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The Scholarly Journal

- **Scholars crave recognition.**
- **Scholarly journals live on reputation.**
- **Scholarly journals sell status.**

Impatient scholars developed the scholarly journal as a communications channel speedier than the book. They will abandon paper journals when faster channels appear. The Internet is likely to be such a channel of communication.

Two parties are involved in producing a scholarly journal: scholars and publishers. Of the two, scholars dominate the content. Traditionally publishers merely facilitate the printing and distribution of paper objects. Publishers, however, dominate the economics of scholarly journals.

The primary motivation of scholars is to seek recognition for themselves and their work. The vast majority of scholars, however, labor in grating obscurity. They gain recognition by having their work approved by their peers. The objective manifestation of this approval is the appearance of their work in a high-status scholarly journal.

Publication in a scholarly journal gives recognition to a scholar's work. Scholars will seek the maximum amount of recognition for their work; therefore, they will want to place their work in the most prestigious journal available.

Scholarly journals compete for status and reputation. Every scholarly journal strives for the status of The New England Journal of Medicine, which is quoted regularly on National Public Radio, The New York Times, etc. Therefore, the critical responsibility of the editor of a scholarly journal is to enhance its reputation and status. If the reputation of a scholarly journal slips, self-interested scholars will flee to more prestigious venues.

The Technological Environment

- **Digital has replaced paper.**
- **Wired scholars are now publishers.**

The “scholarly workstation” has revolutionized scholarly work. In 1998, one may assume that younger scholars in the industrialized world possess a computer wired to the Internet on their desks. By 2010 the generation of computer-shy older scholars will have retired, while an increasing proportion of the world’s scholars become plugged into the Web. In effect, everyone is on the Web, or soon will be. This is a near-term eventuality that revolutionizes scholarly writing and the publication dynamics of a scholarly journal.

The “active desktop” metaphor of new operating systems software obliterates the distinction between local files and hypertexts on the Web. File transfer protocols permit scholars to share documents. Scholars can now circumvent publishers by putting their work on the Web and advertising its presence. Listservs, bulletin boards, newsgroups, chatrooms, electronic conferencing, etc., have turned the scientific community into a global village. There is no longer a problem of disseminating hot, new information. The digital revolution has put the publishing function in the hands of the scholars themselves.

As an example of the ability of a single scholar to establish a web site that attracts Web traffic, consider the page [Books Awaiting Reviewers](#), the device I use to advertise books awaiting reviewers for JASIS. During the last five months, without any effort on my part, this page has attracted the following hits:

October 1997	159
November 1997	109
December 1997	133

January 1998	138
February 1998	103

University libraries and university administrators recognize that the digital revolution will reduce their costs. Extraordinary serials inflation are driving universities away from paper subscriptions and towards digital copies. Furthermore, universities will use digital libraries to retain the intellectual capital of their scholars, instead of buying it back from publishers. The digital revolution will allow universities to circumvent scholarly journals.

The digital revolution has also changed the nature of documents. Scholars can now accessorize their productions by including active objects like applets, scripts such as JavaScript and VBscripts, hypertext links, database interfaces, spreadsheets, images, etc.

The typical scholarly product are now hypertexts, or a cluster of hypertexts. There may be a core textual element, but it is incomplete without its accessory files. Scholars will demand that the total product be published. These scholarly products can not be adequately supported in a paper environment.

Scholarly journals can not compete with the Web in either speed of transmission or complexity of scholarly product. As older print-bound scholars retire, a new generation of Web-sophisticated scholars will seek Web-based channels of communication. For scholarly journals this is a fatal problem that requires a wholly new solution.

The essential problem facing the publishers of scholarly journals is creating a new Web-based product.

The Technological Threat

- **About ten years of viability.**
- **The crucial decision is JohnWiley's.**

Scholarly journals are communications media. New information technologies create a new environment of operation. The specific technological threats are:

- *The high cost of paper production will be resisted by libraries, and can not be passed on to single subscribers. Paper and postage cost too much. This is exacerbated by overseas postage.*
- *Scholars will demand a venue that has capabilities beyond the paper realm. Digital is a more sophisticated medium for communication.*
- *A paper journal is too slow a vehicle to be a conduit of hot, new information. In the future, paper journals will exist only as vanity art objects. Paper making and moveable type printing, once devices of industrial production, are now are craft processes producing art objects.*
- *The legitimizing function of the scholarly journal will rapidly disappear as universities adapt to valuing work on the Web. By 2010, the majority of universities will evaluate a scholar by requesting reviewers all over the world to visit a scholar's web site and assess his contributions.*

**John Wiley and JASIS have less than 10 years
to finesse these changes in the operating environment.**

Does this mean that JASIS will disappear? No, as long as John Wiley is willing to support JASIS, it can continue to exist, even as a low-circulation, low-status vanity art object printed on paper. The paper journal will, however, lose its present impact and role in the information community.

JohnWiley must make a policy decision about the future of JASIS.

This crucial decision dwarfs the selection of a new editor.

Many journals continue to be published long after their role has diminished considerably. Consider, for example, the present diminished role of Library Quarterly, compared to its prestigious introduction many years ago as the organ of the only graduate library school in the nation.

Where JASIS fits in the world

- **Serving a small society**
- **Many digital competitors in place already**
- **Starting behind the curve**

As an outsider to the world of publishing, I have no privileged information about journal subscriptions, society memberships, etc. I suspect that John Wiley can supply better figures than I can.

JASIS has about 3,000 subscriptions, and is closely associated with ASIS – the American Society for Information Science. ASIS is a very small society of less than 5,000. It is about 1/20th of the size of ACM – The Association for Computing Machinery.

The dominating subset of the ASIS membership seems to persons affiliated with schools of library and information science. The topical center of the journal reflects the membership, which is generally concerned with (this is a gross reduction) "electronic library science". Thus, the intellectual center of the journal is information retrieval with some database issues, cognitive issues and perhaps some bibliometrics tossed in. The technical level of the articles is increasing, but there are not heavy doses of statistical content or computer programming.

Intellectually, JASIS falls more towards human issues than technical issues.

My observation is that the two immediate competitors to JASIS are IP&M – Information Processing & Management (about 2,000 subscriptions) and the Journal of Documentation (about 2,000 subscriptions).

JASIS has a web presence, where the digital material serves as entrée to the paper product. The web site appears to be an ancillary product for the “real” product, the paper journal. The current web site is marred by slight problems such as alphabetizing disorder:

Journal of Visualization and Computer Animation

Journal of the American Society for Information Science

and the lack of an entry for "JASIS". In short, it is not apparent that John Wiley has devoted special insight or effort into the JASIS web site. JASIS is merely one of dozens of Wiley journals up on the web.

There are few compelling reasons to visit the current JASIS web site. The assumption of the current JASIS web site is that web surfers will visit the web site and then seek out the paper version. My observation is that human nature doesn't work that way: The interactivity of the Web does not stimulate a hunger for paper products.

**The current JASIS web site does not present its ultimate consumer -
the Webified scholar - with a compelling product.**

The Association for Computing Machinery (ACM) has about 95,000 members. It features 17 print periodicals with about 55,000 journal subscriptions. ASIS members may fall into several of the special interest groups (SIG) of ACM. In 1997 ACM

SIGCHI had about 5,000 members, ACM SIGIR had about 1,200 members. Both of these SIGs publish conference proceedings, technical reports and journals that directly compete with JASIS. Many ASIS members are either members of ACM or read their publications.

The membership of ACM SIGCHI represents a significant pool of new subscribers who have similar interest in human issues.

The Institute of Electrical and Electronics Engineers (IEEE) has a membership of 320,000 members and a large array of publications.

Within the last several years, there has been a mushrooming growth in digital journals in the library and information sciences. A short list comprises:

[Ariadne](#) - "the magazine for the discerning UK Library and Information professional"

[D-lib Magazine](#) - "the magazine of digital library research"

[Information Research, An Electronic Journal](#)

[International Journal of Human-Computer Studies](#)

[Katharine Sharp Review](#) "the peer-reviewed e-journal devoted to student scholarship and research within library and information science"

Publishers are moving whole sets of journals to the Web. University site licensing gives the average scholar the impression that all journals are available full text on the Web. Any journal not readily available from his desktop will accordingly suffer.

Academic Press's Project [IDEAL](#) provides digital access to 175 journals of Academic Press, and [MUSE](#) provides digital access to about forty journals of the Johns Hopkins press. (See Tim Jewell's comments that the University of Washington is about to site license ACM's publications.)

In short, there are many other journals and publishers ahead of JASIS and John Wiley in moving to the Web.

**It is an irony that an information science journal like JASIS
is a latecomer to the Web.**

The only saving grace to this situation is that the majority of the members of ASIS are just now moving to the Web. ASIS members are generally more interested in the idea of the Web, rather than the mechanics of the Web. Therefore JASIS is in step with the ASIS membership.

JASIS in 2010: The Vision

- **The scholarly journal as web site.**
- **Expertise in information science is JASIS's advantage.**

At the present time, Wiley's publication strategy appears to be focused on producing a series of journal issues with the paper product pre-eminent and the web site acting as advertising for the paper journal. Why is this not a viable, long-term strategy?

Why will scholars abandon JASIS?

- Scholars can gain recognition on the Web.
- Scholars can communicate on the Internet.
- Scholars can publish complex objects on the Web
- Academic libraries will avoid buying paper.
- The tenure system will adapt to the Web.

Since the world is moving to the Web, JASIS and John Wiley must follow:

The only viable strategy for JASIS is to follow the scholarly migration to the Web, and build a JASIS Information Science Web Site (JISWS). At first JISWS will complement the journal, quickly it will rival the journal, and within 5 – 7 years, it will replace the journal.

The initial strategy is to complement the paper journal with the web site. JISWS will provide a venue for those articles poorly handled by the paper journal now. As more scholars produce HTML-like products, more material will appear at JISWS and less will appear in the paper journal. Within several years, we will have two different, complementary products. By 2010, most of the information science material will appear at JISWS. The remaining residual appearing in the paper journal will be "literary" information science, well suited to a slower, paper medium. With the generational change of scholars, everything will be found on the web.

The unique advantage of JISWS is ASIS's expertise in information science. While a single scholar may put his work on the web, he can not associate it with other works that enhance its information science utility. While universities may retain their scholars' productions, they can not associate them with other work enhance their information science utility. Only the experts from ASIS can organize the scholarly productions in information science to maximize their utility to other information scientists.

Only JASIS and ASIS has the expertise in information science to create the most sophisticated information science web site on the Web.

**JASIS's single exploitable asset is its association with
ASIS and its expertise in information science.**

JISWS - The JASIS Information Science Web Site

- **The new Web products.**
- **"JISWS" pronounced "gee whiz"**

Publishers fear moving a journal to the Web because it seems that they will be giving the “product” away. This illustrates a lack of understanding of what the new Web information products are.

**The new information products are
"personality" and "experiences".**

- **Sell the author/personality:** A paper journal publishes a scholarly article. The Web can publish the scholarly article and also provide a chat room with the author, the reviewer’s opinions about the paper, the author’s rebuttal, the author’s second draft, etc. A paper journal publishes a static “snap shot” of the author. The web markets the author himself or herself. (See the statement about scholarly ego above.) The scholarly article that JASIS vends now is merely advertising for the personality behind it.
- **Sell the experience:** A paper journal article can talk about a neat tool, an engaging interface, etc. The web can deliver it. At the web site, one can play with the interface, mess with the raw data, hear the music, see the video, etc. The scholarly article that JASIS vends now is merely advertising for the experiences that it describes.

The functional units of JISWS would not be journal articles but scholarly "productions", that is a cluster of hypertexts. The elements of such a cluster might be:

- Author biography and author photograph
- Author statement of motivation, "why I wrote this paper"
- Critical comments on the first draft
- 1st definitive version of paper
- Subsequent comments by peers
- 2nd definitive version of paper
- Author's views on future research
- Sample interfaces and datasets.

Such a cluster would be the equivalent of a single journal article in a paper journal. Such a cluster would never be closed, but always open to further modifications by the author and further comments by the information science community. As new authorial material is added, and new critical commentary piles up, JASIS accumulates its product and advertises the presence of the new material to generate increased traffic at the web site.

What would such a scholarly web site look like? Perhaps a current example would be [Yahoo](#), a hierarchically organized information store. One could arrive at the site and find a subject hierarchy of information science topics. One would also be able to search for individual JASIS titles and authors.

In 2010, the real product would be JISWS, the web site itself. Authors will groom their own productions. The role of Wiley will be as computer support and the person who collects tolls for the privilege of visiting the web site.

**By 2010 the roles of the paper journal and
web site will be reversed.**

Right now, the electronic journal serves as entrée to the paper journal. In 2010, the paper journal will probably publish only brief outlines, abstracts and literary information science. Wiley could simply give these paper blurbs away. The real information will be at the web site, JISWS.

Steps to the Vision

- **Creating the new product**

1. In the near term, JISWS complements JASIS

The immediate task is to establish a JISWS web site.

The new editor strongly urges electronic submission, and places these “preprints” on the JISWS site. Advertising on the Internet would ask interested parties to comment on the preprints. All comments would become part of the cluster of each paper. Letters to the editor would become part of the critical comment of a cluster. The author would respond as much as possible.

The new editor writes a vision statement and invites the ASIS community to comment on it. This becomes the first production at the JISWS.

All JASIS articles are published listing their Web URL’s.

The JASIS board works on creating a subject hierarchy for the new site.

The new editor uses the Internet to regularly announce new items up on the JISWS. The new editor would actively court scholars to comment on submissions.

JohnWiley sells site licenses to universities so that scholars have “free” access to all contents JISWS contents.

2. The Intermediate Term: JISWS Rivals JASIS

The JISWS is established and the ASIS community has established a pattern of visiting JISWS to view preprints and comment on the preprints.

The new editor actively seeks electronic submissions that can not be handled by the paper journal. After peer review, these are published on JISWS. The paper journal gives only an abstract and URL directing readers to the "complete" version at JISWS.

The shift begins towards the web site being the ultimate depository of information. Scholars submit not only their written articles, but also sample interfaces, data sets, etc. as part of the supporting elements of their cluster.

3. The Long Term: JISWS Replaces JASIS

The majority of material published in the paper journal leads readers to the JISWS web site. The paper journal is "given away" as essentially advertising for the web site.

The above process does not merely put the journal up on the Web, but creates a new product, a web site. The web site is not a static repository, but an evolving source of products for John Wiley to market. For example, older authors look back to comment on their younger work, authors elaborate, explain, justify, etc. their work. All these are advertised by the editor on the Internet, which stimulates more traffic at the web site.

The evolution from journal to web site is complete when material is added to JISWS daily, announcements are made weekly.

Challenges and Problems

- **Will authors really put their material on JISWS?**

To recap: Scholars crave recognition for their work. Once they see that "the other guy" has "his stuff" up on JISWS, and the new editor is advertising its presence, they will want similar recognition. Scholars will be given the chance to groom their own material. The appeal to ego is very powerful.

- **Authors will fear that if their work appears at JISWS, people will steal it.**

- **John Wiley fears that if JASIS is put on the web, people will steal it.**

The product is the web site, not individual articles. John Wiley loses if people stop coming to the web site, not if they copy passages from articles. All JISWS material would bear a copyright symbol. Persons found vending material copyrighted by John Wiley would be subject to prosecution. Mere plagiarism of material at JISWS would be flattery of the influence of JASIS. The ultimate goal of JISWS is to have people use the material at the web site. Ironically, John Wiley wins if crowds of people are downloading material from JISWS. John Wiley wins when there is traffic at the web site.

- **Can authors put their material up at their own web sites as well?**

There is no way we can prevent people from using their own web sites for the display of their material. We should insist, however, that any other web publication of material at the JISWS site (i.e., the scholar's own homepage or his university's page) should have the URL linking it to JISWS. The more links to JISWS from all over the world, the deeper the penetration of JISWS, and ultimately the more traffic at the web site.

- **Pricing**

John Wiley wins if people visit the web site, and browse among the many offerings because JISWS is "the best information science web site on the web". Pricing should probably be on an annual basis for ASIS members and in any case, the pricing should be so low as to be invisible. Pricing should not be a barrier to increasing traffic at the web site.

- **Which is the "authoritative" copy?**

This question stems from a paper environment. In an electronic, fluid environment, there will be many copies of a scholarly production. As people become used to reading the "same" work in progress from 1st draft to 2nd draft to 3rd draft, etc., there will be a new scholarly area develop, I predict, called "draft analysis". This will result in more products for Wiley to vend, and ultimately increase traffic to the web site.

- **Plugs-ins, versions, dead links, etc.**

Electronic technology is changing. With the board's help, an ongoing analysis of the preferred plug-ins and other help files will be identified. This list will be advertised to future JISWS authors.

Dead URL links can be brought to the attention of authors who can then groom their JISWS productions. These are "new" versions which represent more product for Wiley to vend, and ultimately increase traffic to the web site.

The New Business Model

How does John Wiley win?

- John Wiley vends the web site, not the journal.
- John Wiley becomes more web master than journal publisher.
- John Wiley strategizes to maximize traffic at JISWS.

How does John Wiley lose?

- They are unable to make the conceptual leap from the journal model to the web site model.
- They price their material to fence web surfers away from JISWS.
- They lack the corporate expertise to move from paper publisher to web master.

The View from the Caboose

A caboose is the last car on the train. It follows the train. Things that you see from the caboose are things that the train has missed. Consider these missed opportunities from recent issues:

- "Image Retrieval by Color Semantics with Incomplete Knowledge" (JASIS, 49(3): 267-282, 1998. JISWS would (1) Show the changing images of Figure 3 (page 270), and (2) Show the colors of Figure 2 (page 270).
- "Electronic News Delivery Project" (JASIS, 49(2):134-150, 1998. JISWS would dynamically show (1) The current WWW metaphor of Figure 1 (page 136), and (2) The video clip of figure 7 (page 148).
- "Ant Wisdom for the Web", Wired Magazine, March 1998, page 89. Paul Kantor, a member of the JASIS board is featured. JISWS would have the interview as streaming video, an example of his work, etc.