Open Access: why we should have it, what works and what doesn't

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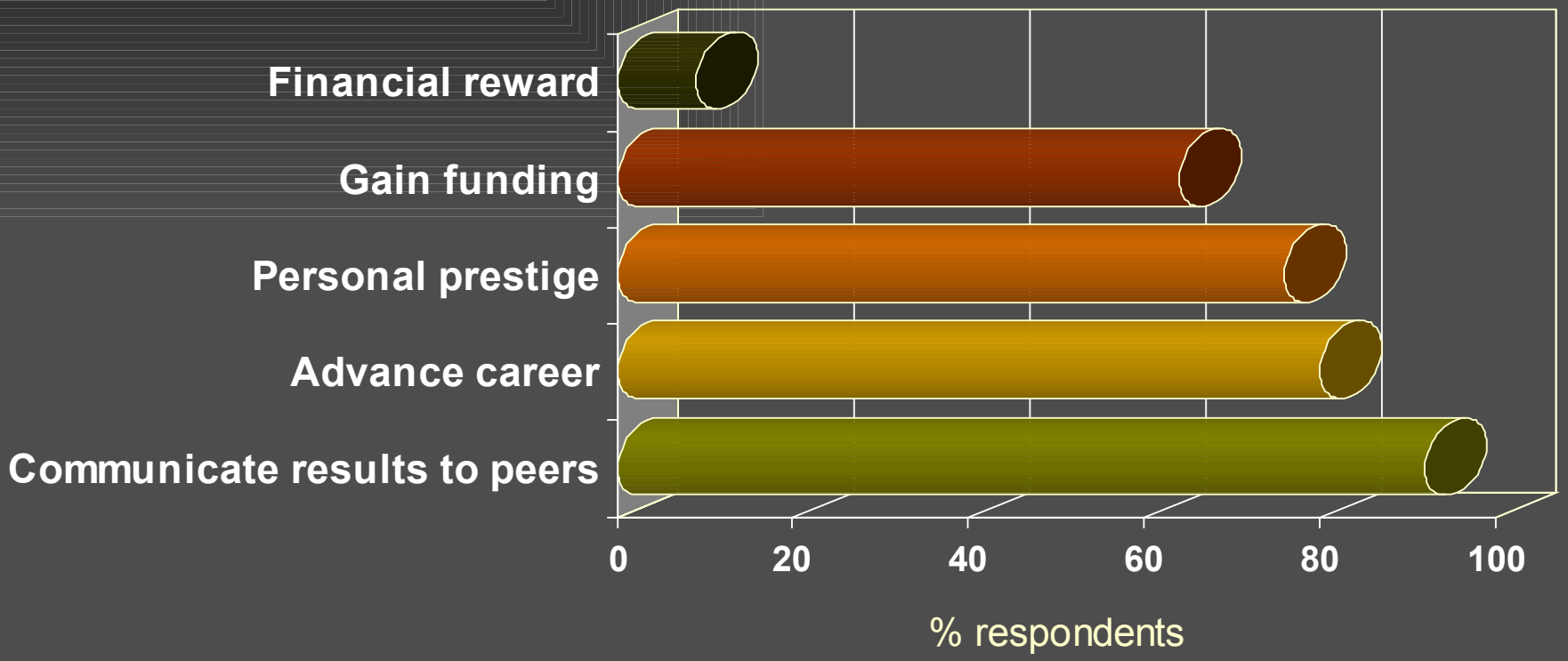
Institutionally-based repositories

- 700+
- Half are institutional or departmental
- Growth of 1 per day, but…
- Average number of postprints is 297!

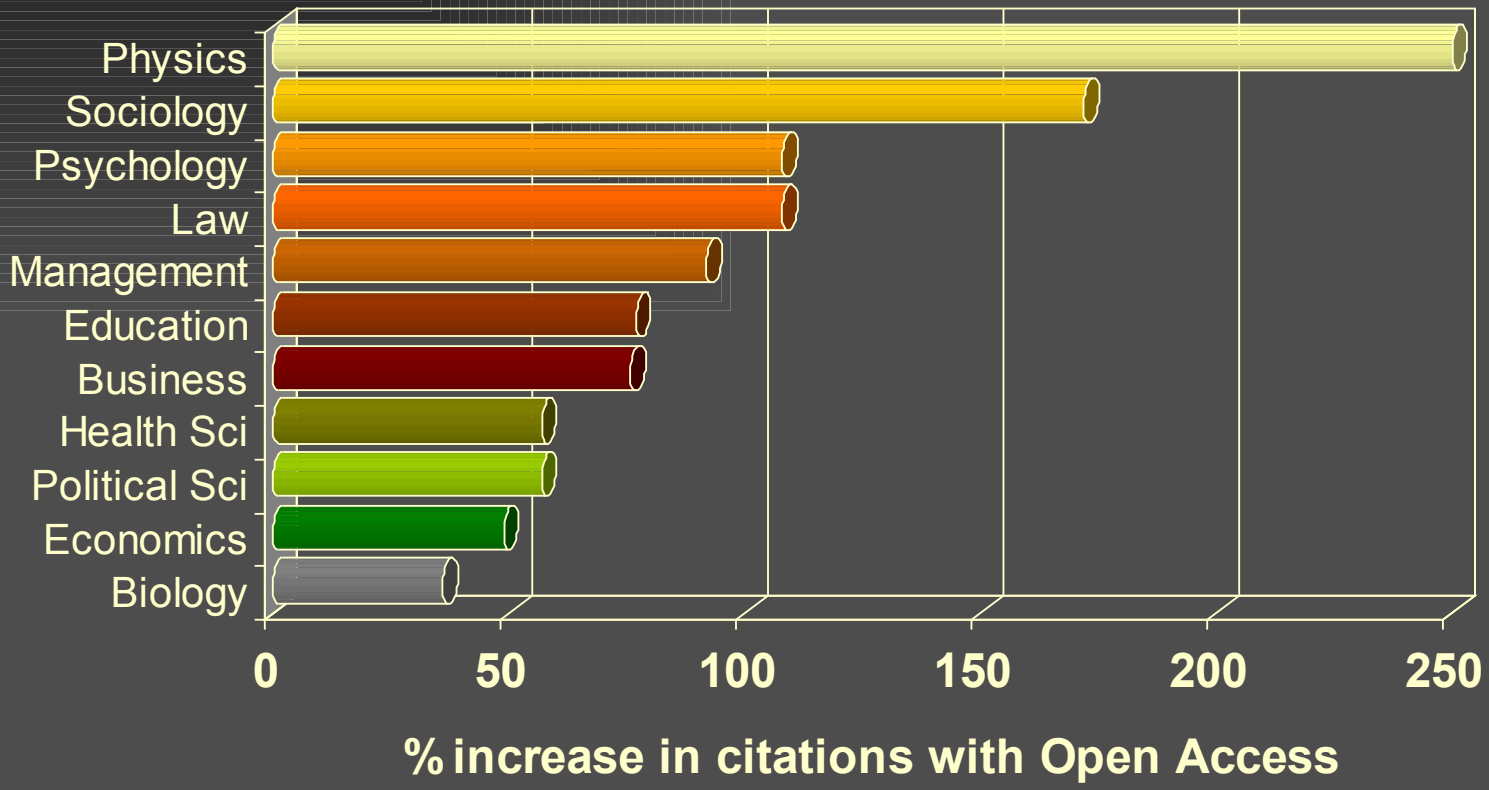
Why Open Access

- Greater impact from scientific endeavour
- More rapid and more efficient progress of science
- Better assessment, better monitoring, better management of science
- Novel information-creation using new and advanced technologies

Why researchers publish their work



Open Access increases citations



Range = 36%-200%
(Data: Stevan Harnad and co-workers)

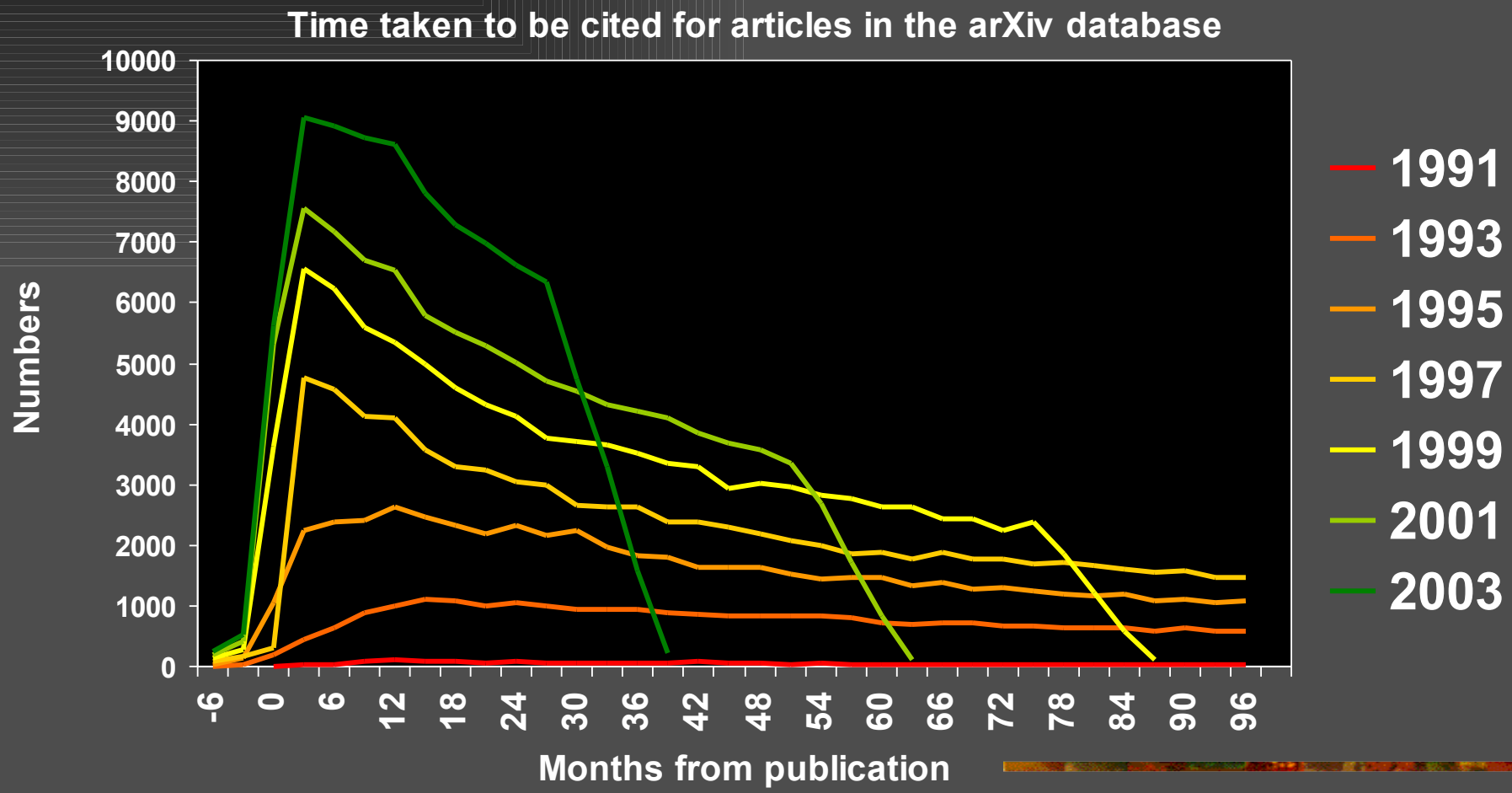
Other impact studies

- Lawrence 2001 (computer science)
- Kurtz 2004 (astronomy)
- Brody & Harnad 2004 (all disciplines)
- Antelman 2005 (philosophy, politics, electrical & electronic engineering, mathematics)
- Wren 2005
- Eysenbach 2006

This means financial impact, too

- The 6th Framework Programme has a science budget of €19 billion
- Losing potential 50% research impact
- This means lost impact worth €9.5 billion to the European economies

Science is faster, more efficient



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Navigation and analysis of science output: Citebase

citebase **Search** Help (Impact) Health-Warning

Metadata | Citation | OAI Identifier

Identifier (explain?) oai:arXiv.org:hep-th/9802150

Rank matches by Descending Co-citedness explain?

Abstract | References | Co-cites With | **Cited By** | Co-cited With | Clear

Showing **1 - 10** of **2679** found [1-100 in XML, Refer, BibTeX, RSS] Query took 1.192 seconds

Large N Field Theories, String Theory and Gravity [Abstract, 1383 Cites, Cached PDF]

1383 Aharony, O.; Gubser, S. S.; Maldacena, J. et al (1999-05-14) *In* Physics Reports 323 183 (2000)

We review the holographic correspondence between field theories and string/M theory, focusing on the relation between compactifications of string/M theory on Anti-de Sitter spaces and conformal field theories. We review the background for this correspondence and discuss its motivations and the evi ... Comment: 261 pages, 42 post-script figures. Please send any comment to jmaldac@fas.harvard.edu. v2: added references and small corrections. v3: minor changes and corrected discussion of SU(3)-invariant supergravity solution

Strings in flat space and pp waves from *N*=4 Super Yang Mills [Abstract, 809 Cites, Cached PDF]

809 Berenstein, David; Maldacena, Juan; Nastase, Horatiu (2002-02-04) *In* JHEP 0204 013 (2002)

We explain how the string spectrum in flat space and pp-waves arises from the large N limit, at fixed g^2_{YM}, of U(N) *N* =4 super Yang Mills. We reproduce the spectrum by summing a subset of the ... Comment: 36 pages, 5 figures. v3: minor typos corrected, references added

Anti-de Sitter Space, Thermal Phase Transition, And Confinement In Gauge Theories [Abstract, 755 Cites, Cached PDF]

755 Witten, Edward (1998-03-16) *In* Advances in Theoretical and Mathematical Physics 2 505 (1998)

The correspondence between supergravity (and string theory) on AdS space and boundary conformal field theory relates the thermodynamics of *N*=4 super Yang-Mills theory in four dimensions to the thermodynamics of Schw ... Comment: 28 pp., added references and minor corrections

Measure usage and impact

This Article's Citation/Hits History (explain?)

> Top | #Reference List | #Cited By | #Co-Cited | All Citations | All Co-Citations

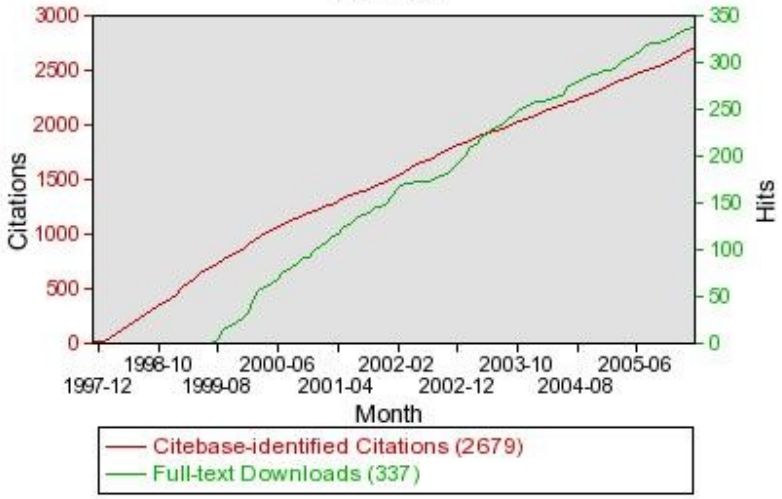
Use the Correlation Generator to explore the correlation between download impact ("hits") and citation impact.

Summary

Citebase is currently only an experimental demonstration. Users are cautioned not to use it for academic evaluation yet. Citation coverage and analysis is incomplete and hit coverage and analysis is both incomplete and noisy.

Caution!	Citations	Full-text Downloads
To this Article	2679	337
To authors (mean)	207.324	90.4604

History



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G/A [1] G. 't Hooft, "A Planar Diagram Theory For Strong Interactions," Nucl. Phys. B72 (1974) 461.
eprint [2] A. M. Polyakov, "String Theory And Quark Confinement," hep-th/9711002.
G/A [3] G. Gibbons, Nucl. Phys. B207 (1982) 337
eprint R. Kallosh and A. Peet, Phys. Rev. B46 (1992) 5223, hep-th/9209116
eprint S. Ferrara, G. Gibbons, R. Kallosh, Nucl. Phys. B500 (1997) 75, hep-th/9702103.
G/A [4] G. Gibbons and P. Townsend, "Vacuum Interpolation In Supergravity Via Super pBranes," Phys. Rev. Lett. 71 (1993) 5223

Follow the citing trail …

Anti De Sitter Space And Holography

Authors: Witten, Edward

Recently, it has been proposed by Maldacena that large N limits of certain conformal field theories in d dimensions can be described in terms of supergravity (and string theory) on the product of d+1-dimensional AdS space with a compact manifold. Here we elaborate on this idea and propose a precise correspondence between conformal field theory observables and those of supergravity: correlation functions in conformal field theory are given by the dependence of the supergravity action on the asymptotic behavior at infinity. In particular, dimensions of operators in conformal field theory are given by masses of particles in supergravity. As quantitative confirmation of this correspondence, we note that the Kaluza-Klein modes of Type IIB supergravity on $AdS_5 \times \backslash bf\ S^5$ match with the chiral operators of $\Box$=4 super Yang-Mills theory in four dimensions. With some further assumptions, one can deduce a Hamiltonian version of the correspondence and show that the $\Box$=4 theory has a large N phase transition related to the thermodynamics of AdS black holes.

Comment: 40 pp.; additional references and assorted corrections

Full-text available from: Cached PDF
Linked PDF (experimental)
Adv.Theor.Math.Phys. 2 (1998) 253-291
http://arxiv.org/abs/hep-th/9802150

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- All Articles Citing this Article
- Top 5 Most Co-cited Articles with this Article
- All Articles Co-Cited with this Article

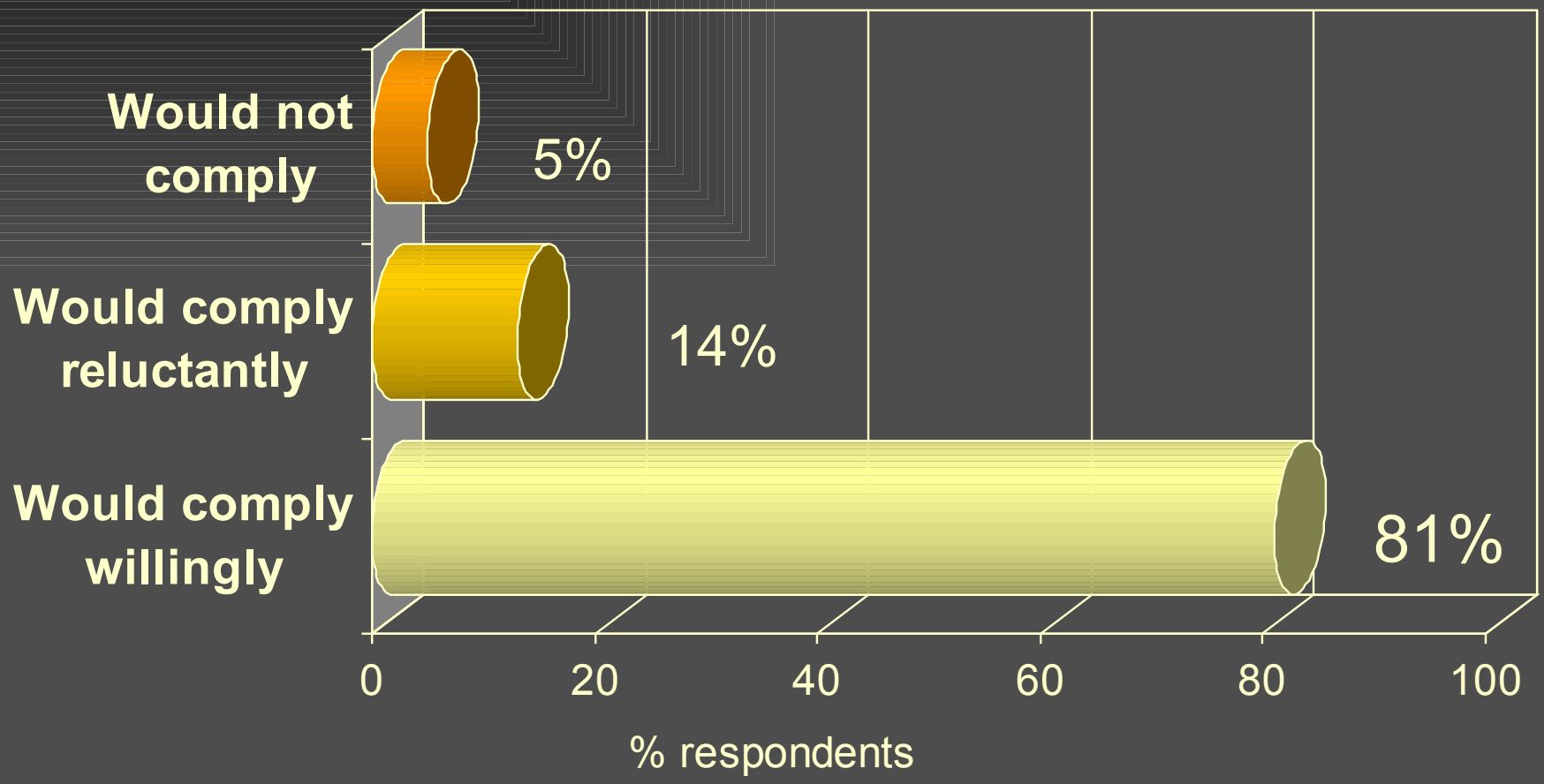
New knowledge from old

- Data-mining
- Text-mining (semantic Web technologies)
- UK: National Text-Mining Centre
- Example: NeuroCommons (www.neurocommons.org)

Average number of articles in an institutional repository …

297!

Author readiness to comply with a mandate



Institutions with a mandate already

- University of Southampton School of Electronics & Computer Science (since 2003) (90+% compliance already)
- CERN (2003) (90% compliance already)
- Queensland University of Technology (2004) (40%+ compliance and growing)
- University of Minho, Portugal (2005)
- NIT (Mumbai), and others on the way …

Funder policies and mandates

- Policies:
  - An almost-mandate from the DFG
  - Exhortations and encouragements from public research funders in Finland, USA
- Proposed mandates : public funders (Canada, Australia, S.Africa, Ukraine, USA and EU)
- First real mandate from private funder (Wellcome Trust)
- National-level mandates from RCUK (Research Councils UK)

Council	Policy	Require	Request	Which version	OAJs
AHRC	End 2006				
BBSRC	✓	✓		?	
CCLRC	✓		✓	Depends on publisher	
EPSRC	2008				
ESRC	✓	✓ ?('should')		Depends on publisher	Can use grant money
MRC	✓	✓		?	Include in grant bid
NERC	a.s.a.p.				
PPARC	☠				

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Thank you for listening

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