

*Academia*  
*and*  
*Academic Journals*

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**An Educational Resource for  
Postgraduate Scholars**

**Cape Theological Seminary**

**Cape Town South Africa**

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See Appendix B for additional copyright information.

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## PREFACE

Wikipedia<sup>1</sup> is a multilingual, web-based, free-content encyclopedia. Articles in Wikipedia are written by volunteers from all around the world. It is an ongoing work to which, in principle, anyone can contribute. In every article, hyperlinks offer readers one-click access to associated articles; these additional articles often contain valuable information on the original topic.

Anyone can add information, cross-references, or citations, as long as they do so within Wikipedia's editing policies and to an appropriate standard of scholarship. Potential contributors need only to click the *edit this page* link. Every day hundreds of thousands of visitors from around the world read articles, edit existing articles, and create thousands of new articles. All of this activity enhancing the knowledge deposited in the Wikipedia encyclopedia. Because of this continuous updating and change, older articles tend to be more comprehensive and balanced, while newer articles may be less reliable. Users need to be aware of this to avoid recently added *misinformation* that has not yet been discovered and removed.

Wikipedia has grown rapidly into one of the world's largest reference web sites. More than 75,000 active contributors are working on some 5,300,000 articles in more than 100 languages. As of mid-2007, Wikipedia holds almost two million English-language articles.

This Wikipedia-based reader is an edited compilation of six Wikipedia articles, all retrieved in February 2007. The web site addresses (“url’s”) for the articles are as follows:

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<sup>1</sup> [http://en.wikipedia.org/wiki/Main\\_Page](http://en.wikipedia.org/wiki/Main_Page)

1. Academia  
<http://en.wikipedia.org/wiki/Academia>
2. Academic Publishing  
[http://en.wikipedia.org/wiki/Academic\\_publishing](http://en.wikipedia.org/wiki/Academic_publishing)
3. Peer Review  
[http://en.wikipedia.org/wiki/Peer\\_review](http://en.wikipedia.org/wiki/Peer_review)
4. Scientific Misconduct  
[http://en.wikipedia.org/wiki/Scientific\\_misconduct](http://en.wikipedia.org/wiki/Scientific_misconduct)
5. Academic Journals  
[http://en.wikipedia.org/wiki/Academic\\_journal](http://en.wikipedia.org/wiki/Academic_journal)
6. Open Access Journals  
[http://en.wikipedia.org/wiki/Open\\_access\\_journal](http://en.wikipedia.org/wiki/Open_access_journal)

## **ARTICLE 1:**

### **ACADEMIA**

#### *Introduction*

“Academia” is a collective term for the scientific and higher education community engaged in teaching and [research](#). The word comes from *akademeia*, a sacred place in ancient Greece dedicated to the Greek goddess of wisdom. It was a former olive grove located just outside ancient Athens, made famous by Plato as a center of learning.

By extension, *academia* has come to connote (a) the cultural accumulation of knowledge, (b) its development and transmission across generations, and (c) its practitioners and transmitters. In the seventeenth century, English and French religious scholars used the term to describe certain types of institutions of higher learning.

An academic is a professional researcher (and usually teacher or lecturer) at a university or similar institution. He or she nearly always holds a terminal advanced degree (e.g., Ph.D.) and engages in peer-reviewed research<sup>2</sup>. In the United States, the term “academic” is synonymous with that of “professor”. In the United Kingdom, various titles are used: “fellow”, “lecturer”, “professor”, and “don”. The term “scholar” is sometimes used synonymously with “academic”, and describes one who has attained mastery in a specific, narrowly focused area of research.

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<sup>2</sup> See Article 3: Peer Review.

## *Structure*

Academia is usually conceived of as being divided into disciplines or fields of study. These disciplines have been revised often since medieval times, and many new disciplines have emerged within the past century. In general, academic fields have become increasingly specialized, with scholars constantly narrowing their research interests. Because of this trend, interdisciplinary research is often prized in today's academy, though it can also be complicated by practical matters of administrative control and funding. In fact, many new fields of study were initially conceived as interdisciplinary ones, later to become specialized disciplines in their own right; cognitive science is one recent example. In short, an ongoing historical process has shaped the internal structure of the academy.

Most academic institutions reflect this discipline-defined partitioning in their administrative structures. Disciplines are normally further divided into departments or academic programs. Each department is typically administered (and funded) separately by the institution, though some overlap can occur. Faculty members, research facilities, and administrative staff may be shared among departments.

Academic institutions, particularly major universities, generally have an overall administrative structure (usually including a president and several deans) that is not controlled by any single department, discipline, or field of thought. The tenure system, a major component of academic employment and research, serves to ensure that academics are relatively protected from political and financial pressures.

### *Academic Degrees*

Academic degrees are awarded for completion of well-defined courses of study. Degrees are ranked in sequence of normal completion, as follows:

- Bachelor's degree: awarded for completion of three to four years of undergraduate study;
- Master's degree: awarded for completion of one to three years of graduate study, and in some cases the successful defense of a research thesis;
- Doctorate: awarded following one to three years of post-master's study, and the successful defense of a dissertation (or doctoral project).

In most fields, the majority of academic researchers and teachers hold earned doctorates. In some professional and creative fields, however, it is common for scholars and teachers to have only master's degrees.

### *Academic Conferences*

Closely related to academic publishing<sup>3</sup> is the practice of bringing together a number of academics in one field (or closely related fields) to present scholarly papers and current research. Such conferences allow a scholarly audience to learn of currently emerging ideas and research findings. The papers are usually "refereed"<sup>4</sup> as a quality control strategy; only a limited number of authors are invited to present their papers.

The opportunity to speak at an academic conference allows presenters to explain points they may not have clearly addressed or fully discussed in previously published articles.

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<sup>3</sup> See Article 2: Academic Publishing.

<sup>4</sup> Reviewed by one or more experts in that field or area of research: see "Recruiting Reviewers" in Article 3: Academic Publishing.

The interactivity inherent in the conference format allows for immediate feedback and critique of the ideas being presented. Since papers are often submitted prior to a conference, those attending may have read them and arrive prepared to interact with the presenter.

### *Conflicting Goals*

Within academia, various constituencies have diverse, and sometimes conflicting, goals. The goal to increase services often conflicts with the goal to reduce costs. Similarly, *professional* education programs and *general* education advocates often promote conflicting goals. This conflict often plays itself out in debates over accreditation standards. Finally, the goals of research-for-profit and research-for-knowledge often conflict to some degree.

### *Practice versus Theory*

Academia is sometimes contrasted pejoratively with “practice”, defined as daily living, employment, and business. Critics of academia claim that academic theory is insulated from the “real world”. As a result, it is not concerned with the real-life results and the risks involved in actually performing (i.e., practicing) the actions which academics study. This academic insularity is often labeled the “ivory tower”. It leads to real or perceived tensions between academics and practitioners in many fields of knowledge, particularly when ivory-tower residents are critical of the actions of practitioners. And, depending on the degree of criticism involved, the practitioners’ critique of academia’s isolation could be seen as anti-intellectualism.

Replying to practitioners’ criticism of the ivory tower, academics argue that even if academia *is* insulated from practice in the real world, this does not mean academic study is valueless. In fact, many academic developments eventually

turn out to have great practical impact. However, wise academics bear in mind that, among practitioners, this perception of academic insularity is widely held. The value and impact of academics' studies or theorizing can only increase if they take that insularity into account when critiquing practitioners or "real-world" practices.

### *Recent Economic Changes*

Historically, academic positions have been desired by intellectuals. The autonomy and intellectual freedom these positions allowed, especially because of the tenure<sup>5</sup> system, contributed to this perception. This is intriguing in light of the low salaries paid, when compared to other professions requiring similar levels of advanced education.

Despite rising tuition rates and growing university revenues, well-paid tenured professorial positions are now becoming increasingly rare. Such "permanent" appointments are being replaced with poorly paid adjunct (i.e., part-time) positions and graduate-student appointments. People with doctorates in the sciences and, to a lesser extent, mathematics, often are attracted to jobs outside of academia, or use part-time work in industry to supplement their academic incomes. In contrast, a Ph.D. degree in the humanities and many social science fields prepares the student primarily (perhaps exclusively) for academic employment. In recent years, a large proportion of such Ph.D.'s—ranging from 30 percent to 60 percent—has been unable to secure tenure-track jobs.<sup>6</sup> In general, they must choose from among four options:

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<sup>5</sup> The highly sought status of holding one's position as a faculty member on a permanent basis without periodic performance reviews and contract renewals.

<sup>6</sup> No reference for these data was provided in the original Wikipedia Article.

- Adjunct professorial positions that are poorly paid and lack job security;
- Lower-paying teaching jobs in community colleges or in high schools, where little, if any, research is conducted;
- The non-academic job market, where such degree holders are often overqualified;
- Cross-training in some other course of study, such as law or business.

### *Academic Dress (“Regalia”)*

Generally, recipients of a bachelor’s degree in the U.S. and the U.K. are entitled to wear a simple full-length robe without adornment and a mortarboard cap with a tassel. Holders of a bachelor’s degree at some schools are also entitled to wear a simple hood: smaller versions of those worn by those holding masters and doctoral degrees. In U.S. universities, however, bachelor’s hoods are rarely used.

Recipients of a master’s degree in the U.S. or the U.K. wear a cap and gown similar to the bachelor’s academic dress, but with closed sleeves with slits. Master’s degree recipients usually wear a ceremonial hood that hangs down the back of the gown. The hood is traditionally edged with a silk or velvet strip displaying the disciplinary color,<sup>7</sup> and is lined with the university’s colors.

Recipients of a doctoral degree (e.g., Ph.D., Doctor of Ministry) have the most elaborate and diverse academic dress. In the U.S., doctoral gowns are similar to the gowns worn by master’s graduates, with the addition of velvet stripes across the sleeves and down the front of the gown. These velvet stripes are either black or the color of the academic discipline.

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<sup>7</sup> For example, blue for education, red for theology.

In modern times, gowns are normally only worn at graduation ceremonies. Some institutions, however, still require their faculty to wear academic regalia during other formal occasions, such as institutional banquets.

*Reference List*

Aronowitz, Stanley. 2001. *The Knowledge Factory: Dismantling the Corporate University and Creating True Higher Learning*. Boston, MA: Beacon Press.

## ARTICLE 2:

### ACADEMIC PUBLISHING

#### *Introduction*

Academic publishing describes the subfield of publishing that disseminates research and related scholarly reflection. Most academic works, including research reports, are published in scholarly journals; some are published books. Academic publishing normally relies on some form of peer review<sup>8</sup> or editorial refereeing to select manuscripts.

Most established academic disciplines have their own journals and other outlets for publication. The types of papers accepted as valid contributions to those disciplines vary greatly between fields, as do their review and publication processes. And some academic journals are interdisciplinary in their focus, publishing papers from several distinct fields or subfields.

Academic publishing is undergoing major changes, transitioning from print to electronic format. Since the early 1990s, the licensing of electronic periodicals, particularly academic journals, has become common. The business models for traditional and electronic academic publishing differ greatly.

A major trend currently impacting academic publishing is the growing number of “open-access” journals. Two expressions of open access<sup>9</sup> are emerging: (a) *open-access publishing*, in which some or all articles are freely available from the moment of publication, and (b) *self-archiving*, where authors post their own work on a web site, and offer free access to them.

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<sup>8</sup> See Article 3: Peer Review.

<sup>9</sup> See Article 6: O-A journal.

## *Publishing Scholarly Papers*

### *Definitions*

In academic publishing, “papers” are manuscripts published in academic journals. Papers normally present original research, theory development, or narrowly focused reviews of existing literature. Referred to as “articles” when actually published, papers are considered print-worthy only if they are peer reviewed by one or more “[referees](#)” (academics/researchers in the same field). Peer review provides an objective mechanism for determining if the content of academic papers is suitable for publication in the journal.

Papers normally undergo several rounds of review, editing, and re-submission before finally being accepted (or rejected) for publication. This review process typically takes a few months. The actual publication of accepted papers is often delayed for many months. Lengthy delays in publication are particularly common for the most popular journals, where the number of acceptable papers surpasses the space available for printing. In response to these unavoidable delays, many scholars offer “pre-print” copies of their papers on their personal or institutional websites. These pre-prints are available for free download by other scholars, as one expression of the “self-archiving” described above.

Some journals, particularly newer ones, now publish in electronic format only. Many traditional journals are also making their content available in electronic format, both to individual subscribers and to libraries. These electronic versions are normally available to subscribers immediately upon publication of the paper version, sometimes even prior to actual publication. In addition, some journals make an electronic version of older issues available to non-subscribers after a waiting period that varies from two to twenty-four months. Journal publishers do this in order to protect the

journal against loss of subscriptions. Such journals are referred to “delayed open-access” periodicals.

### *Peer Review*

Peer review is a central concept for most academic publishing; other scholars (referees) in a given field must agree that a paper is of sufficiently high quality that it merits publication. The peer-review process also guards against plagiarism. Plagiarists are generally reluctant to submit their “borrowed” words to experts who are familiar with those words. Failures in the peer review system, while probably common, are often scandalous when exposed.<sup>10</sup>

### *The Publishing Process*

The process of academic publishing is divided into two distinct phases: the peer-review phase and the production phase.

*The peer-review phase.* This first phase of publishing is organized and managed by a journal’s editor. It is complete when a submitted paper is accepted for publication. The peer-review process, while complex, is increasingly being managed online through the use of commercial software packages. Once the peer review phase is complete, the author(s) revise the paper in accordance with the referees’ comments. This process of review and revision is repeated until the editor is satisfied with the final manuscript or decides to reject the article.

*The production phase.* The author(s) will review and correct final proofs at least once during the production phase. The proof-and-correction cycle has historically been labor-intensive. In recent years, however, the production stage has been streamlined by the introduction of e-annotations in Microsoft Word, Adobe Acrobat, and other program.

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<sup>10</sup> See Articles 3 and 4 for further discussion of this topic.

Nonetheless, it remains a time-consuming and error-prone process.

### *Publishing by Discipline*

#### *Social Sciences*

Publishing within the broad category of the social sciences differs greatly among the specific social science disciplines. Some disciplines, such as economics, have developed quantitative standards for publication, much like the standards set within the natural sciences. Other social science disciplines, such as anthropology or sociology, emphasize reporting on field work (first-hand observations), in addition to quantitative findings. The disciplines of public health and demographics have significant shared interests with the professions of law and medicine, and often publish in legal and medical journals.

#### *Humanities*

Publishing in the humanities is, in principle, similar to publishing elsewhere in the academy. Journals ranging from general to extremely specialized are available, and university presses print a wide array of new humanities books every year.

Requirements for scholarly publishing in the humanities (as well as some social sciences) are currently the subject of significant controversy. Young emerging scholars in fields such as literature and history must publish often in order to qualify for tenured (secure) teaching positions in their universities. Published or forthcoming (“in press”) books may also be required to qualify for tenure. Some critics of higher education argue that demanding such rapid publication has severe, unanticipated consequences. Among these consequences are the production of mediocre or shoddy work, and unreasonably heavy work loads being placed on the already limited research time of young scholars.

To make matters worse, the circulation of many humanities journals declined sharply in the 1990s; many libraries cancelled subscriptions to cut costs. This resulted in increasingly fewer peer-reviewed outlets being available for humanities publication. Further, the first books published by humanities professors typically sell only a few hundred copies; their sales sometimes do not even cover the print costs. Some scholars have called for a publication subvention of a few thousand dollars to be associated with each graduate student [fellowship](#) or new tenure-track hire, in order to alleviate the financial pressure on journals and book publishers in the humanities.

### *Reference List*

- Germano, William. 2001. *Getting It Published: A Guide for Scholars and Anyone Else Serious About Serious Books*. Chicago: University of Chicago Press.
- Goldsmith, John A. 2001. Teaching and Research. In *The Chicago Guide to Your Academic Career*. New education edition. eds. John A. Goldsmith, John Komlos, and Penny Schine Gold. Chicago: University of Chicago Press.
- Nelson, Cary, ed. 1999. *Academic Keywords: A Devil's Dictionary for Higher Education*. Oxford, U.K.: Routledge.
- Tenopir, Carol, and Donald King. 2000. *Towards Electronic Journals: Realities for Librarians and Publishers*. Washington, D.C.: Special Libraries Association.

## **ARTICLE 3:**

### **PEER REVIEW**

#### *Introduction*

Peer review<sup>11</sup> is a process of subjecting an author's scholarly work to the scrutiny of experts in the field. It is used primarily by editors to screen and select submitted papers. Peer review is also used by funding agencies to decide which researchers will receive grant funds for their research projects. Both editors and funding agencies use peer review to filter out obvious mistakes and incompetence, plagiarism, and sub-standard research methodologies.

The peer-review process encourages authors to meet the high standards of their particular discipline and of science generally. Academic publications and grant awards that have not undergone peer review are likely to be regarded with suspicion by scholars. Even refereed journals, however, have published articles containing errors, fraud, and other flaws that undermine their credibility (as discussed later in this Article).

In specialized academic journals, the editor (increasingly, a group of editors) is normally a respected academic within that narrow field. He or she edits the journal on behalf of a learned society, a university (or one of its academic departments), or a commercial publisher. Some journal publishers also hire professional editors. And most academic book publishers hire commissioning editors to solicit book manuscripts from appropriate authors.

A journal editor is responsible for the quality and selection of papers selected for publication, usually basing the decision to publish on the comments generated by the peer review.

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<sup>11</sup> Also known as "refereeing" in some academic fields.

Even so, the author remains responsible for the content of his or her paper.

The journal editor normally does not correct spelling and grammar errors; those are the responsibility of a copy editor. The editor does, however, control the quality of this correction process.

### *Reasons for Peer Review*

One rationale for the peer-review process is that it is rare for a single author or research team to spot every mistake or flaw in a complicated piece. This is not because deficiencies represent difficult-to-identify “needles in a haystack”. Rather, in a new and sometimes eclectic intellectual product, an opportunity for improvement may stand out only to someone with special expertise or experience.

For both grant-funding and publication in a scholarly journal, papers are normally accepted if their content is both novel and substantial. Therefore, showing the paper to others increases the probability that weaknesses will be identified and, with advice and encouragement, rectified.

Since the referees are normally experts in their fields, the process of peer review is considered critical to establishing a reliable body of research and knowledge. Scholars reading published articles cannot be truly expert in multiple fields. They must rely to some extent on the peer-review process to provide reliable and credible research they can use to develop their own subsequent studies. As a result, significant scandal ensues when an author caught having falsified some aspect of a published paper. (See the section entitled *Peer Review and Fraud* in this Article.)

### *How the Peer-Review Process Works*

An editor sends<sup>12</sup> copies of an author's paper to experts in the field who have volunteered to serve as referees. Usually, two (in some cases, three) referees read each paper. Each referee then submits to the editor a detailed evaluation of the paper, including suggestions for improvement. The editor (normally a content expert, too) then evaluates (a) the referees' comments, (b) his or her own opinion of the paper, and (c) the fit between the paper and the journal's readership. Following this evaluation, the editor will return the reviewed copies of the paper to the author(s), usually with the referees' comments and the editor's recommendations for changes (if the paper is to be accepted for publication).

The evaluations written by the referees normally include explicit recommendations for what should be done with the paper. Referees choose from a list of options provided by the journal or funding agency. The following recommendations are typical of the options available:

- To accept the paper or proposal unconditionally,
- To accept the work, provided the authors improves it in specified ways,
- To reject it, but encourage revision and (possibly) resubmission,
- To reject it, but suggest submission to another journal or publisher,
- To reject it outright, without additional recommendations.

The role of a referee is advisory only; the editor is under no formal obligation to accept a referee's opinions. Furthermore,

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<sup>12</sup> Normally editors use e-mail or a web-based paper processing system to distribute articles to reviewers.

referees normally do not act as a group or committee. They do not communicate with each other, do not need to achieve consensus, and typically do not even know who else is serving as a referee.

When the referees disagree about the quality of a paper, the editor can use a number of strategies to reach a decision. For example, he or she often will solicit an additional review to serve as a “tie-breaker” if only two referees were initially involved. Alternatively, an editor may invite the author to reply (indirectly) to a referee’s criticisms, permitting a compelling rebuttal to break the tie. At times, an editor will not feel confident to weigh the persuasiveness of an author’s rebuttal. He or she may then solicit a more detailed evaluation from the referee who wrote the original criticism. In rare instances, an editor will convey communication between an author and the referees, in effect allowing them to debate one or more essential points. Even in such rare cases, however, editors do not allow referees and authors to communicate directly with each other, nor do they allow the referees to confer among themselves. The explicit goal of imposing such controls is to protect the integrity of the peer-review process, not to reach consensus or persuade others to change their opinions.

Some medical journals, usually those employing the open-access<sup>13</sup> model, have begun posting on the Internet the pre-publication history of each article. A typical history will include the original submission, the referees’ reports, the author’s comments (if any), and finally the revised paper.

After reviewing and resolving any “ties” (direct opposite opinions) in referees’ recommendations, an editor is left with one of three options for the paper. The two easiest to work with are outright rejection and unconditional acceptance. The third outcome is the recommendation for publication pending

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<sup>13</sup> See Article 6 for a discussion of O-A journals.

revisions. Prior to publication, authors are generally allowed—even encouraged—to revise their original work, with or without specific guidelines from the referees.

### *Recruiting Referees*

A journal's editor is responsible for selecting referees. When a paper arrives, the editor immediately solicits reviews from a pool of experts. These scholars normally have already volunteered to referee for that journal. In contrast, agencies awarding research grants typically recruit a review panel—a committee of referees—prior to the arrival of applications.

As discussed in Article 1, many academic disciplines organize professional conferences and workshops at which refereed papers are presented (read). In order to be invited to speak at such events, scholars must submit short papers (generally 15 pages or less), which are then reviewed by a program committee (the equivalent of an editorial board). A committee may sometimes request input from one or more experts. However, the hard deadlines set by conferences and workshops limit the options available to a program committee. It will either accept or reject a paper, but generally will not allow extensive revisions to it.

Referees should not be selected from among the authors' colleagues, former students, or close friends. They are required to inform the editor immediately if any conflict of interest arises during the review process. Some academic journals or individual editors invite authors to identify people whom they consider qualified to referee their work. In addition, authors are sometimes invited to identify potential referees who should be *disqualified* from reviewing their papers. When this happens, authors may be asked to justify their opinions (typically expressed in terms of a conflict of interest).

Recruiting referees is a human resource art, because referees are normally not paid. Yet reviewing papers demands an

investment of time and effort. Hours must be taken from the referee's main activities, including his or her own research and writing. To the editor's advantage, most potential referees are authors themselves. At the least, they are informed readers who know that the academic publication system requires the donation of time by content experts. Further, an editor holds a special advantage when recruiting referees if the editor previously published their work, or if those scholars intend to submit papers to that editor for future publication. Grant-funding agencies, similarly, tend to seek referees among their present or former grantees. Willingness to serve as a grant referee can even be an openly stated condition of a grant award or membership in a professional association.

Peer-review organizers face a unique challenge with respect to highly technical research papers or proposals: works for which few scholars truly qualify as experts. (True experts are those who have themselves completed studies like the one being reviewed, and who can "read between the lines".) This circumstance can frustrate the twin goals of maintaining the anonymity of referees and avoiding conflicts of interest. Low-prestige journals and funding agencies that award only small grants are especially handicapped with regard to recruiting true experts.

Finally, anonymity contributes in yet another way to the difficulty in finding qualified referees. In scientific circles, credentials and reputations are important factors in a scholar's career development. Serving as a referee for a prestigious journal is considered an honor, yet the anonymity restrictions make it impossible to publicly state that one actually refereed a particular article. Credentials and professional reputations are principally established by publishing, not by refereeing.

The process of peer review does not end after a paper is accepted for publication. Peer review continues to occur in scholarly meetings called journal clubs. Groups of colleagues corporately review the literature in their specialized fields and

discuss its value and implications. And journal clubs often send review or reaction letters to a journal editor. This allows a wide cross-section of “peers” to offer review and critique of published literature.

### *Various Styles of Review*

Peer review can be *rigorous*, in terms of the skills brought to bear, without being highly *stringent*. A research-funding agency may be flush with money to disburse, or a journal may have few impressive papers submitted from which to choose. As a result, little competition for selection exists at times. Conversely, when funds are limited or publication space is restricted, peer review may be used to select an extremely small percentage of proposals or papers.

Often the final decision of what counts as “good enough” falls entirely to the editor. In other cases, referees are asked to make the call, with only general guidance from the coordinator or editor on what degree of stringency to apply.

General journals such as *Science* and *Nature* have extremely stringent standards for publication. Those editors will reject otherwise excellent papers—those which report good quality scientific work—if they do not report significant breakthroughs in the field. A similar emphasis on originality exists in broad academic journals. However, their editors generally send out *all* papers (except blatantly inappropriate ones) for peer reviewing to multiple referees. The referees are specifically queried on the scientific quality and correctness. They are also asked whether the findings would be of interest to the journal’s readership, or to only a specialist subgroup. In the latter case, a referee’s recommendation is usually to submit the paper to a more specialized journal.

Screening an author’s work by his or her peers may be more or less a *laissez-faire* process, depending on the discipline. Physicists, for example, tend to think that decisions about the

worthiness of an article are best left to the marketplace. Yet even within such an open academic culture, the peer-review process serves to ensure that high standards are maintained in journals. Outright errors are detected and authors receive both essential edits and suggestions for improving the manuscript.

### *Criticisms of Peer Review*

One common complaint about the peer-review process is that it is slow. Typically, a submitted paper will not appear in print for several months. In practice, however, much of the communication about new results in some fields no longer takes place through peer-reviewed papers; it happens through the use of “preprints”<sup>14</sup> placed on the authors’ web sites.

### *Allegations of Bias and Suppression*

Some social scientists argue that peer review makes the ability to publish susceptible to control by a small group of elite scholars (British Scientists Exclude “Maverick” Colleagues, Says Report 2004). Further, the peer-review process may suppress dissent voices against “mainstream” theories (Campanario, nd; Campanario, Juan Miguel, and Brian Martin, 2004; Martin 1997). Referees tend to be especially critical of conclusions that contradict their own views, while quickly accepting those papers supporting those views. At the same time, elite scholars are more likely than less established ones to be sought out as referees, particularly by high-prestige journals and book publishers. As a result, some argue, ideas that harmonize with those of the elite scholars are more likely to be printed in premier journals than are papers presenting iconoclastic or revolutionary views (Petit-Zeman 2003).

In contrast to this rather ominous perspective, other scholars argue that a large number of scientific journals now exist in

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<sup>14</sup> A draft of a scientific paper that has not yet been published in a [peer-reviewed](#) scientific journal.

almost every field. This makes controlling or restricting information extremely difficult, if not totally impossible. These more optimistic authorities point out that:

Peer review does not thwart new ideas. Journal editors and the “scientific establishment” are not hostile to new discoveries. Science thrives on discovery and scientific journals compete to publish new breakthroughs. (Ayala 1994)

### *Peer-Review Failures*

Peer review failures<sup>15</sup> occur when a peer-reviewed paper contains one or more fundamental errors that undermine at least one of its main conclusions. Letters to journal editors seeking to correct errors in previously published articles are printed regularly; these are a common indication of peer-review failures. Few journals have a procedure to deal with peer review failures beyond publishing reaction letters. Inexplicably, some journals maintain a policy of not publishing such letters.

The author of a disputed article is normally allowed a published reply to a critical letter, rebutting some or all of the criticisms. Thus, the readers are left to decide for themselves if a peer-review failure has actually occurred. Normally, neither the reaction letter nor the author’s reply is peer-reviewed.

An alternative method of dealing with peer review failures is correction through a subsequent peer-reviewed article. A disadvantage of this correction method is that a reader who identifies a major flaw in an article may not have the time or resources to conduct the research and write the rebuttal article. And, as noted earlier, the process of conducting new research and getting the results published may take years. In the

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<sup>15</sup> The peer-review process is generally not viewed as a failure in cases of deliberate fraud by authors. See the later section in this Article entitled “Peer Review and Fraud” for a discussion of this topic.

meantime, the faulty study continues to contribute to the literature in that field.

### *Dynamic and Open-Peer Review*

In 2006, a group of UK academics launched the online journal *Philica*, which attempts to redress many of the problems associated with the traditional peer-review process. Unlike the practice in normal journals, all papers submitted to *Philica* are published immediately. The review process actually takes place *after* publication. Reviews are still submitted anonymously, but instead of referees being chosen by an editor, *any* reader who wishes to review an article can do so. Reviews, when submitted, are placed immediately following the article. This flexibility in content arrangement enjoyed by online journals represents a major advantage over traditional, printed journals. It gives the reader instantly accessible critique or evaluation of the original article. And the editor of *Philica* is never forced to decide whether a paper should be published or not.

The approach used by *Philica* ensures that elite referees cannot suppress ideas if they disagree with them. Readers use the reviews to guide what they read; particularly popular (or unpopular) works are easily identified.

### *Peer Review and Fraud*

The peer-review process in scientific journals assumes that the paper reviewed has been honestly written; the review process is not designed to detect fraud.<sup>16</sup> The referees usually do not have full access to the data from which the paper was written. Some elements in academia simply have to be taken on trust. It is generally impossible for the referee to attempt to replicate the author's study.

Some instances of outright scientific fraud and scientific misconduct have successfully passed the peer-review process. They were detected only after others tried and failed to replicate the published results. An example is the disturbing case of Jan Hendrik Schön. Fifteen Schön-authored papers were accepted for publication in prestigious journals following the completion of the usual peer-review evaluation. All fifteen were eventually discovered to be fraudulent and were subsequently withdrawn by the journals involved. Schön's fraud was detected only after the publication of his "studies", when other scientists tried and failed to reproduce his results.

### *Peer Review and Plagiarism*

A few cases of plagiarism by historians have been widely publicized. A poll of 3,247 scientists funded by the U.S. National Institutes of Health found that 0.3% admitted to having fabricated data, 1.4% admitted to having plagiarized content, and 4.7% admitted to having plagiarized *their own previously published works*: this latter type of fraud is termed "autoplagaism". An author's motivation for engaging in autoplagaism is to increase (fraudulently) his or her list of publications. Autoplagaism violates the rules of most peer-

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<sup>16</sup> See Article 4, Scientific Misconduct, for a discussion of fraud in academic publishing in general.

reviewed journals; they usually require that only previously unpublished findings be submitted for consideration.

Sometimes referees detect cases of likely plagiarism and report them to the editor. However, referees normally do not have access to raw data; they are limited to evaluating only the text. Thus, they are in a better position to detect conventional plagiarism or even autoplagiarized *text* than fraudulent or autoplagiarized *data*.

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## ARTICLE 4: SCIENTIFIC MISCONDUCT

### *Introduction*

Scientific misconduct is the violation of a code of conduct, in reference to scholarly research. The main expressions of scientific misconduct are fabrication of data, plagiarism, and violation of ethical standards.

*Fabrication.* Fabrication involves the publication of deliberately false or misleading research. It is often divided in two subgroups:

- Data fabrication: Actually making up research data with the intent of publishing them,
- Data falsification: Unethically manipulating (or intentionally omitting) research data and procedures.

*Plagiarism.* Plagiarism is the act of taking credit for another's work. "Citation" plagiarism is the willful or negligent failure to appropriately cite prior contributions to the literature, so as to give the impression of ownership of the ideas under discussion. Citation plagiarism is, arguably, the most common type of scientific misconduct.

*Violation of ethical standards.* Such violations generally occur during research with human or animal subjects. One example of an ethical standard is that a human subject in an experiment must give informed consent to their participation in an experiment.

### *Various Definitions of Scientific Misconduct<sup>17</sup>*

*The Danish definition.* Scientific misconduct is intentional or gross negligence leading to fabrication of the scientific message, or a false credit or emphasis given to a scientist.

*The Swedish definition.* Scientific misconduct is intentional distortion of the research process by fabrication of data, or plagiarism of text, hypothesis, or methods from another researcher's manuscript or publication; or the distortion of the research process in other ways.

Being accused of the activities described in this Article is a serious matter for any practicing scientist. Scientific misconduct brings severe professional consequences. In some cases, it may also constitute a violation of law. How pervasive is misconduct?

Research suggests this is but a small fraction of all the incidents of fabrication, falsification, and plagiarism. In a survey published June 9 in the journal *Nature*, about 1.5 percent of 3,247 researchers who responded admitted to falsification or plagiarism. (One in three admitted to some type of professional misbehavior.). (*Wired Magazine* 2005)

### *Motivation to Commit Scientific Misconduct*

According to David Goodstein (2002) of the California Institute of Technology, three motivations tempt scientists to commit misconduct: career pressure, the belief that one already knows the right answer, and the ability to not get caught.

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<sup>17</sup> Example definitions from Nylenna, Andersen, Dahlquist, Sarvas, and Aakvaag (1998).

### *Career Pressure*

Science is a career-driven discipline. Scientists must maintain a reputation for productivity in order to receive ongoing funding of their research. Such a reputation is based largely on the publication of high-profile scientific papers. Hence, scientists live with a strong imperative to “publish or perish”.<sup>18</sup> Clearly, this pressure may motivate desperate (or fame-hungry) scientists to fabricate results.

### *The Belief that One “Knows the Right Answer”*

Even on the rare occasions when scientists do falsify data, they almost never do so with the intent of introducing false information into the body of scientific knowledge. Rather, they intend to introduce “findings” they believe are true, without going to the trouble of actually performing the required experiments—at least not in their entirety. As a result, some are tempted to publish their own preconceived “truth”, supported only by data they have fabricated or altered.

### *The Ability to Get Away with It*

In many scientific fields, research results are often difficult to replicate. Original results may be obscured by “noise” from uncontrolled (or uncontrollable) variables, artifacts of methodology, and other extraneous data. This means that even if a scientist does falsify data and results, he or she may get away with it—or at least claim innocence if the bogus results conflict with others in the same field.

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<sup>18</sup> Publishing is a primary requirement for securing tenure (permanent employment) as a university professor. Without producing frequent, high-quality publications, an academic will “perish” professionally. See also footnote 4 for a more detailed discussion of tenure.

### *Consequences*

The consequences of scientific fraud vary in reference to (a) the severity of the fraud, (b) the level of attention it receives in the professional literature and the media, and (c) how long it goes undetected. In the case of fabricated evidence, the consequences can be wide ranging. Others must work to confirm (or refute) the alleged findings. Research agendas must be altered and precious funds wasted in attempts to expose and correct the fraudulent data.

### *Suppression and Non-Publication of Data*

Some academics consider intellectual suppression to be a form of academic misconduct. Suppression is the failure to publish important research findings, or the publication of only selected findings. Such cases usually do not involve deliberate falsification of results. Nevertheless, the researcher's clear intention is to deceive the reader.

Studies may be partially suppressed or remain unpublished because the findings would undermine the commercial, political, or other interests of a sponsor (i.e., grant-awarder or employer). Studies may also remain unpublished because their conclusions fail to support the researcher's own ideological goals or belief system. Examples of suppressive publishing practices include the refusal to publish a study if it demonstrates a harmful effect of a newly marketed drug, or publishing the *benefits* of a new treatment while omitting any reference to its established harmful side-effects.

### *Responsibility of Authors and Coauthors*

Authors (and coauthors) of scientific publications have a variety of responsibilities. Contravention of the rules of scientific authorship may lead to a charge of scientific misconduct. Simultaneous submission of scientific findings to

more than one journal and duplicate publication of findings under different article titles are regarded as misconduct.

All authors of a paper, not just the senior author, are expected to have made reasonable attempts to confirm the validity of findings submitted to academic journals for publication. In some cases, coauthors of fabricated or misleading research have been accused of inappropriate behavior or scientific misconduct for failing to verify their reports. This is why *all* authors are expected to keep a copy of *all* original data for possible later examination, even after publication. Failure to retain original data may be regarded as misconduct.

Some scientific journals require authors to provide information that allows readers to determine whether the authors might have any commercial or non-commercial conflict of interest. Authors are also required to provide information about ethical aspects of research, particularly where research involves human or animal participants or the use of biological material (e.g., stem cells). Providing incorrect information to journals about ethical standards may also be regarded as misconduct.

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## ARTICLE 5: ACADEMIC JOURNALS

### *Introduction*

An academic journal is a regularly-published, [peer-reviewed](#) periodical that disseminates scholarship relevant to a specific academic discipline. The twin purposes of a journal are to provide a venue for the introduction and scrutiny of new research, and (usually) to provide a forum for critiquing previously published research, whether in the form of a journal article or book. These purposes are most often achieved through the publication of original research articles, literature reviews (review articles), and book reviews.

This Article addresses aspects of publication and scholarship common to all academic fields. [Journals](#) in the “hard” sciences and *quantitatively* oriented [social sciences](#) differ somewhat in form and function from journals in the [humanities](#) and *qualitatively* oriented [social sciences](#). Specific aspects of both types of journals are discussed in this Article.

### *Scholarly Articles*

In academic publishing, the submission of papers for possible publication is generally unsolicited. A scholar will submit a paper to a journal of his or her choice after an extensive period of research, data analysis, and writing. The journal’s editor must then determine whether to formally consider it for publication or to reject the submission outright. Outright rejection normally occurs when a paper’s content or methodology is judged to be inappropriate to the journal’s mission or scope. If the editor chooses to consider the paper for publication, it is then subjected to anonymous [peer-review](#) by other scholars (referees) selected by the editor.

Usually two referees will simultaneously review a paper. A third referee is sometimes used if the first two disagree about the paper's worth. The editor uses the judgments of these outside referees to determine what to do with the paper. The choices generally are (a) to publish the paper, (b) to return it to the author for [revision](#) or correction and resubmission, or (c) to reject the paper.<sup>19</sup> Some variations on this process are used by book editors.

### *Review Articles*

Review articles are critical summaries of published research. Some journals are entirely devoted to review articles; other journals include one or more review articles in each issue.<sup>20</sup> Such reviews may summarize cover the research for the preceding year, or for some longer or shorter periods. Some review articles are devoted to limited or specific topics, while others provide broader overviews. Some review articles are *enumerative*, striving to include all significant articles on a given topic. Other reviews are *selective* and *strategic*, including only what the author judges to be significant findings. Similarly, *evaluative* review articles attempt to judge or evaluate recent progress in a given field.

Review articles serve several useful functions. For instance, students who are beginning to study a given topic may rely heavily on the content of review articles. These articles also provide excellent bibliographies for those wanting to review the literature for themselves.

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<sup>19</sup> See also Article 3: Peer Review.

<sup>20</sup> Some journals never publish review articles, choosing to publish only leading-edge reports of new research.

### *Book Reviews*

Detailed reviews of scholarly books introduce the field (discipline) to scholarship published in book form. Unlike research papers, book reviews are often solicited from experts, and are sometimes planned for years in advance. Journals typically have a separate book review editor who determines which new books should be reviewed and by whom. Publishers often send free copies of new books to these editors in the hope that their books will be (favorably) reviewed.

If a scholar accepts the editor's request to review a book, he or she generally receives at least that copy of the book from the journal in exchange for a timely review. In some cases, reviewers are paid for their reviews. The length and depth of reviews vary considerably from journal to journal, as does the extent to which reviews of textbooks and non-scholarly books are published.

### *Prestige*

The prestige of an academic journal is built over time. It can reflect many factors, only some of which can be quantified. Prestigious journals exist in every academic discipline. These journals receive the largest number of submissions and, therefore, can be most selective in choosing their content.

In the natural sciences and the "hard" behavioral and social sciences, the "impact factor" is a convenient quantitative measure of a journal's impact on its field or discipline. The impact factor is the number of subsequent articles that cite those articles already published in the journal. Other possible quantitative factors exist, however, such as:

- The overall number of citations,
- How quickly articles are cited,

- The average “half-life” of articles (the time span before “aging” articles are no longer cited).

The above notwithstanding, some experts are now questioning whether *any* quantitative factor can accurately reflect a journal’s prestige. They argue that a journal’s prestige must be evaluated more qualitatively—as a subjective issue of image and general reputation.

### *Financial Operation*

Academic journals in the humanities and social sciences are usually [subsidized](#) by universities or professional organizations; publishers in well-defined academic subjects are often university presses. For example, [Oxford University Press](#) publishes over 180 journals, some in cooperation with learned societies such as the British Society for the Philosophy of Science. Journals generally do not exist to make a profit. Even so, some accept advertisements to offset their production costs. And it is standard practice for academic journals to charge libraries much higher subscription rates than they charge individual subscribers. The physical production of a journal’s quarterly issues is almost always completed by the publisher’s paid staff.

### *New Developments*

In recent years, the [Internet](#) has revolutionized the production of, and access to, academic journals. The content of hundreds of journals is often available online through subscription services paid for by academic libraries.<sup>21</sup> Individual articles are indexed by subject in massive databases. Increasingly, these databases can be accessed through specialized search engines such as Google Scholar.

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<sup>21</sup> For example, see JSTOR (<http://www.jstor.org/logon?T=1&S1=cc993327.1115f91fa1d0>).

Some smaller and highly specialized journals are prepared in-house by academic departments<sup>22</sup> within a university. Typically, these journals are published only on the Internet. Recently, such publications have taken the form of “blogs”<sup>23</sup>.

Other trends in journal publishing are centered on the use of open-access strategies. These are detailed in Article 6: O-A journals.

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<sup>22</sup> or “faculty”.

<sup>23</sup> “Blob” is a convenient contraction of “world wide web logs.”

## Article 6:

### Open-Access journals

#### *Introduction*

Open-Access (O-A) journals are scholarly journals available to readers without restriction or condition (financial or otherwise), other than access to the Internet itself. O-A journals, sometimes called the “gold road” to open access, constitute one of two methods for providing open access to scholarly research and reflection. The other method, sometimes termed the “green road”, consists of self-archived articles in open-access repositories, such as personal or institutional web sites.

#### *Definitions and Types*

Originally, “open access” was defined as “having no financial or other barrier other than access to the Internet itself.”<sup>24</sup> However, modifications to this definition have emerged in practice. Some journals offer every article in an O-A milieu. Some otherwise O-A journals limit the *commercial* (non-academic) reuse of their articles. This restriction would, strictly speaking, disqualify them as O-A journals.

In a progressively restrictive sense, O-A journals may be classified as follows:

- Journals that are entirely open access,
- Journals that offer only its *research articles* through open access,
- Journals that offer *some* research articles through open access,

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<sup>24</sup> No reference for this quotation was given in the Wikipedia article.

- Journals that offer *some* articles open access immediately and other articles after a set period of delay (e.g., twelve months),
- Journals that delay (“embargo”) open access to *all* of its articles for a set period (e.g., 12 months),
- Journals that only permit self-archiving of its articles by their authors.

No single name or label adequately describes all of the variations listed above.

### *Financing O-A Journals*

All large O-A journals charge some type of publication fee. In contrast, most small open access journals do not charge (Kaufman and Wills 2005).

#### *“Fee-based” O-A Journals*

“Fee-based” O-A journals require payment by the author prior to publication. The money might come directly from the author; more often, it comes from the author’s research grant or employer. Money from grant-funding agencies is often given to researchers just for this purpose—essentially to pay for publishing their papers. This is generally viewed as a legitimate part of their research grants. Many journals will waive all or part of the publication fee if the fee represents a true economic hardship. This includes instances when the authors are from less developed countries.

#### *“No-fee” O-A Journals*

“No-fee” O-A journals use a variety of business models to survive economically. Suber (2006) summarized well this approach to economic viability:

Some no-fee OA journals have direct or indirect subsidies from institutions like universities, laboratories, research

centers, libraries, hospitals, museums, learned societies, foundations, or government agencies. Some have revenue from a separate line of non-OA publications. Some have revenue from advertising, auxiliary services, membership dues, endowments, reprints, or a . . . premium edition. Some rely, more than other journals, on volunteerism. Some undoubtedly use a combination of these means.

### *Advantages and Disadvantages of Open Access*

#### *Advantages*

The primary advantage of open-access publishing is that the content is available to users everywhere without needing affiliation with an academic library. This advantage benefits all of the following people:

1. Authors of such articles, who will see their work read more, cited more, and integrated better into the structure of their discipline. The main motivation for most authors to publish in an O-A journal is increased visibility and, ultimately, a citation advantage.<sup>25</sup> O-A articles are cited more frequently and faster in subsequent articles than are non-open-access (i.e., traditionally published) articles (Eysenbach, 2006).
2. Students, academics, and researchers at institutions unable to afford a large collection of journals, or where a given journal is not a perfect fit with the institution's academic offering.
3. Readers in general who may be interested in the subject matter; they have the opportunity to see what scientific research looks like.
4. Taxpayers who see the results of the research their taxes have funded.

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<sup>25</sup> See the discussion of the "citation index" in Article 5: Academic Journal.

5. Medical patients and those caring for them who are able to keep abreast of medical research focused on a particular disease or medical condition.

### *Disadvantages*

Three objections to open-access publishing appear occasionally in the literature:

1. Open access is unnecessary,
2. Open access is too impractical to implement,
3. In the case of fee-based O-A journals, authors must either have a sponsor (such as a research-funding agency or an employer) or pay the publication fee personally.

### *Identifying O-A Journals and the Articles in Them*

Several major directories of O-A journals have emerged in recent years, notably the *Directory of Open Access Journals* (DOAJ) and the *Open J-Gate*. Each has its own standards for listing journals. On December 31, 2006, the number of peer-reviewed O-A journals listed in the DOAJ was 2,514.

Articles in the major O-A journals are included in the standard bibliographic databases for their subject. And journals that have been established long enough to have a measurable impact factor, and are otherwise qualified, are indexed in the *Web of Science* and in *Scopus*. The DOAJ includes indexing for some, but not all, articles in the thousands of journals it lists.

### *Criticism*

Opponents of the O-A model assert that the traditional subscription (“pay-for-access”) model<sup>26</sup> is necessary to ensure that journal publishers are adequately compensated for their work. Publishers supporting this pay-for-access model claim that the “gatekeeper” role they play is an expensive one. Maintaining a scholarly reputation, managing the peer-review process, editing, publishing (printing), shipping, and finally indexing articles are all costly activities. As a result, they argue that operating a credible journal requires economic resources that simply are not available within the open-access model.

Opponents of open access also claim that it is not essential to ensure fair access to developing nations. Specifically, they claim that differential pricing, or financial aid from developed countries or institutions can make access to proprietary journals affordable in any context or location.

Reactions of existing publishers to the O-A model have varied greatly. They have ranged from (a) moving with enthusiasm to a new open-access business model, to (b) experimenting with some of the O-A options,<sup>27</sup> to (c) lobbying publicly against the launch of new O-A journals. Even so, the unavoidable fact is that many new O-A journals are being launched annually.

The O-A model is the subject of much discussion amongst academics, librarians, university administrators, government official, commercial publishers, and learned societies. Substantial disagreement about the O-A concept characterizes these discussions, along with much debate about the economics of funding an open-access scholarly communications system. The trend is clear, however: open

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<sup>26</sup> For example, one-year to three-year pay-in-advance subscriptions.

<sup>27</sup> Six were listed earlier in this Article.

access will grow in scope, influence, and acceptability, even while being resisted by some of the “old guard” of academic publishers.

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## APPENDIX A

### A BRIEF SAMPLE OF ON-LINE O-A JOURNALS IN FOUR DISCIPLINES

#### Journals of Religion, Missions, Biblical Studies, and Theology

##### *Asian Journal of Pentecostal Studies*

ISSN: 0118–8534 Year started: 1998

Publisher: ASIA PACIFIC THEOLOGICAL SEMINARY (Philippines)

Semi-annual e-journal, published in January and July

<http://www.aps.edu/ajps/>

##### *Harvard Divinity Bulletin*

ISSN: 0017–8047 Year started: 2001

Publisher: HARVARD DIVINITY SCHOOL (USA)

Keywords: religion, theological education

[http://www.hds.harvard.edu/news/bulletin\\_mag/](http://www.hds.harvard.edu/news/bulletin_mag/)

##### *Journal for Cultural and Religious Theory*

ISSN: 1530–5228 Year started: 1999

Publisher: The Whitestone Foundation

Keywords: philosophy, theology, religion, cultural studies

<http://www.jcrt.org/>

##### *Journal of Religion and Popular Culture*

ISSN: d000–0983 Year started: 2002

Publisher: Religious Studies Faculty—UNIVERSITY OF SASKATCHEWAN  
(Canada)

Keywords: religion, theology, cultural studies, popular culture

<http://www.usask.ca/relst/jrpc/>

##### *TC: A Journal of Biblical Textual Criticism*

ISSN: 1089–7747 Year started: 1996

Publisher: James R. Adair, Jr.

Keywords: religion, theology

<http://purl.org/TC>

(Appendix A continued)

Leadership Journals

*Academic Leadership*

ISSN: 1533–7812 Year started: 2000

Publisher: AcademicLeadership.org

Keywords: education, leadership

<http://www.academicleadership.org>

*Journal of Behavioral and Applied Management*

ISSN: 1930–0158 Year started: 1999

Publisher: Institute of Behavioral and Applied Management

Keywords: management

<http://www.ibam.com/pubs/jbam/default.asp>

*M@n@gement*

ISSN: 1286–4892 Year started: 1998

Publisher: D.M.S.P. Research Center

Keywords: management, organizational theory

<http://www.management-aims.com/index.php/management>

*Online Journal of Distance Learning Administration*

ISSN: 1556–3847 Year started: 1998

Publisher: STATE UNIVERSITY OF WEST GEORGIA (USA)

Keywords: education, distance learning

<http://www.westga.edu/%7Edistance/jmain11.html>

*Research and Practice in Human Resource Management*

ISSN: 0218–5180 Year started: 1993

Publisher: Curtin Business School (Curtin University), SINGAPORE  
HUMAN RESOURCES INSTITUTE (Singapore)

Keywords: personnel management, human resource management

<http://rphrm.curtin.edu.au/>

(Appendix A continued)

Education Journals

*Adult Education and Development*

ISSN: 0342–7633 Year started: 2000

Publisher: German Adult Education Association

Language: English, French, Spanish

Keywords: adult education

<http://www.iiz->

[dvv.de/englisch/Publikationen/erwachsenenbildung.htm](http://www.iiz-dvv.de/englisch/Publikationen/erwachsenenbildung.htm)

*Australian Journal of Educational & Developmental Psychology*

ISSN: 1446–5442 Year started: 2001

Publisher: School of Education, UNIVERSITY OF NEWCASTLE (Australia)

Keywords: education, psychology

<http://www.newcastle.edu.au/group/ajedp/>

*The College Quarterly*

ISSN: 1195–4353 Year started: 1993

Publisher: SENECA COLLEGE (Canada)

Keywords: education

<http://www.collegequarterly.ca/>

*Current Issues in Comparative Education*

ISSN: 1523–1615 Year started: 1998

Publisher: Teachers College, COLUMBIA UNIVERSITY (USA)

Keywords: comparative education, world politics, social milieu

<http://www.tc.columbia.edu/cice/index.html>

*Education Review*

ISSN: 1094–5296 Year started: 2002

Publisher: College of Education, ARIZONA STATE UNIVERSITY (USA)

Language: English, Spanish, Portuguese

Keywords: education scholarship and practice (book reviews only)

<http://edrev.asu.edu/index.html>

(Appendix A continued)

Research Journals

*Cyberjournal for Pentecostal-Charismatic Research*

ISSN: 1523–1216 Year started: 1997

Publisher: Pentecostal Charismatic Churches of North America  
(PCCNA)

Keywords: Pentecostal charismatic, Christianity

<http://www.pctii.org/cyberj/>

*Electronic Journal of Research in Educational Psychology*

ISSN: 1696–2095 Year started: 2003

Publisher: UNIVERSITY OF ALMERIA (Spain)

Language: English, Spanish

Keywords: educational psychology

[http://www.investigacion-  
psicopedagogica.org/revista/new/english/index.php](http://www.investigacion-psicopedagogica.org/revista/new/english/index.php)

*Journal for Christian Theological Research*

ISSN: 1087–1624 Year started: 1996

Publisher: Christian Theological Research Fellowship

Keywords: theology, religion, Christianity

<http://www.luthersem.edu/ctrf/JCTR/default.htm>

*Journal of Research Practice*

ISSN: 1712–851X Year started: 2005

Publisher: ICAAP—ATHABASCA UNIVERSITY (Canada)

Keywords: research practice, research education, research design,  
open inquiry, innovations in research

<http://jrp.icaap.org/>

*Qualitative Report, The*

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## **APPENDIX B:**

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