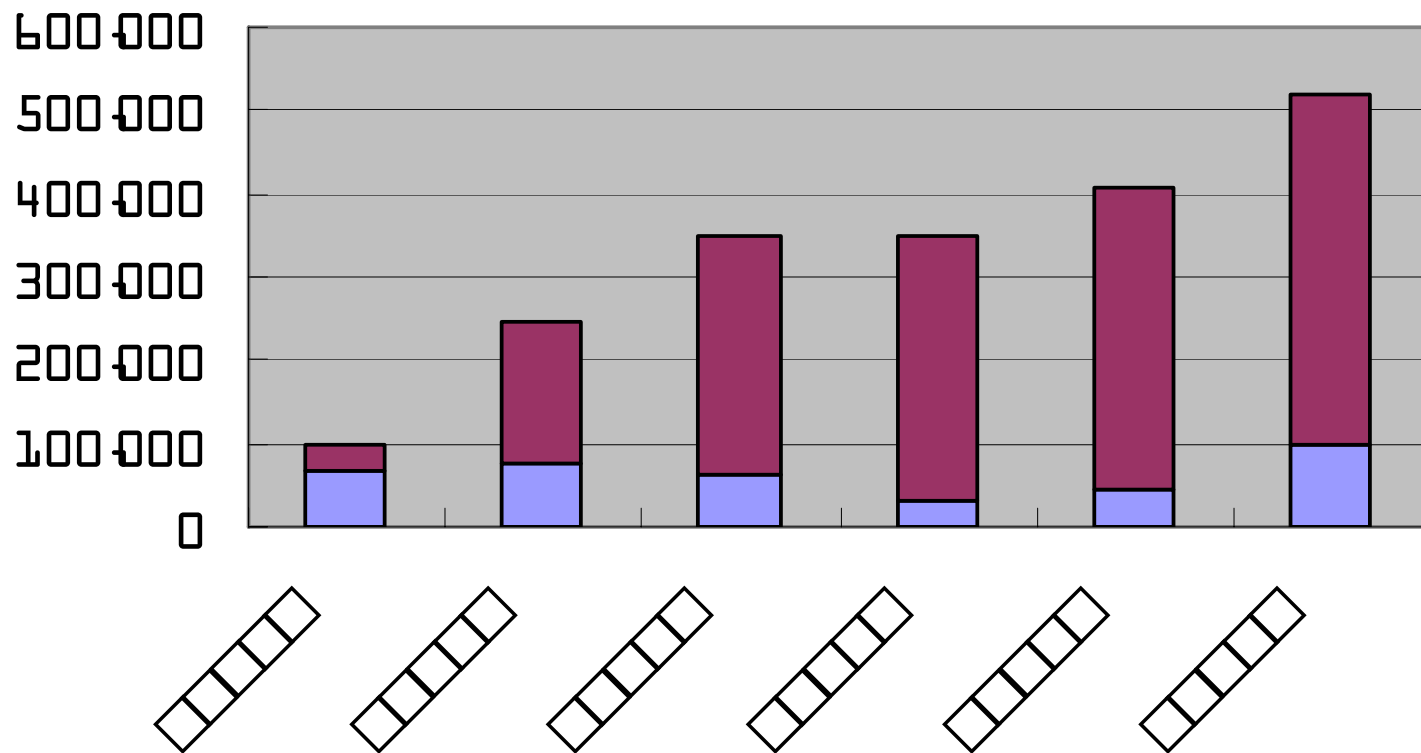
# Electronic scholarly journals

- Japanese version of “serials crisis”
- formation of consortia
  - successful to some extent– we are wise buyers
  - initiatives in archiving
  - user instruction in digital age
- More in national than in private universities
- Decentralized budget system again gets in the way

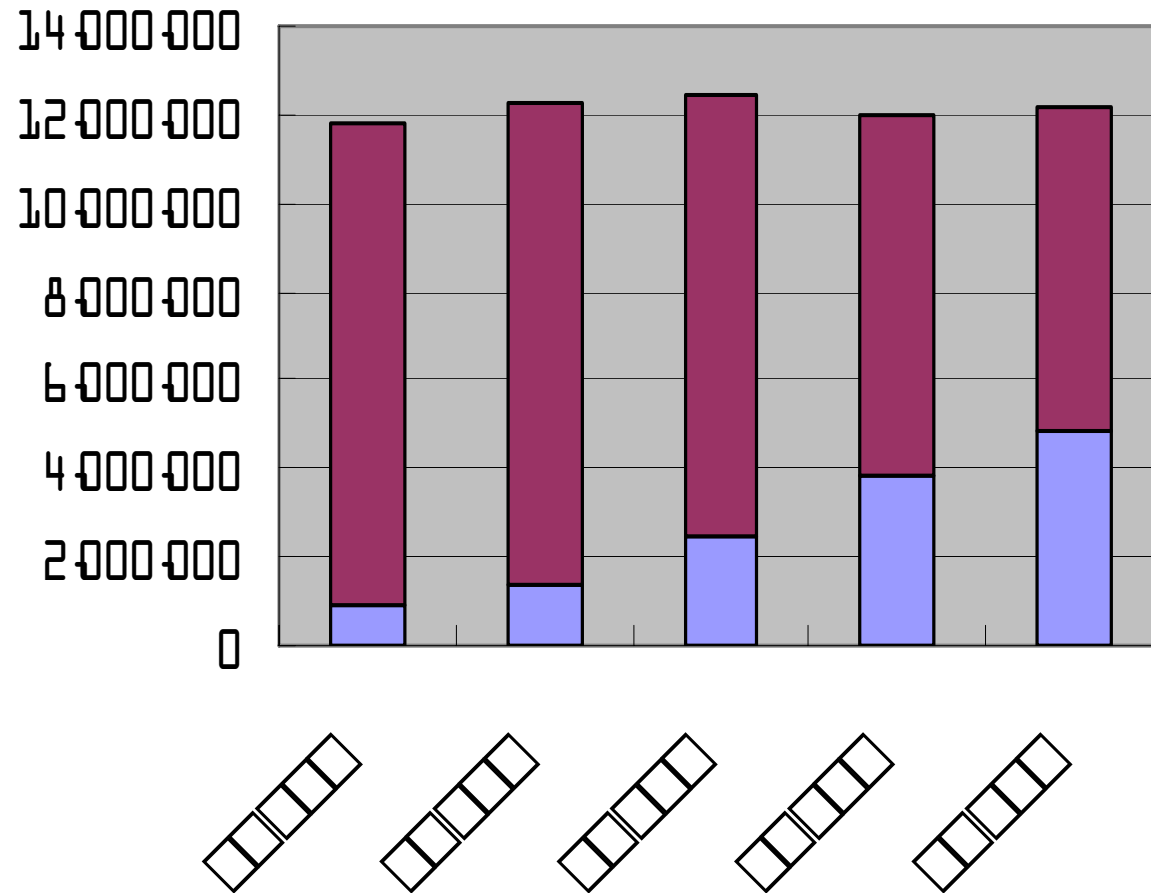
# Agents and bookstores

- Agents know but libraries don't
- “Markup” by agents determines library expenditure, more expensive than overseas
- Japanese market dominated by a small number of wholesale dealers and TRC
- Libraries don't talk to publishers even domestically

# Total number of titles available on national university campuses



# Expenditure on "foreign journals" by national universities





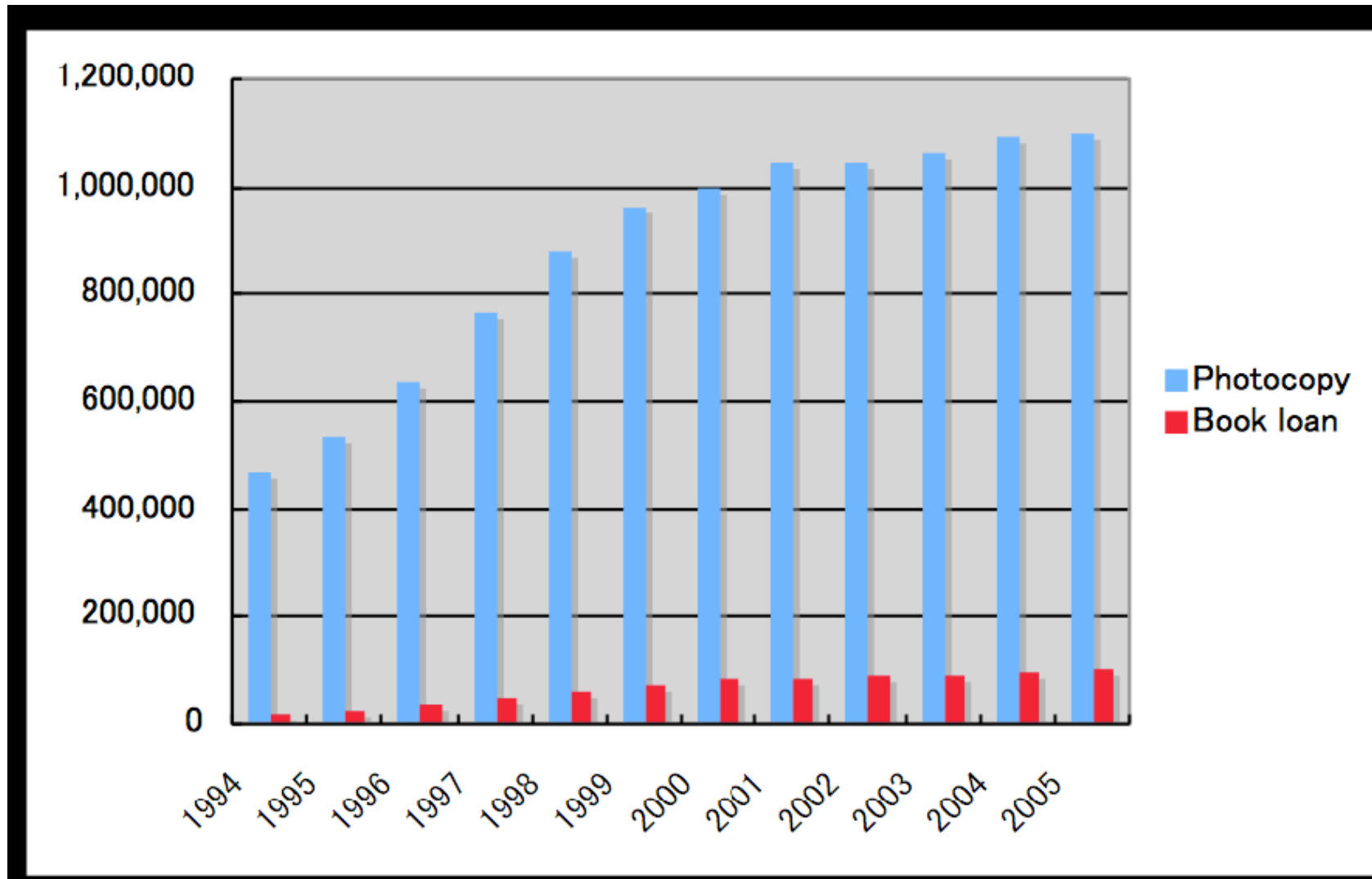
# “Foreign journals” in Japan

- Pretty much supplied to relevant researchers
- \$3 to \$4 per article download on the average
- Expenditure stabilized so far, but only so far or for now
- No big issue now

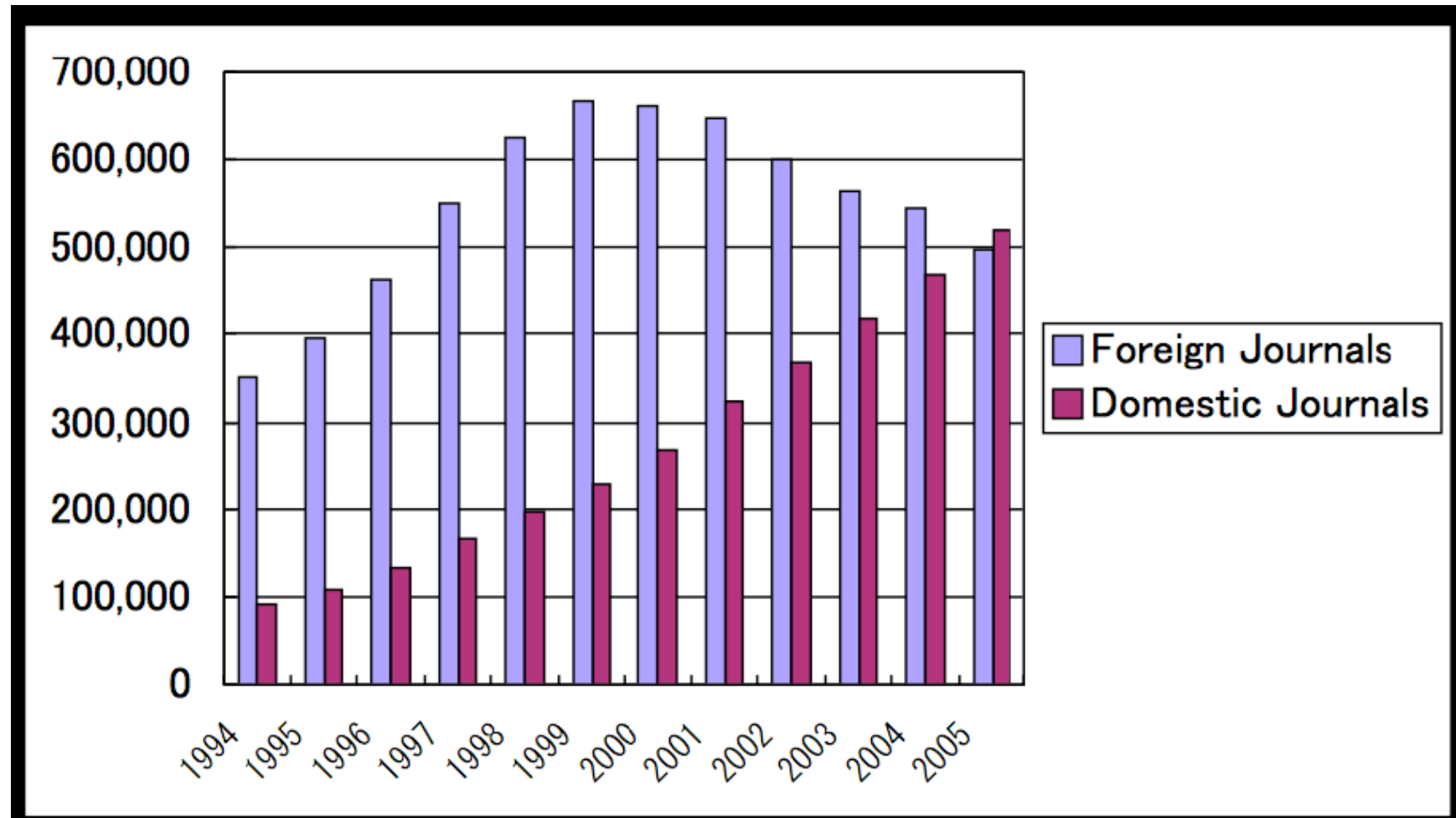
# ILL records confirms and finds

1. the "Interlibrary Loan (ILL)" in the Japanese university context is very peculiar in that requests for photocopies of "foreign journal" articles are significantly predominant in 1990s
2. ironically, increase of requests for "domestic journal" articles, including those in nursing science in particular, is becoming conspicuous as if to match the decrease of requests for "foreign journal" articles, most of which have become available online through site licensing under consortial arrangements that began in 2002
3. requests for book loan, which have only accounted for a small portion of requests, apparently increased as the union catalog database called NACSIS-CAT grew
4. the system is remarkably efficient with the fill rates in lending/supplying constantly high and the average turnaround time generally less than a week
5. while the original intention was construction of a mutually beneficiary collaborative system, there have been some libraries that mainly only request and others that mainly only supply, due partly to the existence of "subject foreign journal center" libraries which started in 1970s
6. some small or middle-sized libraries noticeably began to supply in recent years.

Change in the number of filled requests(1994-2005)

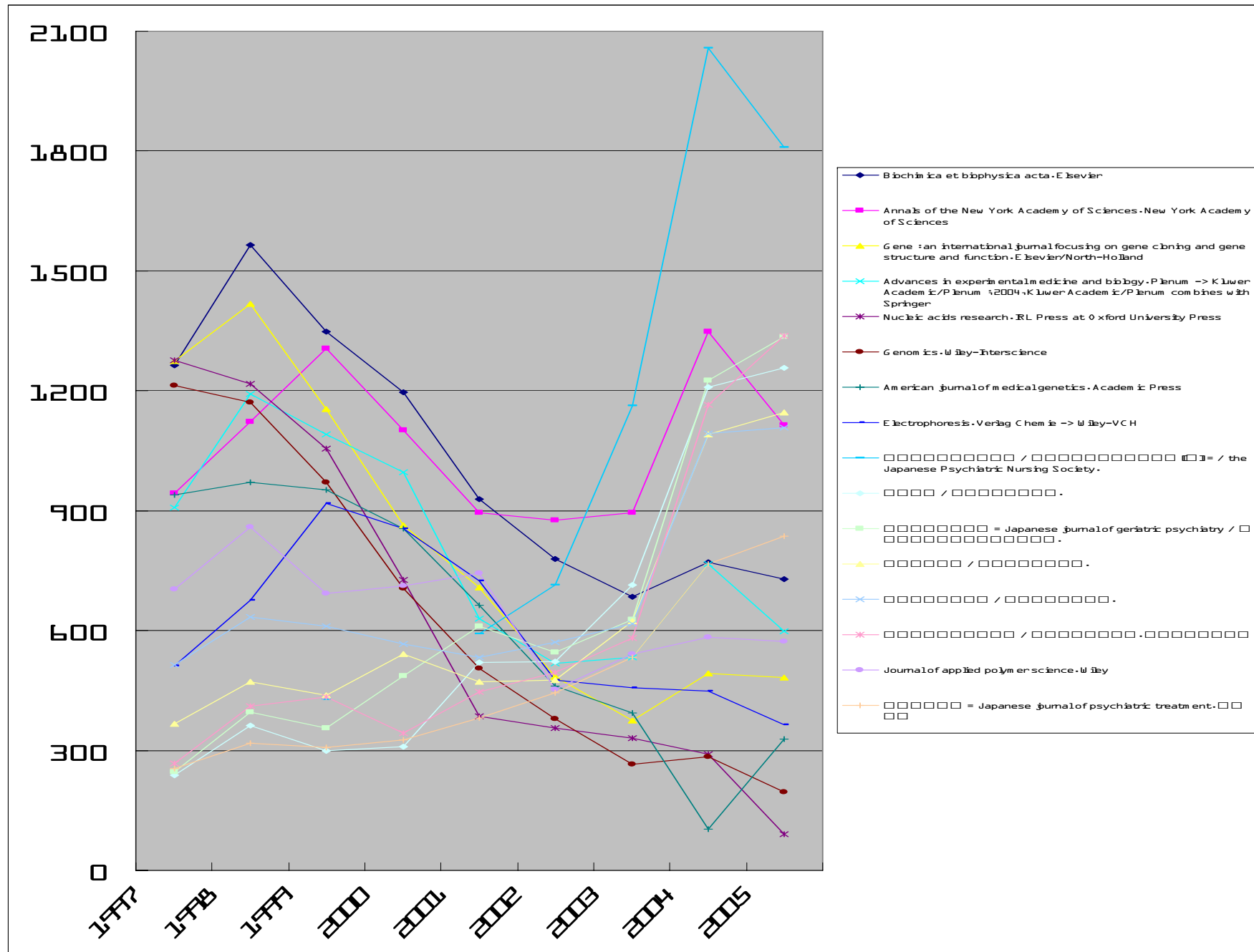


Change in the number of filled requests for foreign and domestic journals(1994-2005)





# Change of the number of requests for outstanding titles



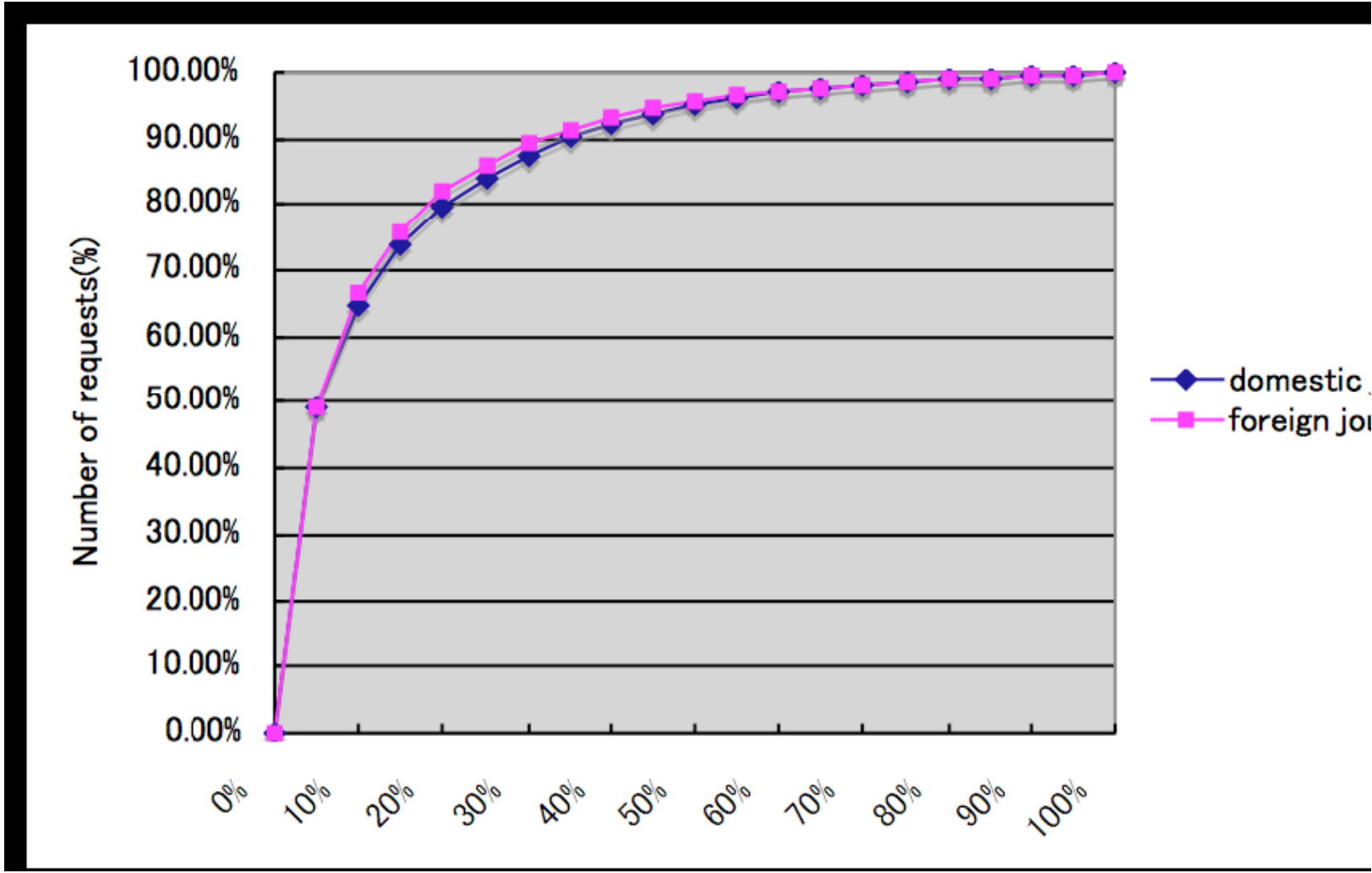
# What about the less used?

- In 2005 
  - 191173 different titles were requested

# of requests	#of titles
1	124069
2	23971
3	9095
4	5129
5	3440
6	2490
7	1919
8	1590
9	1330
10	1060



174093  
(91.1%)






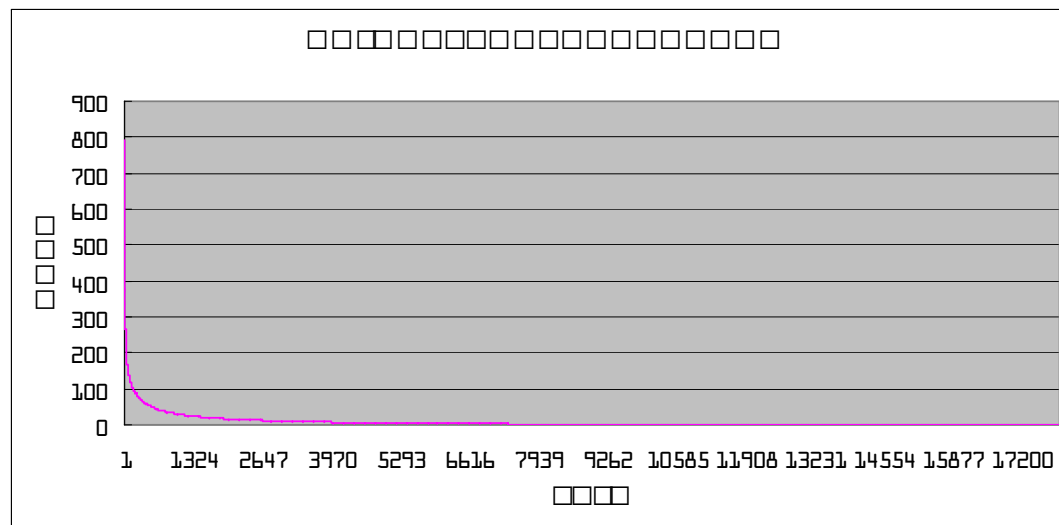
## A bit more in detail

51959 requests to 3782 titles





- “skewness” is:
  - 10 % requests to 25 titles
  - 50 % requests to 300 titles, for which on the average 40 requests were made
  - 1 request to 886 titles
  - Less than 10 requests to 2619 titles
  - Between 10 and 40 requests to 1000 titles
- ☐ Could mean with the open access to these titles 10% of ILL requests will disappear, ie demand for information will be met

# Into a vague area,

- When title includes 
  - 147584 different names with 144352 IDs
  - 17940 different IDs, and the distribution is



# Symbolic examples from frequently requested

- 791 
  - Lecture note series at a continuing education school for nurses
- 523 
  - Originally for communication among alumni of a medical department, growing into a journal for regional community
- 496 
  - Department journal of psychology, though digitized on line
- 477 
  - Department journal for nursing science from on the most traditional college of the kind.

# Domestic journals

- Basically belong to “long tail”
- 2 kinds
  - department journals/bulletins(15000)
  - Society journals(2000 – 3000)
- **Department journals** are published and sent by university money, donated or exchanged between departments, not libraries
- **Society journals** are published, or printed, to share among members, not for dissemination, and most of the time supported totally by membership fee

# Society journals

- More than 2000 titles being published, monthly, quarterly, or annually
- Out of them, between 200 and 300 titles are in English
- Between 70 and 100 are published in corporation with foreign for-profit/not-for-profit publishers
- Some of them are subsidized by JSPS' grants(total 0.7bJPY) to printing
- Most of them(2000) are not online

# NACSIS-ELS & J-STAGE

- Starting in mid-90s, two major services
  - NACSIS-ELS: electronic publishing through image digitization(less than 0.1bJPY)
  - J-STAGE: online publishing of born-digital PDF files(1-2bJPY)
- Both services almost provided for free
  - ELS now provides 4M articles
  - J-STAGE hosts 200+ journals, but year-by-year budget system could be a danger
- Now both suffer from “archaic architectures”
  - With politically institutional conflicts

# Institutional repositories

- In 2003, almost 0, but now as of March, almost 50 working
- Contents:
  - Journal articles: having a hard time (most Japanese societies don't know copyright)
  - Self-published articles: rapidly growing
  - Dissertations and theses: rapidly growing
  - Other gray literatures: rapidly growing
  - Learning materials: slow but growing
  - Science data: not often, but remote sensing, satellite images, plant leaf pictures, etc
- And a lot of advocacies

# So

- With proper growth of institutional repositories,
  - self-published articles will be made wholly online soon
  - Science data will be accumulated
  - Domestic journal articles will be made online from institutional repositories eventually
  - And with big-deal licensed material

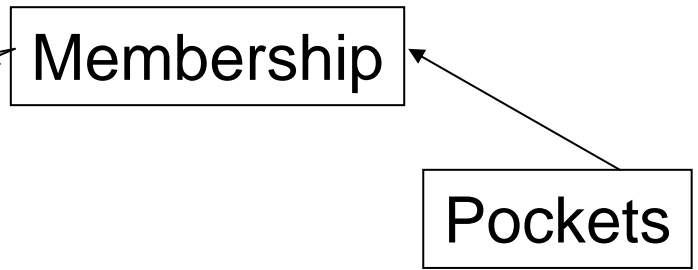
Almost all materials will be made open access for Japanese researchers and students, which is good but only for Japan



- Peer-reviewed articles

- in “foreign journals”
- in domestic societies’ English journals
  - Self-published
  - Publisher-published
- in domestic local language journals

Sales but cheap



Grant

- Self-published articles

- By universities
- By societies

Government

- Books

- By foreign publishers
- By domestic publisher

# The idea of Content Infrastructure

Creation and Dissemination of scholarly contents jointly by universities and NII

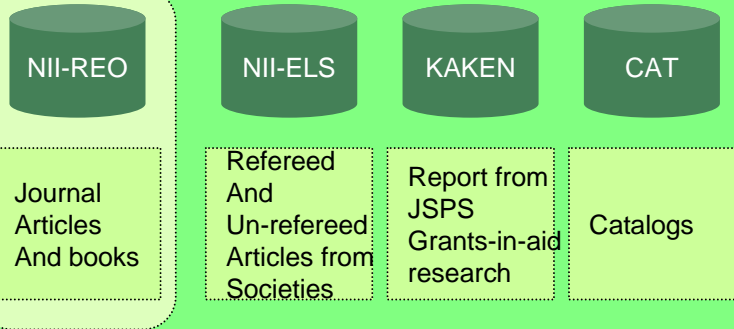
Scholarly communities  
 [researchers, students, etc]

**Make available**

CS [Cyber Science Infrastructure]  
 Network [materials] [Gids]

## Scholarly material as common goods

NII



Institutional repositories

Universities

Materials

- Books, Journals
- Theses and Dissertations
- Department journals
- Technical papers, etc
- Courseware
- Patents, softwares
- Science and statistics
- Data
- Cultural heritage

**Securing**

Jointly by library consortia and NII

digitization

crawling

harvesting

**Scholarly publishers**  
 [e-journal, e-books]

**societies**  
 [journals]

**Web resources**  
 In general

**Misc**

# Conclusion

- Asian perspective is historically constrained
- History is changing now
- Whatever open access means, there is a chance of Japanese being able to access almost all scientific articles
- Japanese government view? Who know?