

# **Business Models in Scientific Publishing**

Heinz Weinheimer, Bielefeld, April 2012

## Topics for today

- Basics
- Subscription based models
- Open access business model
- Conclusion



# Basics

## Definition:

- A business model describes the rationale of how an organization creates, delivers, and captures value (economic, social, or other forms of value).
- The essence of a business model is that it defines the manner by which the business enterprise **delivers value to customers**, entices customers to pay for value, and converts those payments to profit: it thus reflects management's hypothesis about **what customers want**, how they want it, and how an enterprise can organize to best meet those needs, get paid for doing so, and make a profit

[\[source:wikipedia\]](#)



**Elsevier Boycott:  
9000 researchers  
signed**

**SOPA protest: Wikipedia  
closed down**

**RWA: failed**

The Chronicle of Higher Education, 04 April 2012  
**An Open Letter to Academic Publishers About Open Access**  
Dear publishers,  
Boycotts, public disagreements, stalled antipiracy and anti-public-access bills: It's been an interesting time for you lately.  
Are you nervous? Some of you should be. Not because your business models are on the verge of collapse—commercial academic publishers are unlikely to suffer a mass extinction soon—but because of how researchers themselves are changing. One scholar described it to me as an Academic Spring, a sense of revolution in the air.



**Business models of scientific publishers under pressure?**



## What happened? Did the internet change the business?

- You might think: yes,  
because in the electronic world production and distribution cost are much less expensive  
as in the print world – scientists might be able to reduce the role of publishers
- But do not forget:
  - Building up huge databasis needs huge investment in IT infrastructure&Knowledge
  - You need to add a lot of well structured Metadata for efficient search
  - You need a 24/7 52-weeks-a-year accessability for each part of the world
  - Database products are much more in need of explanation – therefore Marketing and sales is much more labor intensive

# The Journey of an Article

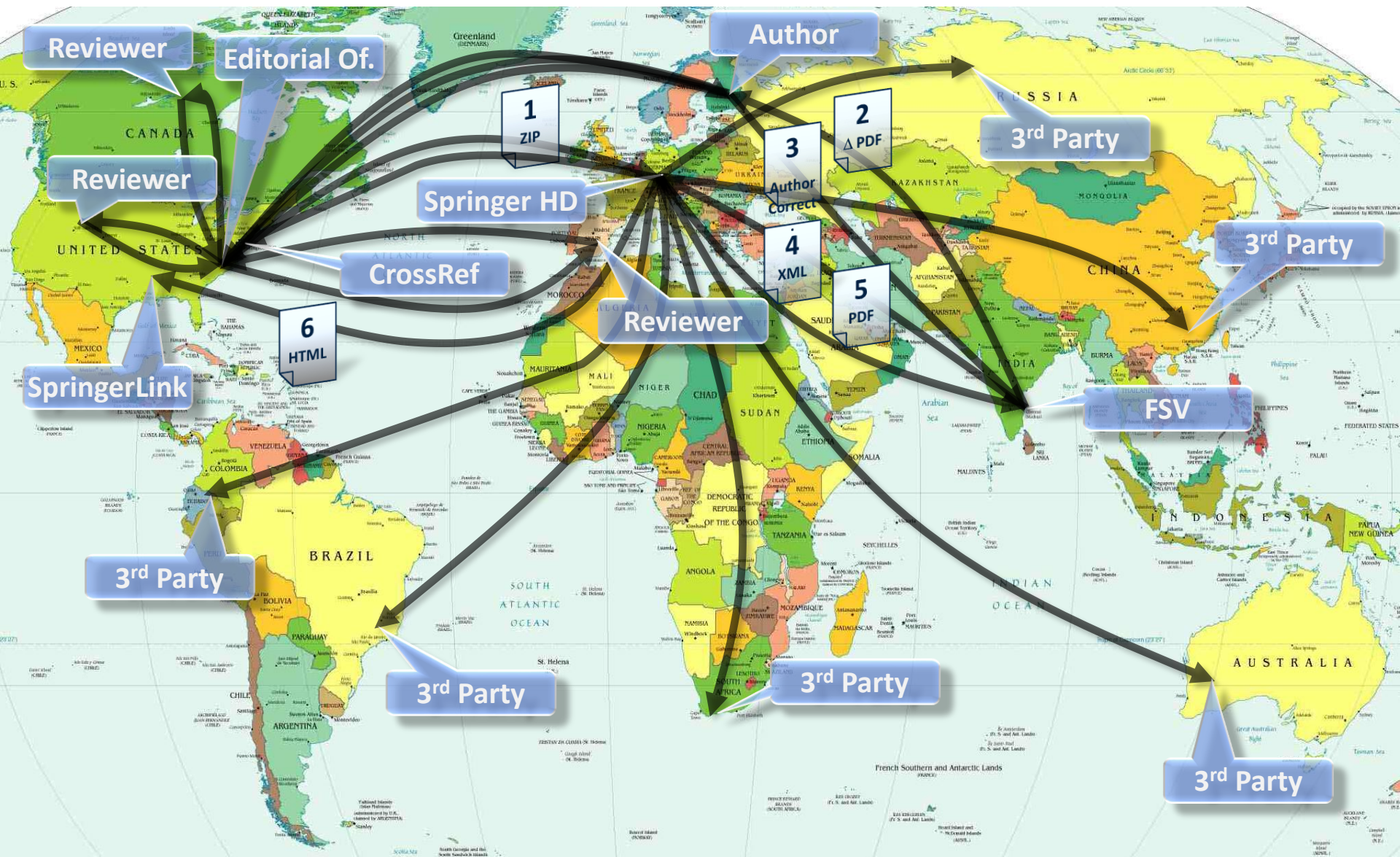
Business Models; Bielefeld Conference| April 2012

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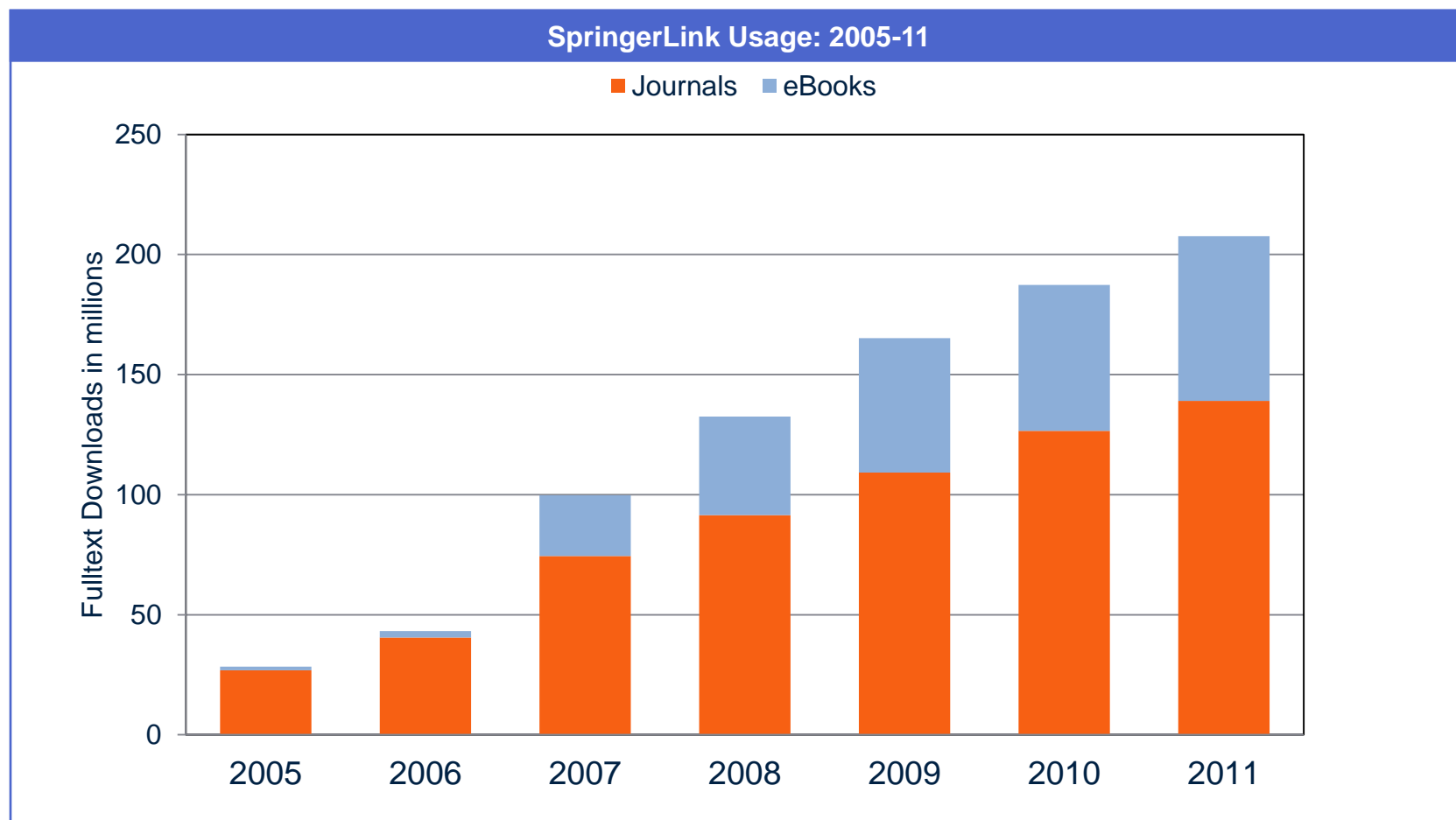


Springer

the language of science



## SpringerLink Total Usage: 2005-11



eBooks Usage up 13% to 69 million article/chapter downloads in 2011



## Subscription based business models

- ...where the discussion comes from
- Basic idea: a customer must pay a subscription price to have access to the product/service – value lies in access to content
- Traditional business model with by far biggest market share
- Golden rule of quantity discount: to buy more means to pay less per unit

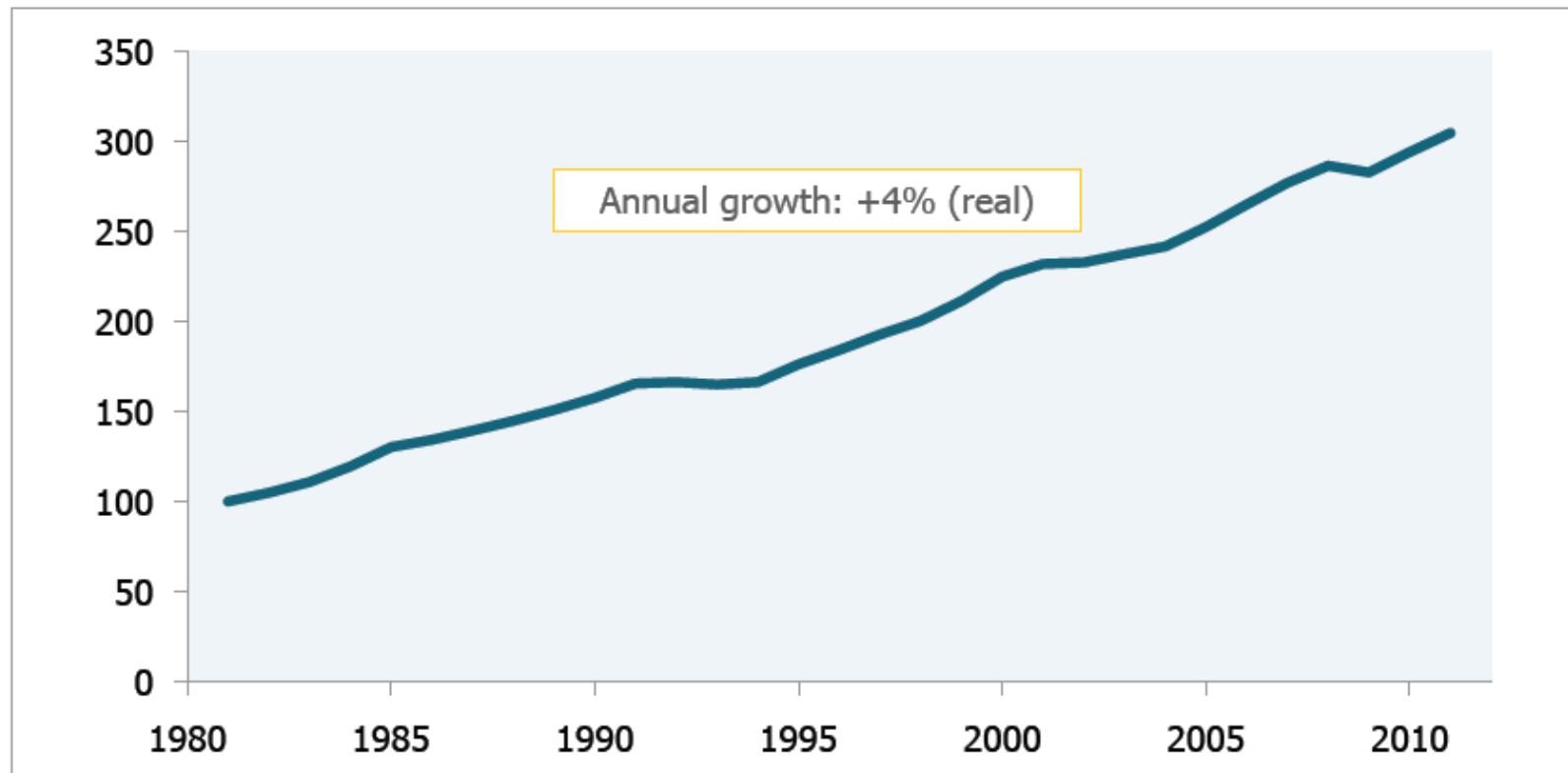
## Traditional models

Business model	Remarks
Individual member subscription	member or personal subscription
Individual institutional subscription	one institutional list price; very often different prices for print only, online only and print-and-online
Subject collection	e.g. Medicine collection
Consortia deals	National license; “Big Deal” – in many cases the most common and in many countries under pressure

- Those models work nicely as long as budgets can cover growth

## Spending on R&D are constantly growing...

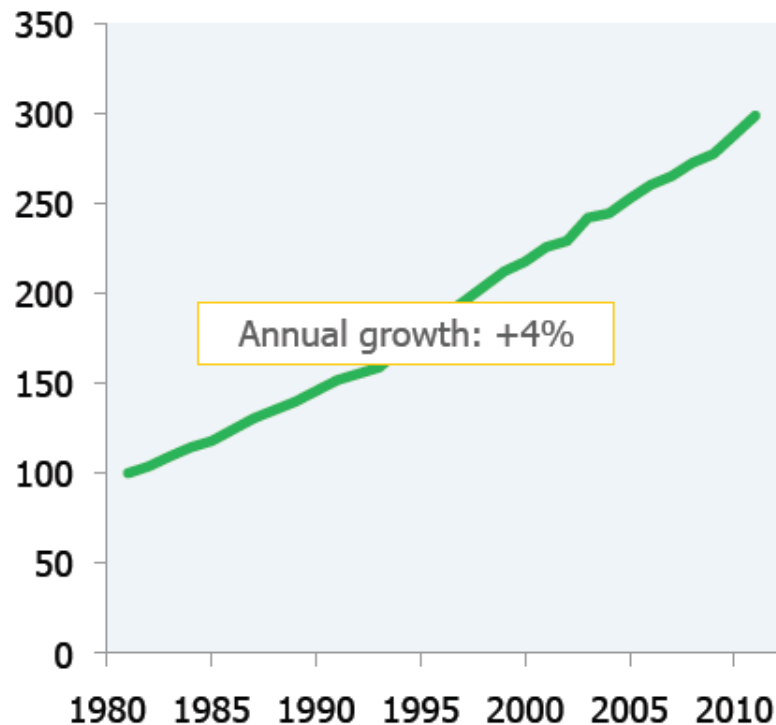
**Spending on R&D – OECD countries\***  
**Indexed values; 100 = Spend in 1981**





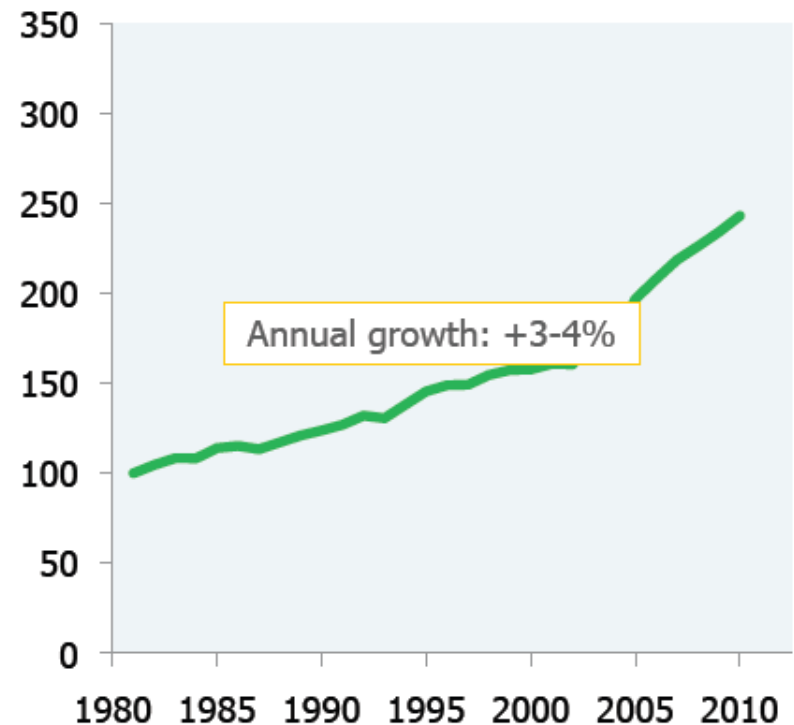
## ...This translates in output growth

**Number of researchers – OECD countries**  
Indexed values; 100 = Number of researchers in 1981



Global number of researchers:  
7 million in 2010

**Number of research articles published**  
Indexed values; 100 = Number of articles in 1981



Number of research articles:  
>1.5 million in 2010

## More recent developments...

- Budget restrictions are forcing librarians to spend less
- Tendency to more customer/user-driven models:

Business model	Remarks
Tiered Model	according to institution size; very popular with American societies, e.g. <a href="#">AIP</a> , <a href="#">ACS</a>
Deposit model	mainly Corporate market (prepaid amount from which pay-per-article is deducted)
Patron driven access	Usage-driven-acquisition, pick & choose; pay-per-download; offered by ebook platforms

## **Change in subscription model raises questions on the role of librarians/libraries:**

- Will IT-experts will take over the role of librarians when acquisition of scientific content will be completely usage-driven?
- As the offer from a library will be more and more incomplete: will Amazon or Google take over that role?

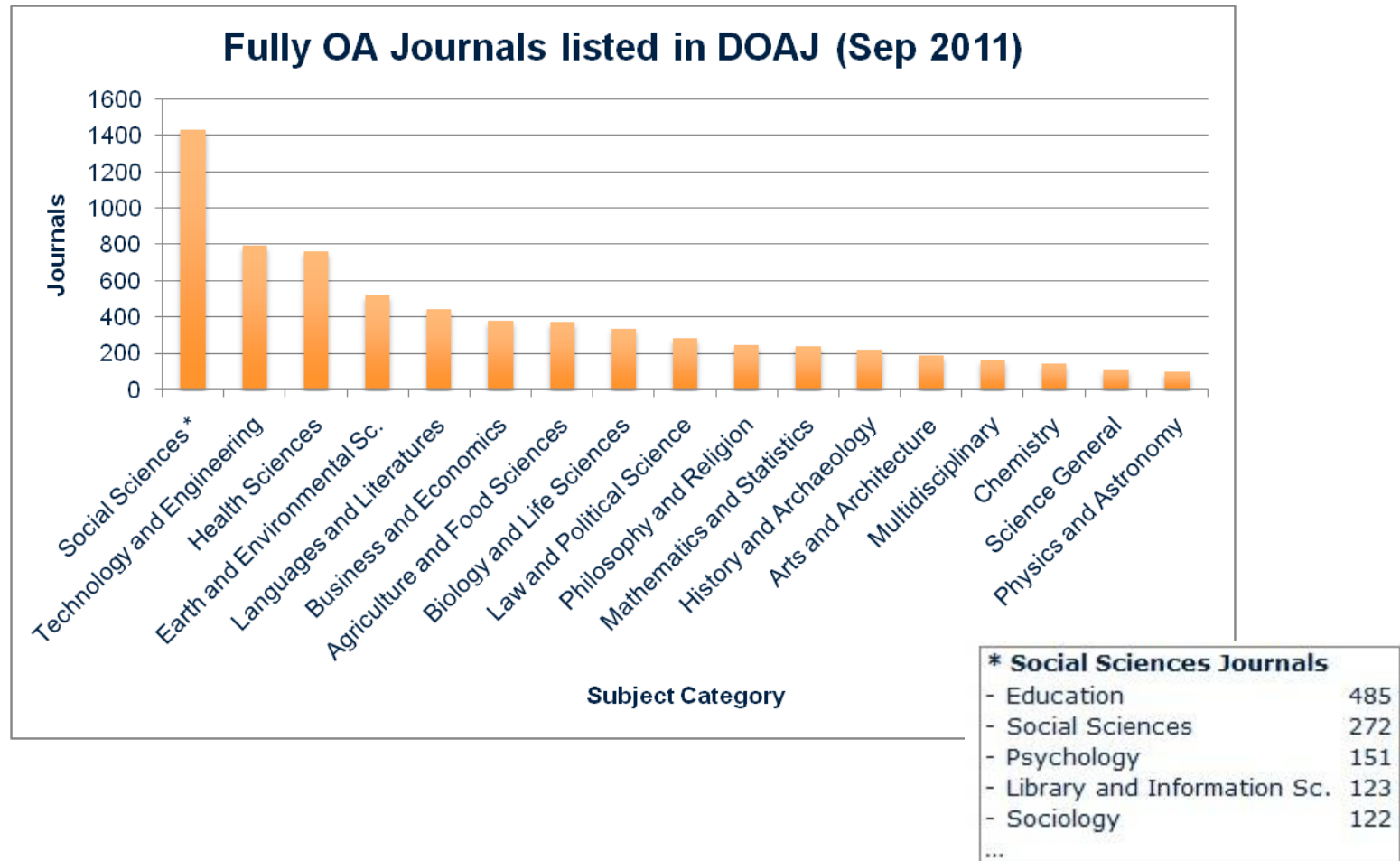


## Open Access as Alternative?

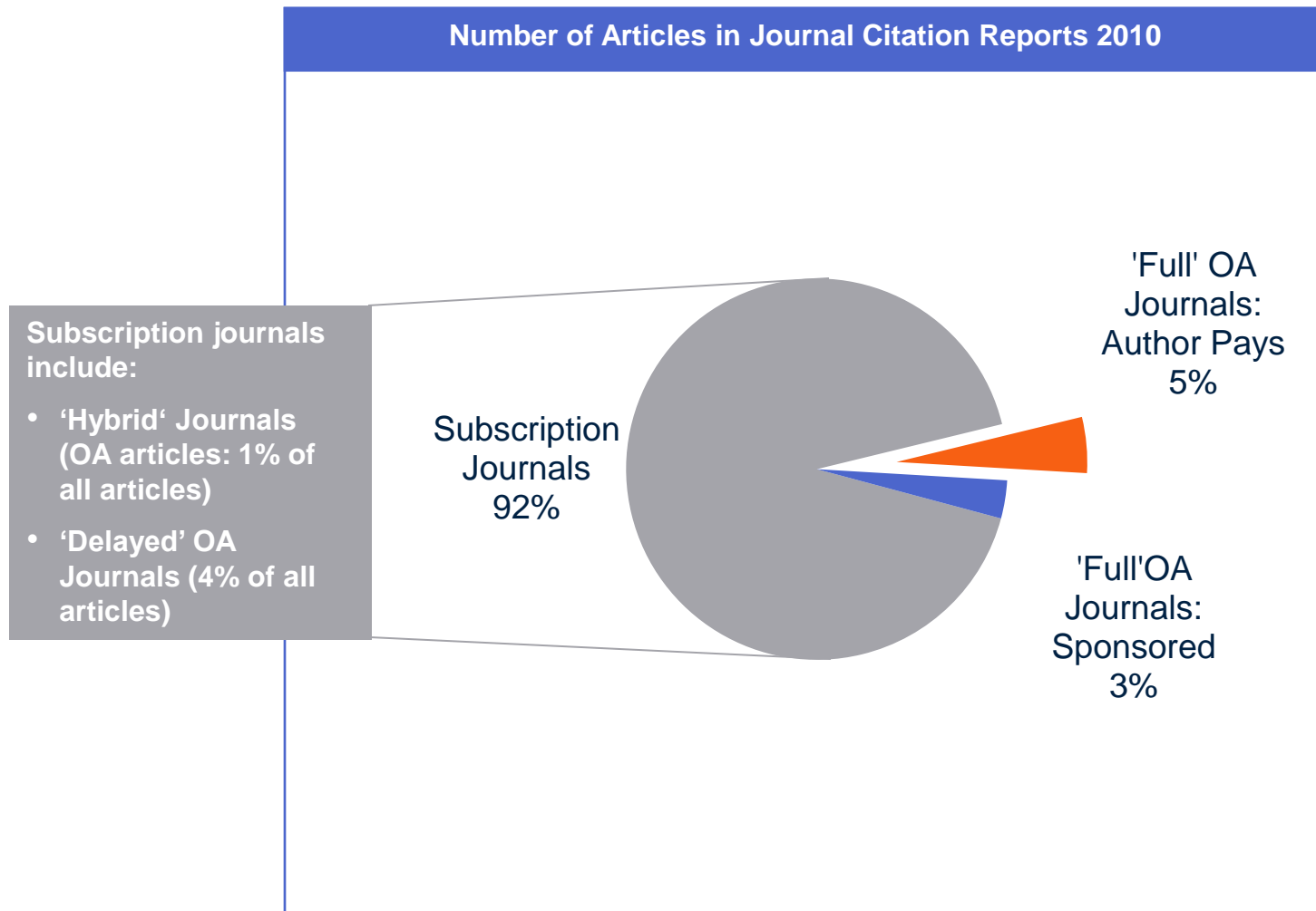
- Basic idea: author or institution pays a publication fee— access to content is free. Many publishers offer a hybrid model: free access article in subscription journal
- Idea came up in BioMed – here publication charges are mainly paid by companies



## Open Access idea reached nearly all disciplines



## Impact Factor journals: Open Access market share is still small



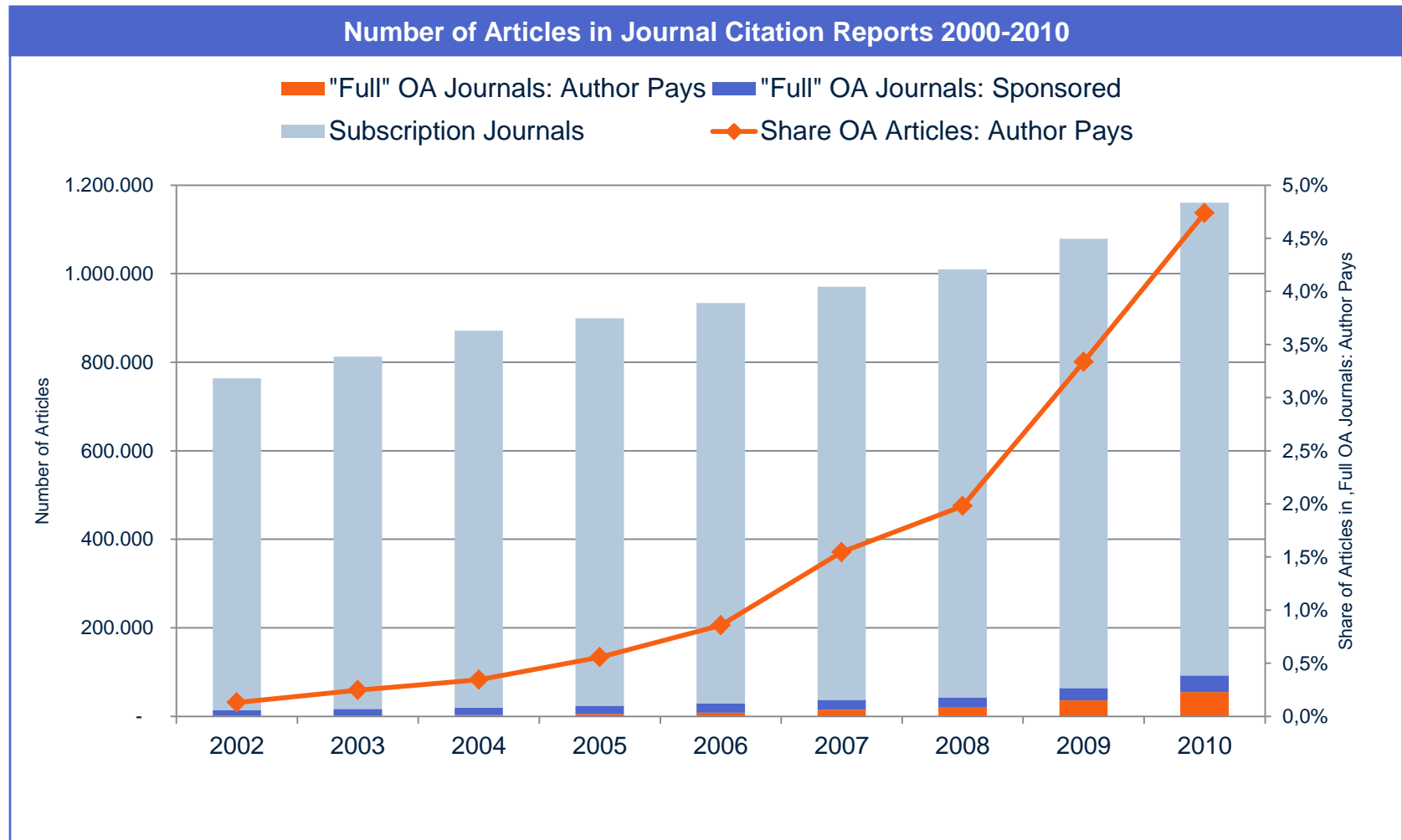
(Sources: Journal Citation Reports 2010, DOAJ)

## Impact Factor journals: Open Access market share by discipline

Discipline	Article Share 'Full' OA Journals: Author Pays	Article Share 'Full' OA Journals: Sponsored
Medicine	3.9%	5.0%
Biomedicine & Life Sciences	8.3%	3.2%
Physical Sciences & Engineering	3.3%	2.0%
Computer Science	0.6%	1.7%
Mathematics	3.0%	2.5%
Business & Economics	0.5%	1.8%
Human Sciences	1.2%	2.3%
<b>Total</b>	<b>4.7%</b>	<b>3.2%</b>

(Sources: Journal Citation Reports 2010, DOAJ)

# Impact Factor journals: Open Access market is growing fast



(Sources: Journal Citation Reports 2010, DOAJ; Share OA Articles: Author Pays 2002-08 estimated)

## Impact Factor journals: Top 15 OA Journals 2010 by # articles

Journal	Publisher	Articles 10	Citations 10	Impact Factor 10	Business Model
PLoS One	PLoS	6,714	42,795	4.411	Author Payment
Acta Crystallographica E	Internat. Union of Crystallography	4,085	9,727	0.413	Author Payment
Optics Express	Optical Soc. America	2,943	46,603	3.749	Author Payment
African Journal of Biotechnology	Academic Journals	1,272	2,988	0.573	Author Payment
Nucleic Acids Research	OUP	1,101	100,444	7.836	Author Payment
World Journal of Gastroenterology	Baishideng Publishing Group	813	15,119	2.240	Author Payment
New Journal of Physics	IOPP	812	11,643	3.849	Author Payment
BMC Public Health	BioMed Central	789	5,254	2.364	Author Payment
Bulletin of the Korean Chem. Soc.	Korean Chemical Sociatey	770	4,059	0.871	Sponsored
BMC Genomics	BioMed Central	761	10,871	4.206	Author Payment
Atmospheric Chemistry and Physics	Copernicus	751	14,776	5.309	Author Payment
BMC Cancer	BioMed Central	691	5,847	3.153	Author Payment
BMC Bioinformatics	BioMed Central	690	12,653	3.028	Author Payment
Chinese Medical Journal	Chinese Medical Association	689	3,900	0.983	Sponsored
Molecules	MDPI	646	3,234	1.988	Author Payment

(Sources: Journal Citation Reports 2010, DOAJ)

## Impact Factor journals: Top 10 OA publishers by # articles

Publisher	# journals	# articles	# citations	Remarks
Springer	94	12,544	130,232	-
PLoS	7	8,746	104,647	Non-profit publisher from the US; publishes 7 OA journals
Intern. Union of Crystall.	1	4,085	9,727	Only one OA journal: Acta E
Academic Journals	7	3,425	4,170	African publisher of 159 OA journals
Optical Soc. America	1	2,943	46,603	Only one OA journal: Optics Express
MDPI	7	2,116	9,101	Swiss publisher of 62 OA journals
Copernicus	11	2,014	28,497	German publisher of 28 OA journals; publisher of the European Geosciences Union (EGU)
Hindawi	19	1,556	7,068	Egyptian publisher of 234 OA journals
OUP	4	1,239	103,384	4 OA journals so far
Medknow Publications	14	1,091	6,387	Indian publisher of 154 OA journals; most journals are available for free online but do not charge authors for publication

(Sources: Journal Citation Reports 2010, DOAJ)

## Conclusion

- Role of subscription model will decrease but still remain the most used – new variations will show up
- Open access will dramatically increase market share
- Publishers and librarians will both prevent that Google or Amazon will take over the business by compromising on variations of subscription model and making use of open access
  - because we are sitting in the same boat!

- Thank you

