Scientific Publishing

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NYT E02

Agenda

1. Research publications
2. Journal publications
3. Conference publications
4. The peer review process
5. The publishing business

1. Research Publications

Why Publish Research Papers?

I publish, therefore I am

To advance science

To have a career

Types and Status of Publication Types

The status hierarchy (by diligence of peer review)

1. Journal articles [1]
2. Conference papers
3. Workshop papers
4. Technical reports

In practice, there are significant quality differences between

- Journals and journals
- Journals and conferences

[1] In computer science, conferences may have equal standing

The Purposes of Academic Communication

- Documentation and communication of scientific results
  - Early (workshop papers)
  - Intermediate (conference papers)
  - Final (journal articles)
- Exchange of ideas, public conversation
- Documentation of supplementary results (technical reports)

Academic Evaluation

Publications are a key component of academic evaluation

- Researchers get evaluated for promotion (tenure)
- Department rankings influence student choice
- University rankings influence public funding

Beware of the bean counters

- See the SF Declaration of Research Assessment (DORA) [1]

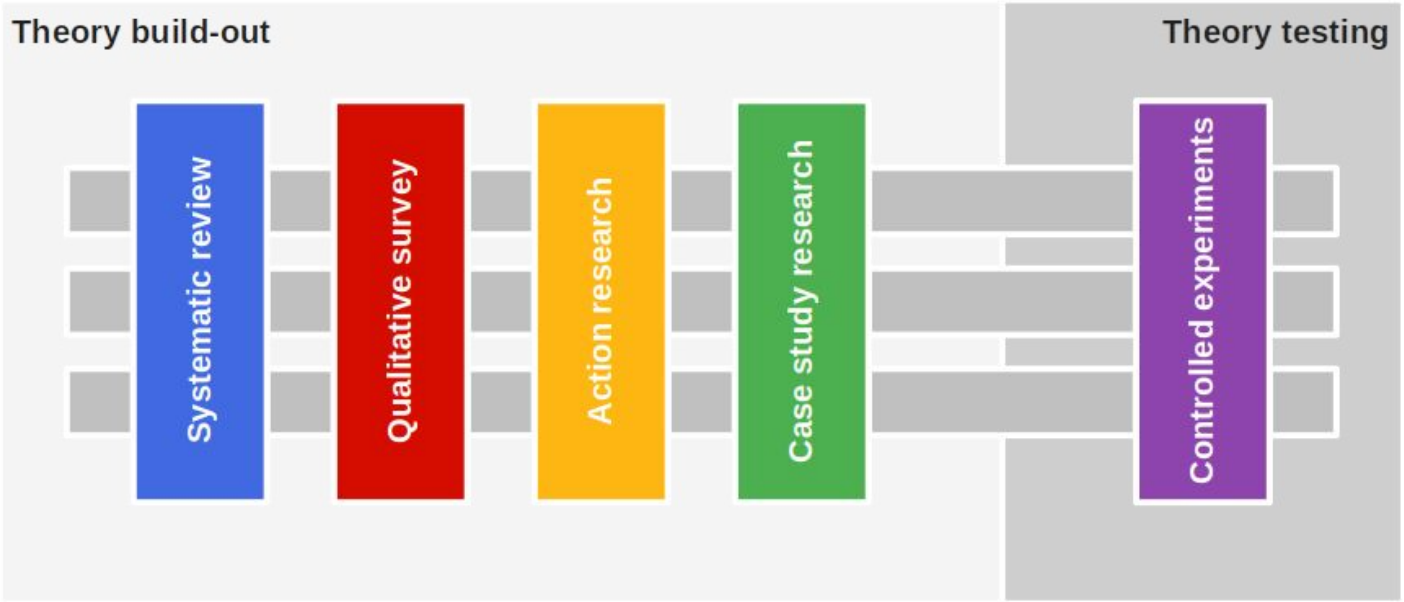
[1] See https://sfdora.org/

Publication Value

Publication value is measured by

- Value of the publication venue
  - Common measure: Impact factor
- Citations of publication
  - Common measure: Weighted counts

Publication Strategy



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2. Journal Publications

Journal Papers

Journal papers are

- Research articles accepted for
  - Publication in a research journal

Journals are

- (Ir)regularly appearing article collections

Organizational Structure of a Journal

Editor-in-chief

Associated editor (a.k.a. area editor)

Reviewer

Software Engineering Journals

ACM Transactions on Software Engineering Methodology (ACM TOSEM)

IEEE Transactions on Software Engineering (IEEE TSE)

Empirical Software Engineering (Springer ESE)

Requirements Engineering (Springer RE Journal)

Journal Paper Process

No specific submission deadline (submit at any time)

Uncertain publication date (when your time has come)

Possibly multiple (re)submissions before a final decision

Review(er) Response Categories

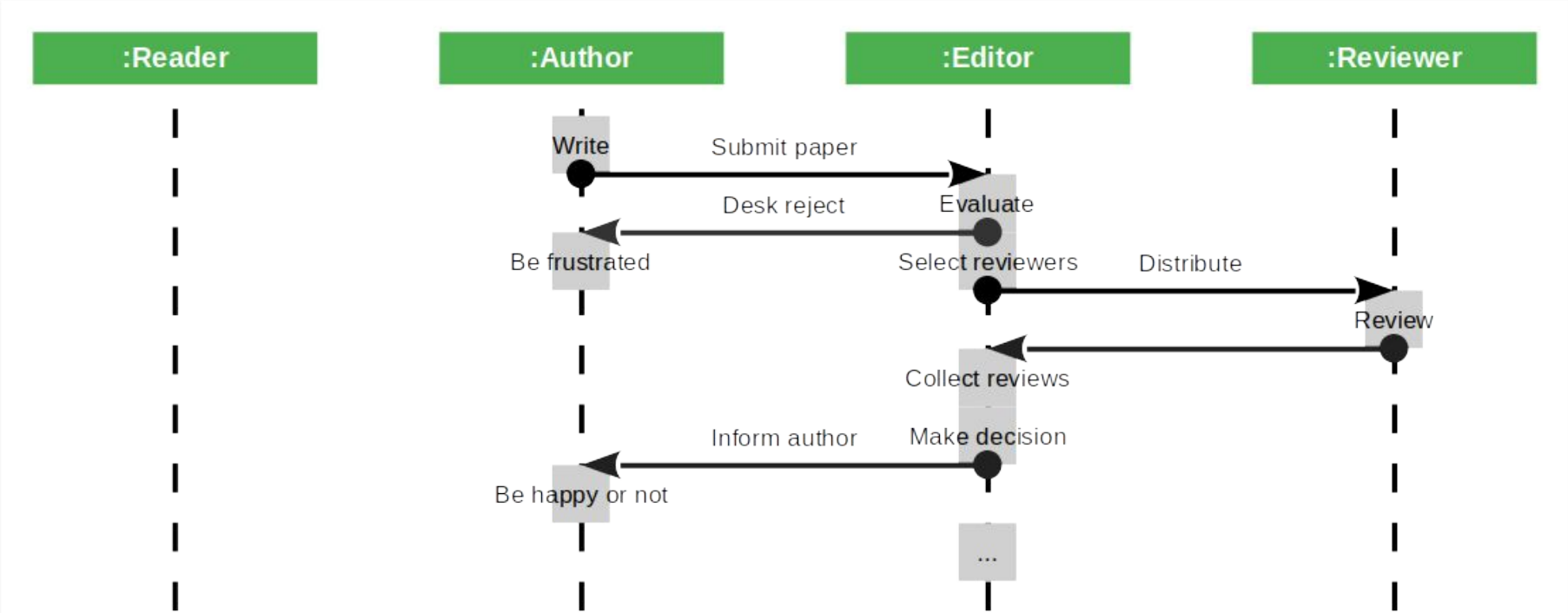
Accept

Accept with minor revisions

Major revision (revise-and-resubmit)

Reject

Submission and Review Process



Resubmission and Response to Reviewers

When faced with a revise-and-resubmit

- Prepare new manuscript expediently
- Write a response to reviewers

Example Response to Reviewers (a.k.a. Rejoinder)

Reviewer comment	Response to reviewer
1.1 In general the design of the literature review and the design of the interviews are rigorous. On the other hand, the number of interviews is rather low and the sample not representative (which is acknowledged in the manuscript).	a. We added an additional section to the limitations to mention the sample size and its influence on the guidelines and recommendations we make.
1.2 What I'm missing in the manuscript is a take-home message as well as possible ways out of the problems or challenges. The study focuses on gathering insight on the state of open collaborative data engineering (participants, roles, challenges) but I'm missing the attempt to make suggestions how to overcome the challenges.	a. We completely rewrote the discussion to add guidelines for successful open collaborative data engineering projects, based on the insights gathered in the article. b. We also added concrete recommendations to increase adoption of open collaborative data engineering in open data contexts.
1.3 I'm also missing a concise summary of the results obtained in the study. The discussion provided in Section is insufficient in this aspect. [...]	a. We combined the multiple tables for challenges into one table including all challenges to create one location that summarizes all challenges. [...]

3. Conference Publications

Conference Papers

Conference papers are

- Research papers accepted for
  - Presentation at a conference and
  - Publication in the conference proceedings

Conferences are

- Community gatherings where
  - Research work is being presented next to
  - Other forms of professional communication

Conference proceedings are

- Research paper compendia

Organizational Structure of a Conference

Conference committee

Program committee (the “PC”)

Program committee chair (the “PC chair”)

Program committee members (reviewers)

Software Engineering Conferences

ACM Foundations of Software Engineering (FSE)

European Software Engineering Conference (ESEC)

IEEE International Conference on Software Engineering (ICSE)

Conference Paper Process

Most conferences take place once a year

One submission deadline for the conference

Usually single accept or reject decision

One publication date (the conference) a year

Program Committee Decision Process

Program chair assigns paper to multiple reviewers

Before or at the committee meeting, reviewers debate paper

Identify the Champion Response Categories

Accept and champion

Accept but do not champion

Reject but do not detract

Reject and detract

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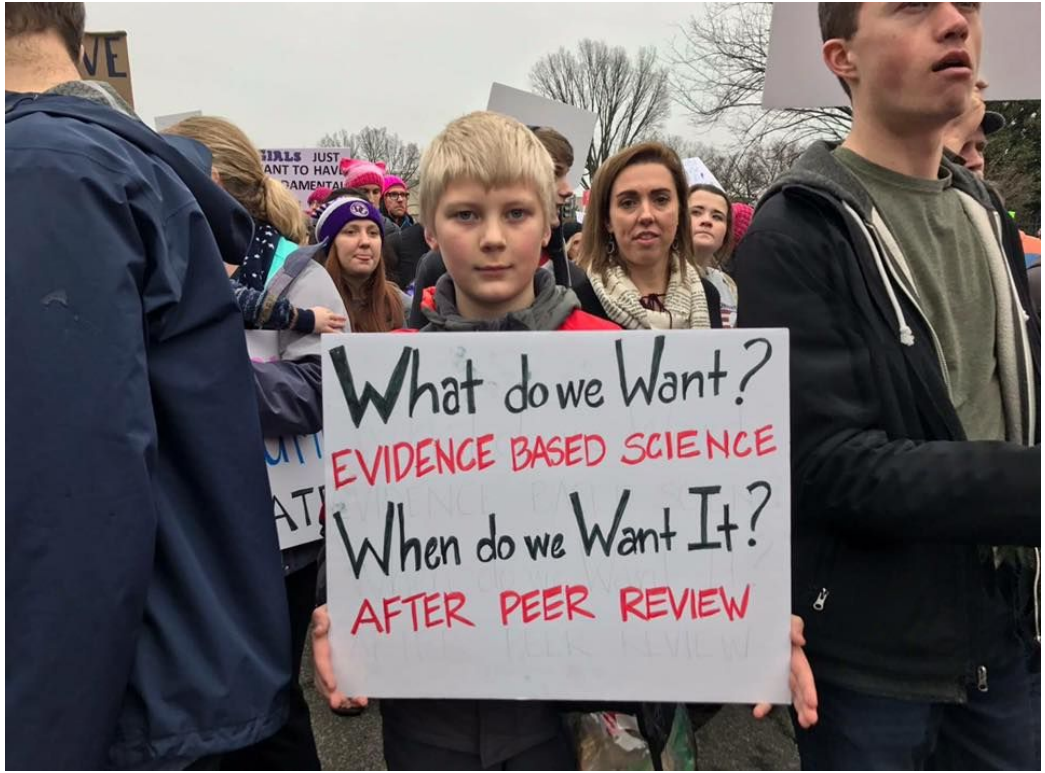
4. The Peer Review Process

The Hallmark of Science



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Peer Review

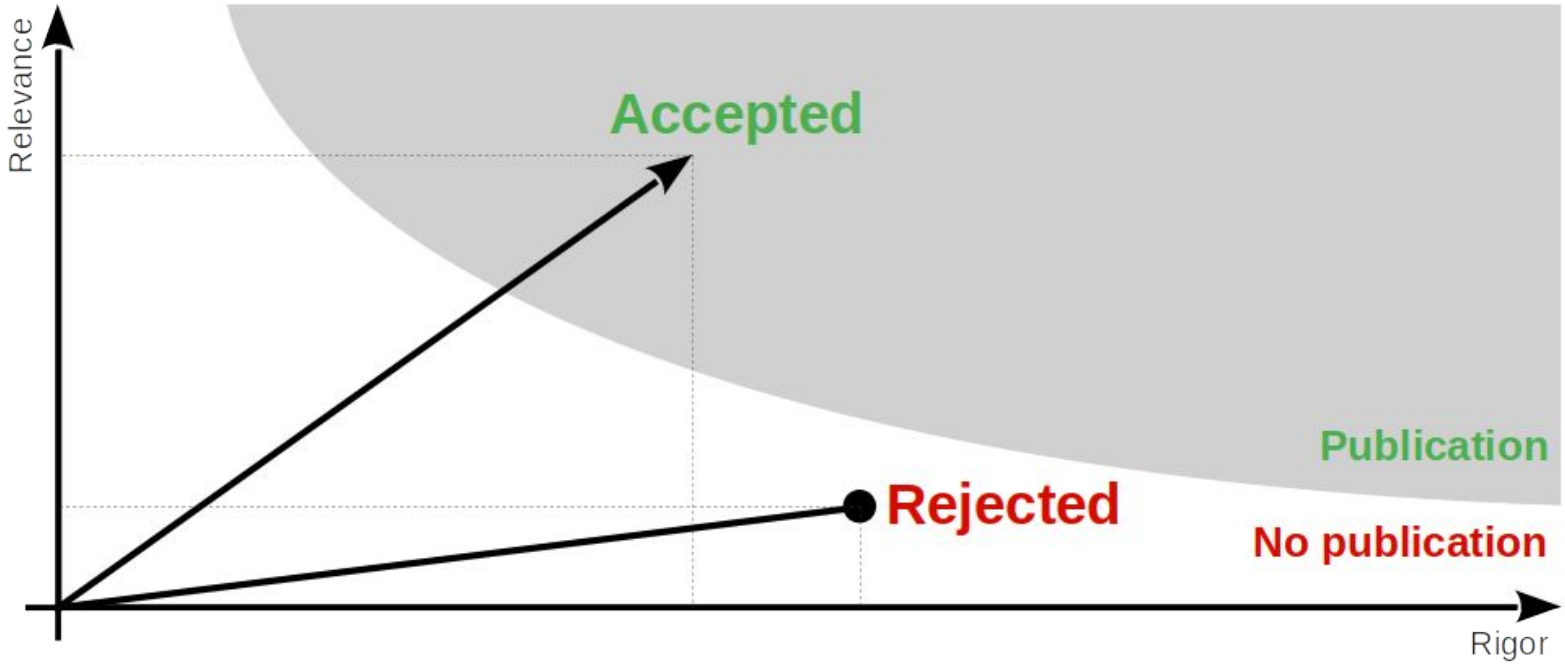
Peer review is

- The process of providing quality assessments of scientific work by
  - Having other scientists provide an analysis and opinion of the work
- Science’s final quality assurance measure

Evidence-based science vs. “eminence-based” science

- Collaborative decision making is typically superior to an individual’s one
- Applies to medicine, aircraft piloting, and science in general

Rigor vs. Relevance (Recap)



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Peer Review is Not Perfect (But the Best We Have)

Final Report: Stapel Affair Points to Bigger Problems in Social Psychology

By **Martin Enserink** | Nov. 28, 2012 , 5:55 PM

The blame goes far beyond Diederik Stapel and the three Dutch universities where he worked as a social psychologist. In their **exhaustive final report** about the fraud affair that rocked social psychology last year, three investigative panels today collectively find fault with the field itself. They paint an image of a "sloppy" research culture in which some scientists don't understand the essentials of statistics, journal-selected article reviewers encourage researchers to leave unwelcome data out of their papers, and even the most prestigious journals print results that are obviously too good to be true.

Taming his demons. In a video released today, Stapel said he created "a world in which almost nothing ever went wrong." NOS

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5. The Publishing Business

Publishers

Non-profit academic publishers

- ACM
- IEEE (mostly)

For-profit publishers of academic research

- Elsevier
- Springer

What Publishers Do

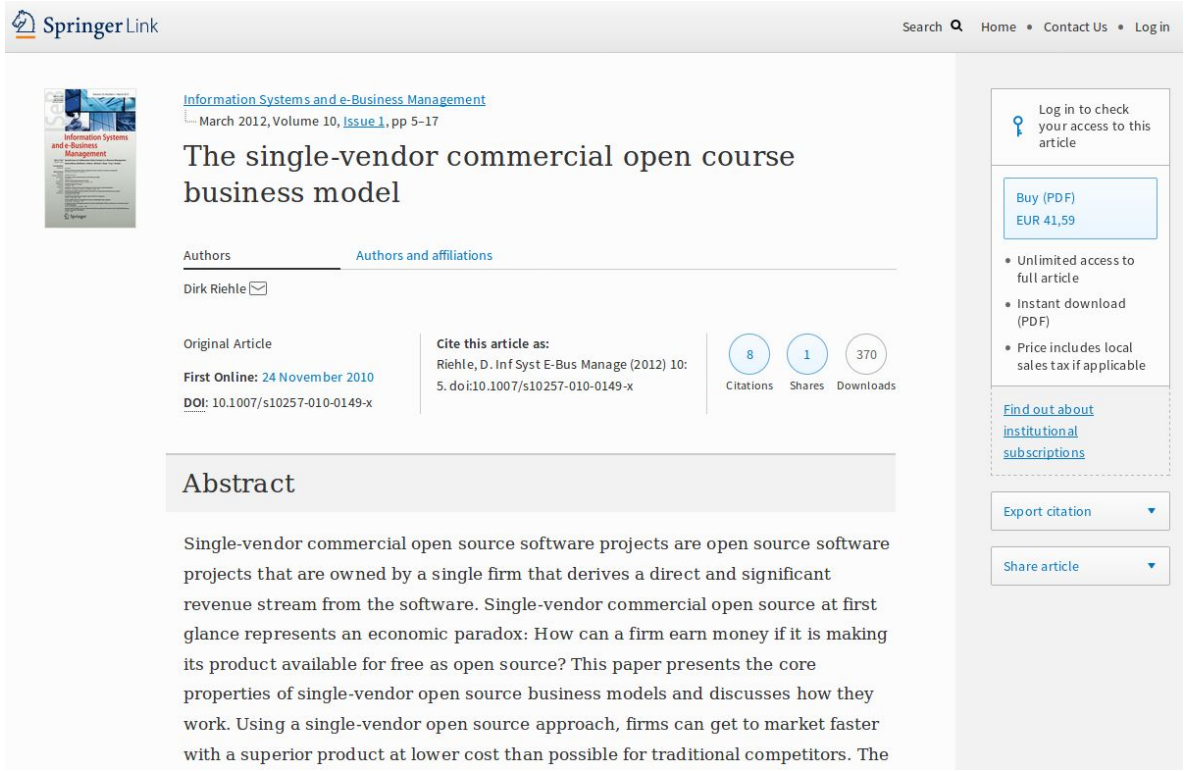
The product

- Provide access to publications
- In various forms (web, paper)

Their service

- Process coordination
- Editing and publishing

Theory vs. Practice



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Information Systems and e-Business Management

March 2012, Volume 10, Issue 1, pp 5–17

The single-vendor commercial open course business model

Authors | Authors and affiliations

Dirk Riehle

Original Article

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Cite this article as:
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8 Citations | 1 Shares | 370 Downloads

Abstract

Single-vendor commercial open source software projects are open source software projects that are owned by a single firm that derives a direct and significant revenue stream from the software. Single-vendor commercial open source at first glance represents an economic paradox: How can a firm earn money if it is making its product available for free as open source? This paper presents the core properties of single-vendor open source business models and discusses how they work. Using a single-vendor open source approach, firms can get to market faster with a superior product at lower cost than possible for traditional competitors. The

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Publishing is a Business

Revenue sources are

- Subscriptions to (digital) libraries
- Individual article access fees

In 2022 Elsevier reported

- Revenues of €3.26 billion
- Profits of €1.2 billion
- A profit margin of 37.8%

[1] See https://reports.relx.com/2022/esef-ar-nl/549300WSX3VBUFFJOO66-2022-12-31-nl.html

Journal Subscription Fees

FRIEDRICH-ALEXANDER UNIVERSITÄT ERLANGEN-NÜRNBERG

FAU UNIVERSITY

Die zwanzig teuersten Zeitschriftenabonnements

für das Jahr 2013 - absteigend nach Preis

1	**Biochimica et biophysica acta: BBA ; international journal of biochemistry, biophysics and molecular biology.**		
		**Verlag: Elsevier** Druckausgabe E-Journal ISSN 1388-1981	**24.102,07 €**
2	**Journal of chromatography**		
		**Verlag: Elsevier** A: Druckausgabe / E-Journal ISSN 1873-3778 B: Druckausgabe / E-Journal ISSN 1873-376X	**23.677,61 €**
3	Cell		

Three Eras of Publishing

First era (mostly gone, but not fully)

- Authors paid publishing fees, subscribers paid subscription fees

Second era (until recently, still going on)

- Authors do not pay anything, subscribers pay subscription fees

New open access era (expanding)

- Authors pay publication fees, access to article is free

Open Access

Open access is

- The free and unencumbered access to a research article

Golden open access

- The authors pay a publisher to provide the article for free

Green open access

- The authors provide the article for free while the publisher charges a fee

Elsevier (Open Access) Article Publishing Charge [1]

ELSEVIER

Article Publishing Charge (APC) price list

All prices excluding taxes. Prices as of date: 19-Jun-2023

ISSN	Title	Business model	List price *			
			USD	EUR	GBP	JPY
0092-8674	Cell	Hybrid	10,100	9,030	8,090	1,134,840
1535-6108	Cancer Cell	Hybrid	9,080	8,120	7,270	1,020,230
2451-9456	Cell Chemical Biology	Hybrid	9,080	8,120	7,270	1,020,230
1931-3128	Cell Host & Microbe	Hybrid	9,080	8,120	7,270	1,020,230
1550-4131	Cell Metabolism	Hybrid	9,080	8,120	7,270	1,020,230
1934-5909	Cell Stem Cell	Hybrid	9,080	8,120	7,270	1,020,230
2405-4712	Cell Systems	Hybrid	9,080	8,120	7,270	1,020,230
2451-9294	Chem	Hybrid	9,080	8,120	7,270	1,020,230
1534-5807	Developmental Cell	Hybrid	9,080	8,120	7,270	1,020,230
2666-9986	Device	Hybrid	9,080	8,120	7,270	1,020,230
1074-7613	Immunity	Hybrid	9,080	8,120	7,270	1,020,230
2542-4351	Joule	Hybrid	9,080	8,120	7,270	1,020,230
2590-2385	Matter	Hybrid	9,080	8,120	7,270	1,020,230
1097-2765	Molecular Cell	Hybrid	9,080	8,120	7,270	1,020,230
0896-6273	Neuron	Hybrid	9,080	8,120	7,270	1,020,230
0969-2126	Structure	Hybrid	9,080	8,120	7,270	1,020,230
2666-979X	Cell Genomics	Open access	8,900	7,960	7,130	1,000,000
2667-1093	Chem Catalysis	Hybrid	8,900	7,960	7,130	1,000,000

[1] See https://www.elsevier.com/about/policies/pricing

Elsevier Was Holding Research Results Hostage [1]

Elsevier News

Update on negotiations with Elsevier

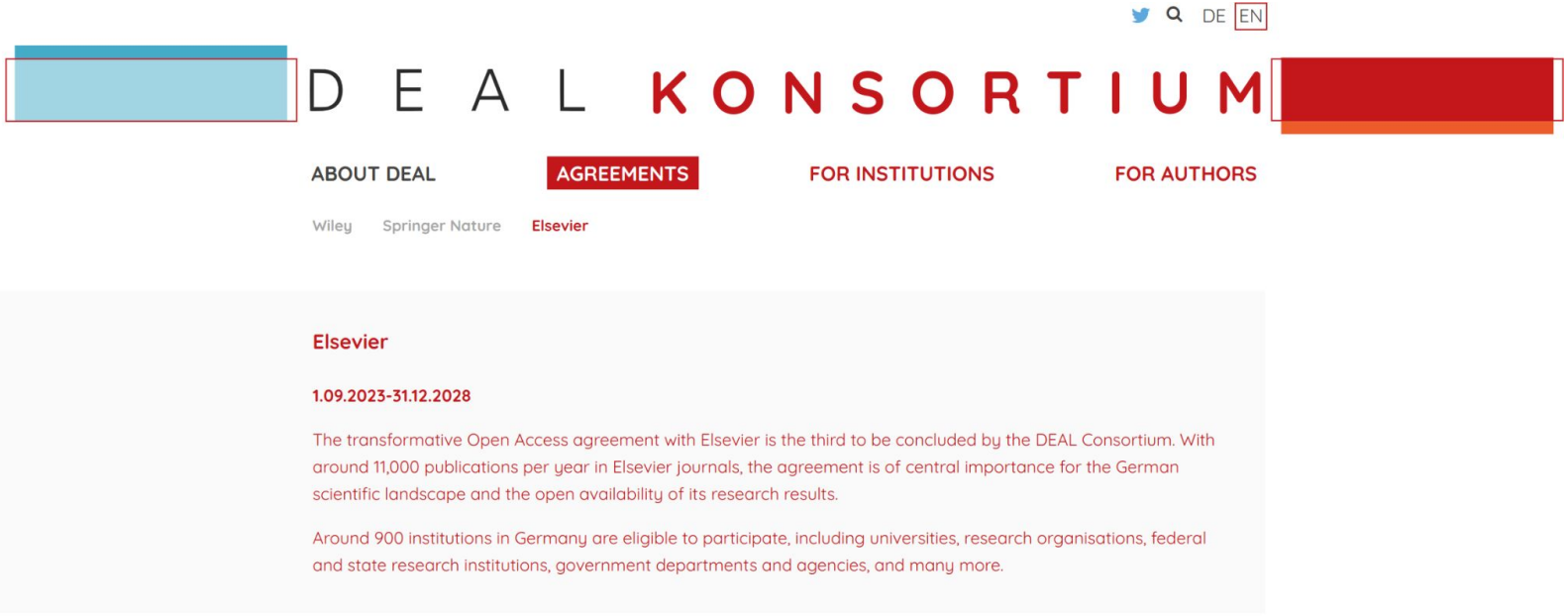
Projekt DEAL and Elsevier are still in contact, although formal negotiations have not yet been resumed (August 22nd, 2019).

Renowned scientists resign from their editorial activities for the publisher Elsevier, thereby supporting the negotiation goals of Project DEAL. A list of these scientists can be found below. Additional information is provided in the HRK press release.

A current list of institutions that have cancelled their contracts with Elsevier can be found here.

[1] See https://www.projekt-deal.de/elsevier-news/

Until An Expensive Agreement Was Reached in 2023



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The Rise of Predatory Publishers

Intelligent Information Management, 2010, 2, 608-612
doi:10.4236/iim.2010.210069 Published Online October 2010 (http://www.SciRP.org/journal/iim)

Scientific Research

Software Industry Cluster be Disagreement on Theory and Practice

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Received June 9, 2010; *revised August* 14, 2010, *accepted September* 19, 2010

Abstract

In the view of traditional industry cluster theory, it is easy to copy the software industry cluster pattern, or it is easy to copy another Silicon Valley, due to low reliability of the resources and the guidance factors of locations in software industry. But it is much more difficult to copy a Silicon Valley mode practically than imaginatively and the difficulties of bringing up and supporting high-tech initiatives is more than theoretic anticipation. In China, the software companies have just gathered together geographically and therefore no initiative center can be formed. All these above signify that software industry cluster is distinct from the traditional industry clusters, but the cognition of the reasons of software industry cluster is not clear yet. Furthermore, reasonable explanations of the bewilderment in the economical practice of software industry clus-

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Thank you! Any questions?

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