



## LETTER FROM THE PRESIDENT

As I sit drafting this letter on September 21, 2001, it is not possible for me to write this introduction without reflecting on the events of September 11, 2001. First, let me thank all of you from around the world who sent messages of concern and goodwill in the hours and days following the attacks. These were very comforting messages for all of us here at JSTOR, and we appreciated them greatly.

Union Square, which is a park over the subway stop closest to our New York office, and the station many of us at JSTOR use, was turned into a kind of shrine following the tragedy. Thousands came to the park posting tributes to the people lost and missing. It was a very moving and emotional place. On September 20<sup>th</sup>, as I emerged from the subway, I noticed that people were taking down many of the posters, banners, placards, flowers, etc. A park police officer asked if I would help, and explained that it was about to rain, and that all of the tributes were going to be ruined. They wanted volunteers to get them down so that they could be preserved. As much as I wanted the materials to stay, because they were really the property of those who had posted them there to honor their loved ones, it was also obvious that they would be lost if they were not removed. Like life, they weren't going to be there forever. The Museum of the City of New York will preserve the materials to help us remember the supportive sense of community that bloomed in the wake of the attack. Several of us at JSTOR were thankful to play even a small role in this act of preservation.

In the wake of these awful events I hope we will all look for opportunities to help a neighbor, a friend, or a stranger. We cannot change what has happened, but we can try to overcome the horror of it through countless individual acts of caring and kindness.

*Kevin M. Guthrie*

## JSTOR AND PUBLISHERS: A GROWING RELATIONSHIP

JSTOR was founded on the idea that creating a reliable and comprehensive electronic archive of the back volumes of scholarly journals could both lower the long-term costs associated with the storage of journal collections and dramatically increase access to these journals. For JSTOR to be successful, however, the organization needed to rely on the willingness of publishers to let an outside entity digitize the back issues of their journals and create a model for distribution. In the early 1990s, this was uncharted territory. No one knew the impact electronic technologies might have on publishing or how libraries would respond to the idea of a digital archive. JSTOR's first participating publishers took a decided risk on this venture. Recognizing these publishers' early commitment to JSTOR's mission and their important role in the organization's success, JSTOR continues to build its relationships with publishers and seek new ways to help them maximize the value of their scholarly endeavors.

As trust has been built over time from publisher to publisher, many have enthusiastically chosen to expand their relationship with JSTOR. The University of Chicago Press, for example, initially included seven journals in JSTOR, but now has signed up a total of twenty journals in current and future JSTOR collections. In fact, JSTOR now contains approximately half of the journals published by The University of Chicago Press. Cambridge University Press has likewise extended its participation in JSTOR from one journal to nine.

Publisher trust has also led to a growing trend of reducing the "moving wall." The "moving wall," a fixed period of time ranging in most cases from two to five years that defines the gap between the most recently published issue of a journal and the date of the most recent issues available in JSTOR, was originally established to protect publishers from the possibility of lost

revenue due to the availability of very recent issues in the archive. As publishers become more comfortable with JSTOR and recognize the value of participation to their constituents, some have decided to make even more issues of their journals available. For example, The American Economic Association has reduced the moving wall for all three of its journals in the JSTOR archive from five years to three.

Publishers are making this change for a number of reasons. Participation in JSTOR has not had the adverse impact on subscription revenue that publishers once feared, and has, in some cases, even led to new subscriptions at libraries first exposed to the journal through JSTOR. Additionally, many publishers are continually looking to benefit the scholarly communities they serve and recognize that JSTOR can help. By reducing the moving wall, publishers are increasing the ease with which researchers can access their material. This was the case for the Population Association of America, which changed its moving wall from five years to two. According to Stephanie Dudley, Executive Director: "We felt that the five year lag was too long and that it inconvenienced members and researchers. Our publications committee, which made the recommendation, does not expect any impact on subscriptions or membership."

Another organization, the American Society of International Law, has eliminated its moving wall altogether. JSTOR digitizes each new issue of the *American Journal of International Law (AJIL)* soon after publication, allowing researchers to search seamlessly through the entire run of the journal. Explains Executive Vice President and Executive Director Charlotte Ku:

The organization decided to take this step, principally as an outreach effort, to introduce *AJIL* and international law to as wide an audience as possible. JSTOR seemed a good vehicle to achieve this goal because of its strong presence in the humanities and social sciences. We hope that the occasional reader who sees *AJIL* in JSTOR may eventually wish to subscribe.

Publishers who decide to alter the moving wall can see the result immediately, says Eileen Fenton, JSTOR's Director of Production. "We digitize content as it is published and made available to us. The content is already on our servers in a secure area and can easily be made publicly viewable should the publisher so desire."

JSTOR is also working with a number of publishers to provide additional services for their society membership via their Web sites. The Ecological Society of America (ESA) and the American Finance Association are two organizations at the forefront of this effort. Their members can now search full journal runs and identify material contained in JSTOR through the organizations' web sites. For the American Finance Association, the primary goal of linking with JSTOR is to provide a service to its members. According to David Pyle, the organization's Executive Secretary and Treasurer:

Our current issues appear on our site from a Blackwell server. When people look for current information and

don't find what they want, they like to go deeper into the archive. Now, if someone puts in an entry that is beyond the moving wall, they automatically go to the article from JSTOR's server. It makes a lot of sense.

Explains JSTOR's Director of Publisher Relations, Heidi McGregor:

From a mission standpoint, it is important for a society to be able to replicate the run of its entire journal. At the same time, giving users an entry point where they can navigate from the first issue published through the most current is extremely valuable. By working together, JSTOR and publishers can build complete runs regardless of where those journals are housed electronically.

The number of JSTOR publishers has grown nearly tenfold to 148 in the last six years. As JSTOR grows, so do the possibilities for creating programs that provide significant publisher benefits. JSTOR is currently working with publishers on a number of new ideas, such as a collaboration to provide society members with access to a range of journals in their fields. As publishers begin to make current issues available electronically, JSTOR will archive this material that is "born digital." These efforts are in a pilot stage and reports on progress can be expected in the future.

## ARCHIVING IN THE DIGITAL AGE: ONE LESSON FROM JSTOR'S EXPERIENCE

One of the bedrock principles of JSTOR's mission is to serve as a trusted archive of electronic content. When we use the term "archive," we refer to the task of preserving and providing access to a collection of scholarly literature over time, without regard for how frequently these materials are being read or used. In that sense, our definition assumes that there is some portion, perhaps even a significant portion, of material that is not economically self-supporting in a commercial sense. While JSTOR's initial activity has centered around converting previously published paper content to electronic formats and then archiving them, our mission has always also included the commitment to archive future issues of journals that are published electronically. Because of that commitment, JSTOR represents one of the first tests of how the scholarly community may support electronic archives. The purpose of this article is to share early lessons and some of the questions that are surfacing from that "test."

As the scholarly community makes a transition to disseminating information electronically, are the responsibilities for archiving also making the transition? There is not yet a system in place to protect the electronic literature being published today. How can we be sure that such a system will evolve? Where will the resources come from to support it on an ongoing basis? This is just the beginning of a long list of questions that point to challenges that lie ahead if archiving is going to make the transition to the digital age.

## Existing Archiving System

To understand this transition, we must familiarize ourselves with the existing archiving system and how it evolved in order to assess possible future archiving solutions. One important characteristic of the system we rely on today for paper is that it was not developed through a proactive effort to provide an archive; rather, it has been primarily a by-product of the need to provide access. If you want to read a paper document, you must have it in your hands, and for that to happen the place where it is stored matters a great deal. So the existing system evolved through countless local acquisition decisions combined with librarians' commitment to preserve materials once acquired. In addition, the infrastructure required to preserve those materials – the buildings, the shelves, and the associated maintenance costs – have been paid for and justified for a variety of reasons that have nothing to do with archiving per se. For example, the library was and is an important “place,” and the construction of large structures to house the accumulated knowledge lends credibility and prestige to the institutions that maintain them. Further, funding streams can be tapped, including fund-raising that can associate donors with parts or all of the physical structure, that can help support these edifices of information. Once the huge fixed investments are made, the very small marginal cost of adding a volume to the physical collections supports the continuation of this pattern until, of course, a library runs out of space, at which time the effort to raise capital funds begins anew.

## A Time of Transition

What happens when access is unbundled from geography and ownership? Information can reside on one server and reach any authorized user, anywhere in the world, who has a connection to the Internet. In such an environment, it does not make sense to duplicate the existing model, with its emphasis on local ownership. Individual colleges and universities are not demanding that content providers deliver to them the electronic materials so that they can build huge server and disk storage infrastructure on campus to store, maintain, and deliver the information. So, as documents make the digital transition, we are leaving the old model behind, without any replacement approach in operation.

## Lessons from JSTOR

JSTOR's experience over the last six years indicates that many of the financial systems and structures in place at our academic institutions present challenges to the implementation of a more centralized archival approach that is required by the technological transition described above. We have studied the capital, operating and maintenance costs associated with storing paper journals and compared them with the costs of JSTOR participation. There is no doubt that the costs for an individual library to participate in JSTOR are substantially less – for smaller teaching institutions, more than ten times less – than the costs associated with storing and providing access to the paper journals. However, based on the feedback received from these libraries, the primary reason for JSTOR participation seems to be not the potential savings associated with central archiving but rather the benefits associated with providing better and more

convenient access to the literature for faculty and students.

Justifying JSTOR on the basis of the benefits of enhanced access as opposed to the potential savings associated with archiving is not in itself a bad thing, nor is it an “either/or” situation. Both benefits are valuable. But for many libraries, the focus on access seems to overwhelm the interest in archiving. This is understandable. For one thing, JSTOR is an extremely young organization, and libraries are appropriately conservative. They are not going to move quickly to realize the shelf space benefits soon after they sign up. They will want JSTOR to prove itself first. Further, the focus on access is consistent with the point made earlier: the primary motivation for an acquisition is its current usefulness, not its archival or future value to scholarship. Finally, and perhaps most important, librarians focus on the access benefits of JSTOR because, from a practical standpoint, this is all that the existing organizational and financial structures allow them to do. The benefits of newly available shelf space do not appear in any budget under their control. That budget resides somewhere else, such as under the control of the provost or president. Even for the provost, if the space available to the library is sufficient at present and for the near future, the economic savings is not a foremost consideration. It will be, though, when the time comes to build the library addition.

In many, if not most cases, the only budget that the librarian can use to pay for an archive like JSTOR is the acquisitions budget. Assuming that the account used to purchase an item is related to the purpose of the purchase, reliance on the acquisitions budget to pay for JSTOR makes it a database, not an archive. In other words, by paying for JSTOR from the acquisitions budget, rather than from a combination of the acquisitions budget and funds that would normally be used to build new infrastructure for storage and archiving, institutions will have more difficulty recognizing, in economic terms, the capital cost savings associated with JSTOR participation. Existing financial structures make it hard to take *all* costs into account.

Who is in charge of archiving at academic institutions? What budget in higher education institutions is dedicated to preserving this literature in the future? If electronic access is no longer tied to geography, and there are no local motivations for supporting an archive, how can we ensure that electronic archives will be established and maintained? Are institutions going to be willing to contribute to centrally managed archives of important materials when the goal is specifically preservation, not access?

## Conclusion

The challenge that lies ahead, if little-used electronic materials are to be preserved for future scholars and students, is to address directly the motivations for investing in the resources to perform this function. How will institutions justify the investments in supporting or providing a centrally-held electronic archive when there is no named building to point to, no beautiful library to show prospective students, no addition to the volume count that leads to a ranking among the top libraries? Will colleges and universities be able to justify investments in archiving for its own sake?

If there is to be a transition from paper to electronic publishing, the archiving challenge will have to be addressed. This

is not a problem that is going to be solved through a complex array of disconnected local decisions. Because electronic publication by its very nature depends on centrally held resources distributed widely through communications networks, inevitably some parties will be “providers” of an archive while others will be “beneficiaries” or “users.” We must determine ways to motivate the beneficiaries of the archive to support the costs of the providers. JSTOR will continue to test the question of whether support can be generated for a not-for-profit organization with archiving as its fundamental mission. But there are and will be other examples. One is The Andrew W. Mellon Foundation’s Electronic Journal Archiving Initiative, which has provided support to seven universities to develop plans for archiving electronic content. These universities are working with a variety of publishers of scholarly content to test the technological, legal, and economic questions associated with archiving electronic content in a practical way.

This project and others like it will contribute to our understanding of what will be needed to preserve electronic documents. We hope they will also shed light on what motivates colleges and universities to protect and preserve scholarly literature for future users. The local motivations that have been the foundation of the current paper archive do not naturally generate the scale of resources that will be required to establish the more centralized model necessary for the preservation of electronic documents. There are examples, especially in the larger collecting institutions, of decisions made solely for the purpose of the long-term maintenance of the scholarly record. In those

institutions, regular funding streams and even departments (e.g., preservation and conservation) have been established. The government, and in particular the National Institutes of Health, played a critical role in these cases through programs such as the Brittle Books program. It may be that government will have to play a role here as well. Alternatively, the kind of transformation that has happened in the financial systems and procedures related to computer technology to accommodate the transition from a mainframe-dominated to distributed computer infrastructure, may provide some clues to the path ahead. These are but a few examples, but they demonstrate the kind of budgetary recognition and allocation that will be necessary if the problems of electronic archiving are to be overcome.

If the documents of today are to be preserved for tomorrow, the budgets of academic and cultural institutions may need a new line item in the digital age, a line item that transcends existing capital and operating budgets and addresses all the costs of maintaining the electronic record; perhaps it should be called “e-archiving.” Fortunately, one major benefit of the advances in information technology is that, from both a system-wide and an individual organization’s perspective, if costs can be spread over a significant number of institutions, an e-archiving budgetary commitment *can* be both less expensive and more effective than the regular investments already being made in the maintenance of the printed record.

*This is an abridged version of an article authored by Kevin Guthrie in Educause Review, November/December 2001, Volume 35, Number 6.*

<http://www.jstor.org>



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### JSTOR FACTS

January 1, 2001 - September 24, 2001

Total accesses:	31,958,979
Searches performed:	7,979,862
Articles viewed:	6,677,748
Articles printed:	4,110,051
Pages viewed:	12,177,930
Total issues available:	53,264
Total full-length articles available:	611,478
Total articles:	1,302,910
Total pages currently available:	7,809,852
Number of participating institutions:	1,130
Number of participating journals:	273
Number of journals available online:	169
Number of participating publishers:	148

### COMMENTS

I take this opportunity to share with you that faculty and students at the Lahore University of Management Sciences in Pakistan are very happy over our participation to JSTOR’s Arts & Sciences I Collection. I have lots of appreciation over our decision for JSTOR participation. This improves our potential to carry out research in many areas. Kindly pay our facilitations to the JSTOR team for such an effective and reliable archive treasure.

*Muhammad Ramzan, Chief Librarian,  
Lahore University of Management Sciences, Pakistan*

Just a brief note to thank you for your Latin American journals. I have always used JSTOR for my research and to train both students and faculty on its use, but always found the history journal collection weak in terms of non-US and British journals. You have certainly improved on that ... Keep up with the fine work; this is a service in research and teaching that has become absolutely essential for students and professional researchers alike. Gracias!

*Dr. Diana Velez, Assistant Professor of History, University of Central Florida*

I have been searching for articles for patrons for hours. I realized that one of the articles I was looking for was in JSTOR. I thought to myself – can life get any better than this? I was in a state of euphoria. Of course, I found the article. You have a great database. Thanks for all the hard work.

*Jennifer Isaacs, Administrative Assistant, Nova Southeastern University*

I just wanted to congratulate the organizers of JSTOR. This is a fantastic resource for researchers and I want to convey my thanks for putting together this tremendous body of historical work.

*Dr. Troy Shinbrot, Rutgers University*