

The Long Tail and Finnish Research Libraries



white



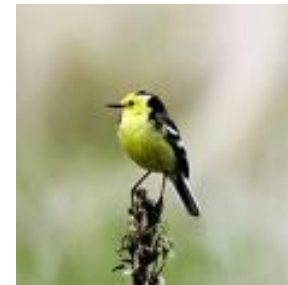
yellow

Jarmo Saarti and Pentti Vattulainen

The Universal Repository Library and the Guarantees for the Sustainability of the Digital Copy - 30.10.2009, Kuopio

A world of digital dissemination of documents

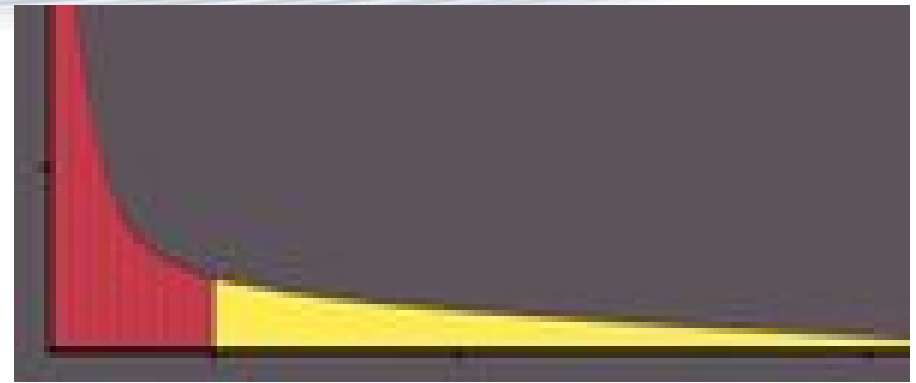
- More and more books are published in printed format
- E-books are coming
- More and more of the older printed books are being digitized
- "Fast food of science" i.e. scientific papers and journals are used in the digital form
- The on-going higher education reform: emphasis on economic efficiency and quality in education and research
- Legislation, especially copyright issues
- Users are familiar with using databases and e-services



citrine



grey



Long tail

- *The Long Tail* is the popular name for a commonly recognized feature of statistical distributions (e.g. Pareto 80%-20%: Long tail 98% - 2%)
- Long tail economy in entertainment (Anderson 2004)
- The future management of scientific print collections (Storey 2005, Dempsey 2006):
 - “The real relevance of the long tail argument, which is about how well supply and demand are matched in a network environment”
 - Need for “an agreed policy framework” to developing storage options
 - in order to achieve “system-wide efficiencies” we need “new services that operate at the network level, above the level of individual libraries”. (Dempsey 2006, Genoni 2007)



african



Long tail and libraries

- Aggregation of supply and demand
- Supply: the cost of inventory and storage
 - Problem of managing print collections in libraries
 - “When costs of inventory and storage are insignificant it becomes viable to deliver relatively unpopular items” (Hughes 2007)
- Demand, navigation
 - Search engines etc. allow clients to locate items outside their local geographic area
 - Challenge for libraries, but what about developments with semantic web, FRBR; Union Catalogues and collection level description
 - Resource sharing systems (open the collections)

Finnish National Repository Library and the long tail

- Serving all libraries
- Department for Education and Science of the Ministry of Education
- Functions: receive, store and offer material for use
- The Board: representatives of library sectors
- Annual budget 1,55 m€
- Staff 20 fte
- Shelf capacity year 2008: 76 shelf km (growing)
- Premises: 6767 m²
- Co-operation with the National Library and other libraries



cape

Finnish National Repository Library and the Long tail – impact on the library premises in Finland



mountain

	Library premises, m ²		Closed stacks, m ²	
	1990	2008	1990	2008
All university libraries	134 796	165 880	39 557	40 757
Legal deposit (6)	52 231	88 010	28 649	32 700
Other univ. libs (14)	82 565	77 870	10 908	8 057

Finnish National Repository Library and the long tail – savings in premises

- Transfers 4 – 7 shelf km / year
- Equals 900 – 1600 m²
= 140 000 – 250 000 euro/ year
- Total transfers: 109 shelf km mainly from research libraries (86%)
- Deduplication: 3 million volumes of monographs and periodicals equals 67 shelf km
- Delivery free of charge; fast delivery
- Half of ILL traffic of research libraries (71.000 requests)

blue-headed



Managing a library's collection policy, case Kuopio University Library

- Structural changes:
- Re-organizing the library premises at the campus
- Merging of two universities (Joensuu and Kuopio) from the beginning of 2010
- University policy: specialization, efficiency and savings
- E-services, digital collections and automation as possible solutions



willie wagtail

Kuopio University Library and National Repository Library, part 1

- Co-operation
- Collection planning
- Projects and piloting e-services
- Building trust-based networks



japanese

Kuopio University Library and National Repository Library, part 2



mekong

	Year 2006	2007	2008
Total floor area in square meters	4 041	3 788,9	2 792,2
Total shelf meters in use	12 330,4	9 630,4	5 993,7
Open collections shelf meters	6 468,4	6 468,4	3 151,7
Total reading and working places	310	310	268
Group work facilities	54	54	78
Home loans	51 847	50 176	48 174
Digital documents viewed	4 271	7 882	16 160

Table 1. Statistics about library facilities and library use. Source: Finish research library statistics database, English version available from: https://yhteistolasto.lib.helsinki.fi/language.do?action=change&choose_language=3

Gerstenfeld LC and Shapiro FD. Expression of bone-specific genes by hypertrophic chondrocytes: implications of the complex functions of the hypertrophic chondrocyte during endochondral bone development. *J Cell Biochem* 1996;62:1-9.

Glüer C-C, Wu CY and Genant HK. Broadband ultrasound attenuation signals depend on trabecular orientation: An *in vitro* study. *Osteoporosis Int* 1993;3:185-191.

Glüer C-C, Wu CY, Jergas M, Goldstein SA and Genant HK. Three quantitative ultrasound parameters reflect bone structure. *Calcif Tissue Int* 1994;55:46-52.

Goodsitt MM, Kilcoyne RF, Gutcheck RA, Richardson ML and Rosenthal DI. Effect of collagen on bone mineral analysis with CT. *Radiology* 1988;167:787-791.

Gough AKS, Peel NFA, Eastell R, Holder RL, Lilley J and Emery P. Excretion of pyridinium crosslinks correlates with disease activity and appendicular bone loss in early rheumatoid arthritis. *Ann Rheum Dis* 1994;53:14-17.

Gray H. Osteology. In: Williams PL and Warwick R (Eds.) *Gray's anatomy*. 36th ed. Churchill Livingstone, Edinburgh, 1980.

Grazioli V, Casari E, Murone M and Bonini PA. High-performance liquid chromatographic method for measuring hydroxylysine glycosides and their ratio in urine as a possible marker of human bone collagen breakdown. *J Chromatogr* 1993;615:59-66.

Grimston SK, Willows ND and Hanley DA. Mechanical loading regime and its relationship to bone mineral density in children. *Med Sci Sports Exerc* 1993;25:1203-1210.

Haapala J, Arokoski J, Pirttimäki J, Lyyra T, Jurvelin J, Tammi M, Helminen HJ and Kiviranta I. Incomplete restoration of immobilization induced softening of young beagle knee articular cartilage after 50-week remobilization. *Int J Sports Med* 2000;21:76-81.

Haapala J, Arokoski JP, Hyttinen MM, Lammi M, Tammi M, Kovanen V, Helminen HJ and Kiviranta I. Remobilization does not fully restore immobilization induced articular cartilage atrophy. *Clin Orthop Relat Res* 1999;218-229.

Haapasalo H, Kannus P, Sievänen H, Heinonen A, Oja P and Vuori I. Long-term unilateral loading and bone mineral density and content in female squash players. *Calcif Tissue Int* 1994;54:249-255.

Halleen JM, Alatalo SL, Suominen H, Cheng S, Janckila AJ and Väänänen HK. Tartrate-resistant acid phosphatase 5b: a novel serum marker of bone resorption. *J Bone Miner Res* 2000;15:1337-1345.

Hamerman D. Aging and osteoarthritis: basic mechanisms. *JAGS* 1993;41:760-770.



white-browed

Comparison of radiological osteoarthritis in a Dutch population with that in 10 other populations. *Ann Rheum Dis.* 1989;48:271-80.

[269] Verbrugge LM and Patrick DL. Seven chronic conditions: their impact on US adults' activity levels and use of medical services. *Am J Public Health.* 1995;85:173-82.

[270] Verzijl N, DeGroot J, Thorpe SR, Bank RA, Shaw JN, Lyons TJ, *et al.* Effect of collagen turnover on the accumulation of advanced glycation end products. *J Biol Chem.* 2000;275:39027-31.

[271] Winalski CS, Shortkroff S, Schneider E, Yoshioka H, Mulkern RV and Rosen GM. Targeted dendrimer-based contrast agents for articular cartilage assessment by MR imaging. *Osteoarthritis Cartilage.* 2008;16:815-22.

[272] Viren T, Saarakkala S, Kaleva E, Jurvelin JS and Töyräs J. Novel Mini-Invasive Ultrasound Method for Intra-Articular Diagnostics of Cartilage Degeneration. *Trans Orthop Res Soc.* 2009;55:1123.

[273] Wluka AE, Wolfe R, Stuckey S and Cicuttini FM. How does tibial cartilage volume relate to symptoms in subjects with knee osteoarthritis? *Ann Rheum Dis.* 2004;63:264-8.

[274] Wooley PH, Grimm MJ and Radin EL. The structure and function of joints. In editors. *Arthritis and allied conditions : a textbook of rheumatology. Vol. 1*, pages 149-173. Philadelphia: Lippincott Williams & Wilkins; 2005.

[275] Treatment of knee and hip osteoarthritis (online). Current Care Summary [homepage on the Internet]. The Finnish Medical Society Duodecim; 2007 [cited Available from: <http://www.kaypahoito.fi/>

[276] Xia Y, Moody JB, Burton-Wurster N and Lust G. Quantitative in situ correlation between microscopic MRI and polarized light microscopy studies of articular cartilage. *Osteoarthritis Cartilage.* 2001;9:393-406.

[277] Xie L, Lin AS, Levenston ME and Guldberg RE. Quantitative assessment of articular cartilage morphology via EPIC-microCT. *Osteoarthritis Cartilage.* 2009;17:313-20.

[278] Xie T, Guo S, Zhang J, Chen Z and Peavy GM. Use of polarization-sensitive optical coherence tomography to determine the directional polarization sensitivity of articular cartilage and meniscus. *J Biomed Opt.* 2006;11:064001.



madagascar

Future of the long tail

- Research uses mostly new documents, but clearly a long tail exists in science
- Need of a global policy for the long tail management:
- Digitizing
- Copyright policies
- Distribution of work of the global network of repositories and libraries.
- Can we build a trust-based network of national actors that shall bear responsibility for their part of the preservation, logistics and digitizing of printed material?
- Who takes care of the preservation and long-time use of the digital documents?
- Local library vs. national actors vs. international actors - head vs. short tail vs. long tail
- Private vs. public sector

Thank you for your attention!

Questions now

or

jarmo.saarti@uku.fi

or

pentti.vattulainen@nrl.fi

