Quality Control in Scholarly Publishing. What are the Alternatives to Peer Review?

William Y. Arms
Cornell University
This talk is about:

How can readers recognize good quality materials?

How can publishers maintain high standards and let readers know?
This talk is not about:

What criteria should libraries use in selecting materials?

What criteria should universities use in promoting faculty?
But we must consider:

How can a scientist build a reputation outside the traditional peer-reviewed journals?

A sample of one: William Y. Arms
Today's students:

(a) High school

Primary sources are *Yahoo Science* and *about.com*

(b) University

Primary source is *Google*

"Please can I use the web? I don't do libraries."
Anonymous Cornell student, circa 1996.
**Plato, Reincarnation, and the Zodiac**

Repeat after me: "Plato can be fun." Chances are that when reading this article - you'll discover you knew more about the ancient Greek philosopher, Plato, than you thought. Those who already know Plato might have a few surprises, too.

**Archetypal Astrology**

Map of the Soul - What is "Archetypal" Astrology, and how does it differ from what is considered to be more "traditional" astrology? This is the 1st article in a new series of feature articles on this fascinating subject.

**Discussion:** [Jung and Astrology] - What's your opinion?

**More:** [Love Journey] - Archetypal Look at Love

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**Did You Know?**

Aquarius is related to the mythology of the Greek Titan god, Prometheus. Prometheus was the god given the task of creating humanity. He was also the god responsible for teaching humanity mathematics.

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**Related Sites**

from About & Partners

- Alternative Religions
- Conspiracies and Extremism
- Dating
- Hinduism
- New Age
- Pagan/Wiccan
- Religion
- Paranormal
- Phenomena
- Space

Also Recommended

- [Ancient Sign Art Charts](http://www.astrology.com)
- Chinese Zodiak

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**About Astronomy**

The Human Internet

You are here: [About] > [Science] > [Astrology]

**Search for** in this topic site

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Subjects

- Horoscopes
- Your Zodiac Sign
- Love & Romance
- Oracles
- Fun and Humor
- Chart Calculation
- Free Stuff

Advanced

- Archetypal
- Ancient/History
- Astrologers
- Basics
- Books/Reviews
- Celebrity/Famous
- Community
Current Quality Strategy 1: The Reader Looks for Clues

Internal clues can inform an experienced reader

All that glisters is not gold.
And vice versa.
The Journal of the ACM serves as a venue for careful presentation of theoretical research in the core areas of computing: complexity of algorithms, computer architecture, system modeling, AI, data structures, database theory and graph theory, to name a few. The authors are world class scientists, writing to other scientists about advances, methods and findings behind the fundamentals. For more information about the publication, see the Journal of the ACM home page.

Content available in the Digital Library

♦ Volume 47 (2000)
   No. 1 | No. 2 | No. 3 | No. 4 | No. 5 | No. 6
♦ Volume 46 (1999)
   No. 1 | No. 2 | No. 3 | No. 4 | No. 5 | No. 6
♦ Volume 45 (1998)
   No. 1 | No. 2 | No. 3 | No. 4 | No. 5 | No. 6
♦ Volume 44 (1997)
   No. 1 | No. 2 | No. 3 | No. 4 | No. 5 | No. 6
Considerations

Publisher, ACM, is a well-known scientific society that follows standard procedures for peer review.

Editor-in-chief is a well-known professor in a strong department.

Papers in theoretical computer science can be reviewed from their content.
International Conference on Digital Libraries

Proceedings of the fifth ACM conference on ACM 2000 digital libraries
June 2 - 7, 2000, San Antonio, TX USA

Table of Contents
For full text in PDF, use Adobe Acrobat Reader.

The psychology of multimedia databases
Mark G. L. M. van Doorn and Arjen P. de Vries
Pages 1 - 9
metadata: index terms
full text: 1397 KB
Considerations

Looks the same as the *Journal of the ACM*.

*but ...*

Procedures for selecting and reviewing conference papers are loosely controlled.

Papers in applications research are difficult to evaluate by superficial reading.

*Not gold*
RFC: 791

INTERNET PROTOCOL

DARPA INTERNET PROGRAM

PROTOCOL SPECIFICATION

September 1981
Considerations

The appearance looks like a draft.
Nothing technical from 1981 is current.
Who is DARPA anyway?

yet ...

This is the official definition of IP.
CS 430
Information Discovery
Spring 2001

Professor William Y. Arms

Lectures: Tuesday and Thursday, 12:20 to 1:10 pm Thurston Hall 203
Discussion class: Wednesday 7:30 to 8:30 p.m., Hollister 110

3 Credit Hours

- Notices
- Code of practice
- Syllabus
- Assignments
- Readings and references
- Slides
- Laptop computers

Check the Notices file regularly for information about schedule, assignments, etc.
Considerations

Course materials from a well known university.

but ...

Is the faculty member an expert in this field?

How carefully have these materials been developed?

Not gold
arXiv.org e-Print archive

Automated e-print archives at arXiv.org: physics Form Interface

6 Jan '00: Cumulative "What's New" pages
Guide to the perplexed: Read these PROFESSIONAL HELP pages before sending fan mail.
ROBOTS BEWARE: indiscriminate automated downloads from this site are not permitted.

Physics

- Astrophysics (astro-ph new, recent, abs, find)
- Condensed Matter (cond-mat new, recent, abs, find)
  includes: Disordered Systems and Neural Networks; Materials Science; Mesoscopic Systems and Quantum Hall Effect; Soft Condensed Matter; Statistical Mechanics; Strongly Correlated Electrons; Superconductivity
- General Relativity and Quantum Cosmology (gr-qc new, recent, abs, find)
- High Energy Physics - Experiment (hep-ex new, recent, abs, find)
- High Energy Physics - Lattice (hep-lat new, recent, abs, find)
- High Energy Physics - Phenomenology (hep-ph new, recent, abs, find)
- High Energy Physics - Theory (hep-th new, recent, abs, find)
- Mathematical Physics (math-ph new, recent, abs, find)
- Nuclear Experiment (nucl-ex new, recent, abs, find)
- Nuclear Theory (nucl-th new, recent, abs, find)
Considerations

The appearance looks like a joke. "xxx" in the URL is suspicious. Why does it have a "gov" name?

yet ...

This is the working literature of physics research.
Current Quality Strategy 2: The Publisher as Creator

Materials are written by authors or selected by curators who are employed by the publisher.

Quality is tied to the reputation of the publisher.
The Digital Dilemma

Intellectual Property
IN THE INFORMATION AGE

Committee on Intellectual Property Rights and the
Emerging Information Infrastructure

Computer Science and Telecommunications Board
Commission on Physical Sciences, Mathematics, and Applications
National Research Council

This book is also available in:

HTML FORMAT
The Making of a Suspect: 
The Case of Wen Ho Lee

By MATTHEW PURDY
FROM SUNDAY'S TIMES

A re-examination of the case against Los Alamos scientist Wen Ho Lee indicates that investigators took ambiguous evidence about Dr. Lee's behavior and Chinese atomic espionage and wove it into a case that eventually collapsed. The first of a two-part series. Go to Article

• DIAGRAM: Building a Smaller H-Bomb

U.S. Tries Defusing Allies' 
Opposition to Missile Defense

By MICHAEL R. GORDON
FROM SUNDAY'S TIMES

Defense Secretary Donald H. Rumsfeld, the first senior Bush administration official to visit Europe, tried today to defuse opposition to the administration's antimissile plans by offering to help European nations and other allies to deploy missile defenses.

NATIONAL

Field Guide? Check, Binoculars? Check, Lobbyists? Soon. (12:00 a.m.)

INTERNATIONAL

Flames Consume the Dead, but Not the Anguish of India (12:00 a.m.)
Northern Great Plains, 1880-1920

Search on: Threshing | Threshing Machines | Threshing Crews
Direct Access to U.S.
OFFICIAL WEATHER FORECAST PRODUCTS & OBSERVATIONS

HIGHLIGHTED PRODUCTS
- Storm Prediction Center’s Watch/Warning Display (20 minute update)
- Hydrometeorological Prediction Center’s 24 Hour Surface Forecast Chart (twice daily)

National Weather Service REGIONS Web Sites (map)
- Alaska
- Central
- Eastern
- Pacific
- Southern
- Western

SPECIALIZED CENTERS
Current Quality Strategy 3: External Readers Chosen by the Publisher

Publishers ask external experts to review materials
Digital Libraries

by William Y. Arms

"Bill Arms offers a comprehensive look at Digital Libraries from many perspectives. He's right: we're just at the beginning of this story. The best is yet to come."

-- Vint Cerf, Senior Vice President, Internet Architecture and Technology, MCI WorldCom

The emergence of the Internet and the wide availability of affordable computing equipment have created tremendous interest in digital libraries and electronic publishing. This book is the first to provide
Journal of Digital Information

Publishing papers on the management, presentation and uses of information in digital environments

Join

The journal welcomes first time readers. Please join - it’s free - to gain access to the full-texts of all papers and to receive our alerts of future issues.

IP Access for Libraries

Want to avoid user log-in? Find out about our service for libraries.

What’s New

Regular users check this page for updates and the latest papers.

Call for Papers for special issue on Distributed Information Management

Current Issue

Order by: date, author, title. This page ordered by author.

Volume 1

Issue 7 - Hypertext Criticism

S. Tosca (January 2001)
Editorial: Hypertext Criticism: introduction to a special issue

M. Engebretsen (December 2000)
Hypernews and Coherence

A. Miles (December 2000)
Hypertext in the Dark: cinematic narration with links

A. Day (December 2000)
Observations about Peer Review

At its best, it is superb.

At its worst, it validates junk.

Some topics can be reviewed from a paper, e.g., mathematics.

Some topics cannot be reviewed from a paper, e.g., computer systems.

"Whatever you do, write a paper. Some journal will publish it." Advice to young faculty member, University of Sussex, 1972.
Current Quality Strategy 4:
Independent Reviews

Reviewers, hopefully independent of the author and publisher, describe their opinion of the item.

Value of the review to the user depends on (a) the reputation of where the review is published and (b) how well it is done.
EDITORIAL

Free and Fee: Future Information Discovery and Access
by Peter Hirtle

To the Editor: Letters

BOOK REVIEW

The Intellectual Foundation of Information Organization
Elaine Svenonius. MIT Press, 2000
Reviewed by: Caroline R. Arms, Library of Congress

"...This book about cataloging certainly deserves to be read outside the community whose principles and traditions it describes and illuminates."
Editorial Reviews

Amazon.com

These days we seem to be creating information faster than we can store it, but the near future is looking bright. Cornell professor William Y. Arms offers a program for that future in Digital Libraries, a synthesis of library and computer sciences that presents the history and current developments in each field with special emphasis on their interactions.

Since the book necessarily must appeal to a broad spectrum of professionals, any given reader will find some parts elementary, but Arms clearly maps the common ground and much of the text will appeal to all. Chapters covering the basics of information management, the Internet, security, archives, and retrieval bridge the traditional books-and-shelves library systems and the often jury-rigged information architecture developed over 40 years of computer use.

*Digital Libraries* contains plenty of sidebars detailing historical information as well as definitions primarily suited to professionals entering the interdisciplinary zone (but which would unacceptably break up the text flow, while it's important to understand both MARC codes and TCP/IP protocols, it's best for each reader to decide what supplementary information is needed). *Digital Libraries* is an ambitious and important book—if we are to develop truly efficient and accessible information management systems, everyone concerned must understand their shared technical history and move forward as one. --Rob Lightner
Internet Draft

Document: draft-ietf-ipcdn-dvbenetint-mib-02.txt
Category: Informational

DVB Cable Network Interface Unit MIB
for EuroModem compliant Cable Modems

Status of this Memo

This document is an Internet-Draft and is in full conformance with all provisions of Section 10 of RFC2026.

Internet-Drafts are working documents of the Internet Engineering Task Force (IETF), its areas, and its working groups. Note that other groups may also distribute working documents as Internet-Drafts. Internet-Drafts are draft documents valid for a maximum of six months and may be updated, replaced, or obsoleted by other documents at any time. It is inappropriate to use Internet-Drafts as reference material or to cite them other than as "work in progress."

The list of current Internet-Drafts can be accessed at http://www.ietf.org/ietf/1id-abstracts.txt
Epinions.com - rbinck's profile - Netscape

Before you buy anything
make an informed decision.

Find: A Loan for Me
Powered by GetSmart.com
Refinancing  Second Mortgage  Debt Consolidation

Search

Sign up! | Home | Help | Sign in

Home » Member Center » rbinck

Web of Trust

rbinck trusts:
1. hikini
2. tekki
3. alanrus
4. bmcnichol
5. ptiemann

» View all 62 members whom rbinck trusts

rbinck is trusted by:
1. Daxman
2. LordBalfor
3. j_hipps
4. splace
5. gd134

» View all 25 members who trust rbinck

rbinck's Profile

Member: Richard Binckley
Epinions.com ID: rbinck
Location: Houston, Texas - Kailua-Kona, Hawaii
Member since: Dec 27 '00

Part time Hawaii resident that likes Hawaii and Classic Cars.

rbinck's Recent Opinions

<table>
<thead>
<tr>
<th>Date Written</th>
<th>Opinion Title</th>
<th>Product / Topic</th>
<th>Product Rating</th>
<th>Opinion Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mar 15 '01</td>
<td>Kealakekua Bay - Snorkeling at it's Finest</td>
<td>Kealakekua Bay State Historical Park in Parks</td>
<td>★★★★★</td>
<td>Very Helpful</td>
</tr>
</tbody>
</table>
Proposed Quality Strategy 1: Separate Peer Review from Publication

Author publishes article, e.g., on eprint archive.

Publisher provides reviews, reputation, indexing, etc.
Overlay Journals

Links show the articles in the overlay journal
Example of an Overlay Journal

A physicist deposits a paper in the Los Alamos arXiv and notifies the XYZ society.

XYZ arranges reviewers who suggest changes.

The physicist revises the paper and deposits the revised version in arXiv, noting that the paper has been reviewed by XYZ.

XYZ links to the paper.
Virtual Collections

Links show the members of the virtual collection
Proposed Quality Strategy 2: Exchange of Quality Metadata

Given a digital object, how can a reader discover if there is a review or other metadata about its quality?
Metadata Example

<oai-quality>
  <category> internal </category>
  <process>
    peer review
  </process>
  <organization>
    CERN
  </organization>
  <policies>
    http://www.cern.ch/policies/review.html
  </policies>
</oai-quality>
Options

(a) Establish a database of links between digital objects and metadata, e.g., as an extension of CrossRef.

(b) Make metadata available for harvesting, e.g., as an extension of the Open Archives initiative.
Metadata Harvesting in the NSDL

Central service matches metadata to documents

Harvested metadata

Quality metadata

Distributed collections
Quality Control in Scholarly Publishing. What are the Alternatives to Peer Review?

William Y. Arms
Cornell University