TOWARD OPEN ACCESS IN ANCIENT STUDIES

The Princeton-Stanford Working Papers in Classics

ABSTRACT

The authors' experience with founding and managing an open-access Internet site for publishing scholarly preprints, the Princeton-Stanford Working Papers in Classics, raises issues about the status of publication in classical studies. Open-access e-prints offer unique advantages in terms of availability and dated registration of work, but raise concerns about certification and permanent archiving. E-prints and traditional publications are currently complementary. Yet the worlds of scholarly publication and academic evaluation of scholarship are changing in important ways; closer cooperation between publishers, scholars, and university administrators could help to maximize benefits and limit costs to disciplines, institutions, and individuals.

The relationship between traditional research publication venues and new types of communication is a matter of sometimes-heated debate and serious discussion within the disciplines of classics and classical archaeology as well as across the academic world.[1] Classical studies have been in the forefront of exploring the utility of electronic technologies for the humanities. The Perseus Project (http://www.perseus.tufts.edu) and the *Bryn Mawr Classical Review* (*BMCR;* http://ccat.sas.upenn.edu/bmcr/) are just two early ventures that have now become standard points of reference in humanities research. In the area of research publication, traditional print journals have added Web-based versions of their issues that run in parallel with the print versions, although often with "moving walls" of access that block online consultation of current issues. Meanwhile, recently launched e-based journals such as *Histos* (http://www.dur.ac.uk/Classics/histos/) and *Ancient Narrative* (http://www.ancientnarrative.com/) have fulfilled all the normal functions of traditional print journals, including peer review and careful editing. Each year witnesses the development of more of these scholarly electronic sources: the *Frankfurter elektronische Rundschau zur Altertumskunde* (*FeRA;* http://www.fera-journal.eu), for example, was recently initiated at the Johann Wolfgang Goethe-Universität, Frankfurt, with substantial EU support, as an e-journal primarily dedicated to new publications by graduate students in ancient studies. Internet-based

"working-papers" (WP) sites have emerged within this broader context as another means of making academic research more immediately accessible—and on a global scale.

Yet the practice of circulating and archiving working papers, or preprints, antedates the advent of the Internet.[2] The idea of systematically collecting preprints of academic research appears to have begun at Stanford University in 1962 among the High Energy Physics (HEP) community when the Stanford Linear Accelerator Center (SLAC) began archiving preprints in physics. The accessibility of these working papers was greatly improved in 1968–1969 with the establishment of the Stanford Physics (later, Public) Information Retrieval System (SPIRES). Others soon adopted the idea, and working-papers series were initiated by leading academic departments in various fields of the social sciences, notably economics.

It was only in the late 1980s and the early 1990s, however, that the practice of making prepublication research quickly and readily available expanded dramatically, once again within the HEP community, with the efforts of Paul Ginsparg and others at the Los Alamos National Laboratory (LANL) to post preprints or working papers on computer sites that would be freely and openly accessible via the Internet.[3] The archiving of preprint papers was now envisaged purely as a distribution system, set up so that research in progress could be made immediately available to all interested parties in the discipline. With the model set by the success of this project, Internet-based working-papers sites have proliferated in the past few years. This brief essay traces the origins and development of one such recent experiment in our own field—the Princeton-Stanford Working Papers in Classics—in order both to comment on the benefits of this new mode of publishing research and to raise questions about the relationship of working-papers sites to more traditional modes of scholarly publication.

The Princeton-Stanford Working Papers in Classics (henceforth PSWPC; http://www.princeton.edu/~pswpc/) is a Web-based open-access preprint collection, featuring work in progress of members of the Princeton and Stanford ancient studies communities. The term "open access" indicates that anyone with an Internet connection and browser has access to the site and can download its contents.[4] The site is managed by the Classics departments of the two universities and the papers are mounted on a server maintained by Princeton's department. Papers are not peer reviewed. Instead, quality is monitored by limiting the number of scholars who are permitted to post research on the site to the faculty of the two universities, postdoctoral fellows, and visiting scholars, as well as graduate students with faculty approval. The site was designed and is currently operated by Donna Sanclemente, who holds a full-time Information Technology (IT) position in Princeton's Department of Classics. The use of the department server to host this site follows what appears to be the normal practice in hosting new preprint or working-papers sites in many science and engineering fields, a practice that is likely to continue in the near future.[5]

2. Although the term "preprint" is used interchangeably with "working paper" in this article, there is much terminological variance in literature about publishing. Attempts to define terms such as "preprint" and "postprint" more clearly can be found at http://www.sherpa.ac.uk/romeoinfo.html and http://www.niso.org/committees/Journal_versioning/Recommendations_TechnicalWG.pdf (accessed March 10, 2007).

3. Gunnarsdóttir 2005, pp. 551–554; Manuel 2001, pp. 60, 63–64.

4. For the relevance of open-access sites to this discussion, see Tananbaum 2004, 2005. The author is the past president of the Berkeley Electronic Press.

5. See Andrew 2003. Contributors to PSWPC are individually responsible for basic formatting: attaching a standard cover page, providing an abstract of the paper's contents and the author's e-mail address, converting their submission to a PDF file, and submitting the file to the local PSWPC coordinator (there is one faculty-member coordinator at each institution). The coordinator checks to see that the formatting is correct and then sends the file on to the IT specialist who serves as site administrator. The specialist mounts the file, ensuring that it is properly cross-linked by author, date, institution, and subject area.

HISTORY AND SCOPE OF THE PSWPC

The idea of setting up a Web-based Working Papers in Classics series originally occurred to Josiah Ober in the spring of 2004, when he was serving on the Princeton Faculty Advisory Committee on Appointments and Advancements. This committee reads appointment and retention dossiers from all academic departments. Many of the dossiers, notably in the social sciences, included references to working papers; in some cases, notably in economics, a section of the candidate's curriculum vitae was dedicated to a list of working papers. By chance, one of the committee members, Gene Grossman of the Department of Economics, had been instrumental in founding and maintaining his department's WP series at Princeton. He offered Ober a detailed explanation of how this series operated, how it had evolved from a print-based to a Web-based format, the costs of its operation, and the benefits reaped by both contributors and readers of these papers.

There are obvious differences in how the academic fields of economics and classical studies operate; for example, promotion decisions in departments of economics are based primarily on publications in scholarly journals, and articles often have multiple authors. Yet Ober reasoned that since economists, who are by disciplinary inclination very attentive to costs and benefits, had long found such working papers to be of substantial benefit—even worth the high cost of hard-copy distribution in the pre-Internet era—then a prima facie case could be made that a similar series would benefit classicists and classical archaeologists. Moreover, with Internet publication rather than print distribution, costs were within reason. The project seemed timely in that the Department of Classics at Princeton had recently hired an IT specialist with Web design experience, and was in the process of acquiring access to dedicated servers.

The project took shape in the fall of 2004 at a luncheon meeting at the Center for Advanced Study in the Behavioral Sciences in Palo Alto, California. Walter Scheidel, who had been thinking along similar lines, suggested that there could be a joint series sponsored by the classics departments of the two universities. Scheidel pointed to the benefits that would come with a somewhat larger series: more papers would be likely to attract more readers, and more faculty involved in the design and maintenance of the site would lower the burden on specific individuals. Ober and Scheidel then met with other classicists at Stanford who contributed ideas about how the site might be organized. A formal proposal was sketched out and presented to the faculty of both departments. The possibility of making the series a larger project from the beginning, by inviting other universities to join a consortium, was considered, but set aside as impractical—at least for the first, experimental stage. The resources that Princeton made available, including server space and staff time, were generous, but necessarily limited. After further discussion, each department formally endorsed the project, and Sanclemente established the site using RapidWeaver, a powerful Web-site authoring tool that eliminates much of the drudgery of coding Web pages.[6]

6. Sanclemente estimates that the costs for an in-house launch of such a Web site consist mainly of the labor of an IT professional and server costs—either of a portion of a designated server or of space or time on a central server. She does not regard this work as particularly burdensome once the initial "launch period" has passed. Maintaining the site requires the continued attention of the IT person; at present, this amounts to a few hours a week, on average.

When the PSWPC was launched in December of 2005, it was with a modest number of contributors—about half a dozen—drawn from the faculties of both universities. It has since experienced modest growth within the confines of its purview. By the late spring of 2006 there were about 15 contributors and about 50 working papers posted; and by December 2006 there were about 20 contributors and about 75 papers on the Web site. A number of papers have already gone on to formal print publication and so have been deleted from the site. Deleted working papers are replaced by a notice that directs the reader to the venue of final publication. We discuss the complicated issue of archiving below, and in future may consider a shift toward permanent postprint self-archiving. Several papers have been replaced by updated versions.

Although some papers by graduate students have been posted, the contributors, thus far, are drawn primarily from the faculties of the Princeton and Stanford departments. We hope that graduate students in both departments will use the venue more often in the future for circulating preprints of their work in progress. Among the benefits of posting a working paper is the public registration of ideas, since submissions are dated to the month of the year. Because the posting of research on the PSWPC site is a form of publication, it is a means of "hallmarking" work in progress. As it now stands, this registration or hallmarking advantage is limited to members of the Princeton and Stanford ancient studies communities, but it is our hope that the success of the PSWPC experiment will lead to the creation of other WP sites in classics and classical archaeology, and in closely related disciplines.

The PSWPC site is frequently accessed by users scattered over a wide geographical range. The site began with a modest number of inquiries, or "hits," reflecting a somewhat limited and mostly domestic interest. But it has grown rapidly, and within a rather brief span of time, to have a substantial worldwide readership. Between September and November of 2006 alone, the average number of hits per day has increased from approximately 1,100 to about 1,600. Only a portion of these hits are actual requests for a specific paper. In the most recently counted week there were about 1,750 requests for 67 papers by 20 authors—that is, for virtually all of the authors and for most of the active papers. Requests for a given paper ranged from seven, the lowest number of hits counted by the tracking program, to a high of 170, for an average of 26 per paper. Within each week, a distinct cycle occurs: the number of hits is highest on Mondays through Wednesdays and is noticeably lower on Thursdays and Fridays, with the lowest number of inquiries occurring on weekend days.[7]

A large number of requests come, as might be expected, from institutions of higher education in the United States, but many hits also come from private networks and sources within the United States, Canada, Australia, and Britain. Beyond these, however, is a further international component that at least equals the sum total of all of these domestic and "usual-suspect" interests. A random sample from the first two weeks of November 2006 shows international queries coming from Chile, the Netherlands, Peru, Greece, Finland, Spain, Poland, Ireland, Brazil, Israel, Indonesia, Russia, Turkey, New Zealand, Zimbabwe, Japan, Iran,

7. Data reported by the Princeton Office for Information Technology, from 11:59 p.m., December 8, 2006, to 2:18 p.m., December 15, 2006.

Singapore, Bulgaria, Thailand, Mexico, Nepal, Taiwan, Croatia, Saudi Arabia, and Argentina—to cite only a selection. The wide range of these sources would seem to indicate a large and growing international interest in the site.

RELATIONSHIP TO TRADITIONAL SCHOLARLY PUBLICATIONS

If the PSWPC site proves successful, if it is imitated, and if its imitators are also successful, would this point to the demise of established scholarly journals, whether print or Web-based? We believe not, at least in the foreseeable future, given the fundamental difference between the role of a working-papers series and that of a scholarly publisher in a field such as classical studies. Moreover, there are problematic aspects of the new media that have not yet been fully resolved to the satisfaction of all. One of these concerns involves the guaranteed longevity of access to and the archiving of publications by WP sites. Traditional academic publishing houses and institutions that support research journals often seem to offer a firmer guarantee of continuity. Indeed, one of the e-journals mentioned at the beginning of this article, *Histos,* ceased publication in 2000 for a number of reasons that often bedevil the long-term maintenance of e-resources by university departments and academic programs.[8]

As Brent Shaw reports, based on the discussion that followed his invited presentation on the PSWPC to the Society for Scholarly Publishing in September 2006, it is difficult to limit the effects of WP series once they are initiated. Two of Shaw's interlocutors, one from the National Science Foundation and the other from the field of economics, emphasized that once WP sites are launched and become "normalized," they can become the preferred venue for the first publication of papers in certain disciplines.[9] They believed that in several disciplines in the natural sciences and in economics, WP sites are already in the process of replacing traditional journals as the first choice of venue for publication.[10]

One way to think about the potential impact of working-papers sites on publishing in classical studies is to think of the traditional role of scholarly publishing as being constituted by three main processes: *making public, certifying,* and *archiving.*[11] The first of these three processes, that of making public, seems at first glance the heart of the matter—after all, what is publishing other than making public? Yet, in our opinion, this first process is probably the least important to the fundamental role and likely future of traditional scholarly publishing. Open-access working-papers series certainly do have a role to play in making scholarship available to a public, but only in a preliminary form. The status of the content as "in progress" or "in some way incomplete"—and not in its final state—is signaled by the term working paper. Indeed, any given working paper might be close to or far from its final state. Authors sometimes indicate in the abstract or footnotes that a paper is forthcoming, but the PSWPC site itself does not make any claims or assumptions about how close any given working paper might be to its final form, or even whether or not there will be a final form.

8. According to A. J. Woodman and J. Marincola (pers. comm. to Shaw), *Histos* (based at the University of Durham) might be revived. Continuing publication was difficult to sustain given personnel moves, but it is hoped that a new agreement between its originator, John Moles, and the university can be reached.

9. To appreciate the extent of the impact of working papers on economics, see the site EconPapers at http://econpapers.repec.org/paper.

10. A conference blog is available at http://ssptmr.blogspot.com/2006_09_01_ssptmr_archive.html.

11. Most recently, see Mabe and Amin 2002, pp. 149–150.

If working papers are to be cited, both those who cite them and those who read the citation must be aware that it is work in progress.

In terms of making research public, little of this seems new, except for the medium of distribution. Long before the advent of the Internet, unpublished papers were circulated among friends and colleagues in the "prepublication release" form of more or less complete drafts. A WP series may be thought of as an extension of this informal practice. The major difference is that access to the preprint is open and publicly available for as long as the paper is posted on the site. In the current practice of the PSWPC site, the final and stable phase of making the paper public still remains in the hands of traditional publishers.

Registration, an ancillary but (to authors, at least) very important part of "making public," is particularly well served by a WP series. Registration refers to the role that an authorized venue for publication, traditionally an established scholarly journal or an academic press, plays in dating the appearance of an author's idea, analysis, or presentation of original data. It is highly advantageous for a scholar to have his or her work registered as originally his or hers as soon as possible after it has been completed. Each successive version, including the important first one, may be immediately dated by posting on a working-papers site. Internet e-print sites can usually accomplish this step more quickly than traditional venues of publication, which is one of the reasons that WP sites are becoming the preferred places of first publication in scholarly fields with a rapid turnover in ideas. In many of the natural sciences, in particular, having one's idea established as first in a series is critical to the researchers.

The idea of certification refers to the assurance of quality. It is the implicit message to the reader that a publication has been carefully and impartially reviewed by experts in the field and thus is worthy of serious consideration. In traditional publishing, certification is achieved primarily through the process of peer review. Consideration of the ways in which working-papers series are *unlike* articles or book chapters published by established scholarly publishers leads to the conclusion that the certification process is the central and defining feature of traditional scholarly publishing. First-rate scholarly journals and book publishers rightly pride themselves on their copyediting and proofreading, on the aesthetic value of their products, and on their effective modes of distribution and marketing. In some cases, senior editors may also offer authors substantial help in project development. But at the heart of the reputation of a scholarly publisher or journal, and therefore of the publisher's "brand," is the care and rigor of its review process.

Arguably, from the point of view of the scholarly consumer-reader, the most important service that the publisher provides is a professionally competent prepublication reviewing process. That process may take place partly in-house—indeed, many acquiring editors are themselves highly expert in the relevant fields—and partly externally, through the technical experts whom the editor persuades to do the hard work of providing a fair and detailed peer review. This review process is ultimately what separates traditional scholarly publications not only from WP series, but also from other forms of publication. While nonscholarly publishers may employ

fact-checkers in an attempt to ensure the accuracy of published work, it is the mark of the scholarly publisher to assume the time-consuming job of ensuring that the overall intellectual content of the books or articles that they publish has undergone a rigorous process of judgment by qualified scholars with established expertise in the relevant field. If this kind of peer review is an essential part of the establishment of scholarly knowledge, an "epistemological objection"[12] could be raised against working-papers sites or preprint archives—namely, that they will become filled with bad information and that the entire enterprise of academic scholarship could be thereby compromised. How serious is this objection?

Working-papers series, at least those that operate on the principles of the PSWPC, do not institute editorial interventions to certify their content. As noted above, there is no content-review process. The only assurance to readers of the potential value of the contents is the reputation of the two departments. A reader may reasonably hope that members of the faculty at Princeton and Stanford would not make public—or allow their graduate students to make public—work that is shoddy or fundamentally misleading. The great success of the *arXiv* site in physics, for example, has been explained by the natural gatekeeping function of a research community that has a high degree of internal cohesion. This core group of scholars similarly assures the reader that posted papers are of a minimum requisite quality.[13]

Whether the research community of classical studies can boast a level of cohesion similar to that of the high-energy physics community is debatable. Yet the extent to which certification is a serious problem and peculiar to WP sites can be exaggerated by those who focus on the epistemological objection. First, traditional-publisher peer review may be relatively undemanding. Consider the related field of history. Although high-ranking history journals have higher rates of rejection, more than half of all refereed history journals accept for publication more than half of the papers that are submitted to them.[14] Next, the public availability of a working paper allows it to be cited and criticized in other scholarly work; unsound information can thus be exposed as such by the ordinary processes of scholarship. Finally, although it might still be objected that a WP series offers relatively weak forms of assurance compared to formal peer review, the provision of fully completed and fully certifiable research is not the main purpose of WP sites. Working papers, indeed, may often be posted in a deliberately unfinished state, with arguments that still need substantial work, in order to attract potentially helpful comments from readers.

The epistemological objection may actually be a less troubling aspect of the emergence of e-print series than is the potential for modes of research and evaluation to diverge. In some of the natural sciences—most notably physics, which has led the way in these changes—the presence of online WP series has already contributed to a strange disjunction between the way in which academic work is carried out and the way in which it is evaluated. The first-line recourse of physics researchers is now to the universe of online working papers. Yet, as Kristrún Gunnarsdóttir has observed, because of professional requirements of evaluation for tenure and promotion, "the *arXiv* system has had very little influence upon . . . professional certification." She goes on to say, "when acting as authors, scientists have no

12. The term is that of Gunnarsdóttir 2005, p. 550.

13. The *arXiv* site can be found at http://arxiv.org (accessed January 16, 2007). See Manuel 2001, p. 62, on these "peer-respect" controls and pressures; and Gunnarsdóttir 2005, pp. 555, 558, 566, for the function of the core group in the success of the HEP case.

14. Stieg 1986, pp. 15–16.

choice but to care greatly whether or not their papers have been or will be formally published, because they must compile a record of research activities in a widely recognized and culturally entrenched form, recognizable to 'outsiders.' This is an odd situation."[15] It is indeed odd; the disturbing nature of the schism is made clear in remarks by the editor of a traditional physics journal: "in physics, nobody except a student at a place where you didn't really have active physicists would ever learn anything from a physics journal. That's just where papers eventually were published so that [they] would look official and somebody would get tenure. All of the real action was happening first in the . . . preprints."[16]

While it is possible that such a disjunction can exist in the short term, serious questions must be raised about the long-term future of academic evaluation in a research world dominated by e-prints. There might be reasons why the disciplines of classics and classical archaeology would be exempt from this process, but there are surely as many reasons, including the comparatively enormous costs of traditional journal production, to make one suspect that our disciplines too will eventually face the certification problems posed by these new modes of publication.

Those who think that Web-based self-publishing will ultimately supersede traditional scholarly print publishing refer to a market analogy to argue that the certification issue will be sorted out in the e-world in ways that do not require traditional forms of peer review. They suggest that it is the "invisible hand" of the market of ideas that will be the ultimate arbiter of the value, or lack thereof, of the research and scholarship published in these new electronic forms.[17] The notion is that the value of a work of scholarship, like the price of a commodity, will be established by aggregated dispersed knowledge and general response to the work in question. Quality will be determined by many users rather than by a few editors, in a manner similar to the "citation counting" or "citation assessment" prevalent in many of the social and natural sciences. In this scenario, better work, like better commodities, will be more widely recognized and cited and so will rise to the top, while poor work will simply sink out of sight.[18]

Finally, the function of archiving consists of making scholarship permanently available. At this time, the PSWPC project is not undertaking this function, although it would not be technically difficult and we have been strongly urged to do so by open-access advocates. A Web site that posts preprints can also be used to self-archive postprints, that is, the final texts of articles after they have undergone peer review and/or have been published by a journal. Advocates of open access who see working papers as the future of publishing are strongly in favor of postprint archiving. If, as they argue, it is the working papers themselves that will tend to be cited and referred to with increasing frequency, deleting these posted versions is not merely an inconvenience to readers, even if journal publication is finally achieved. The problem, as they see it, is that the e-versions posted on a WP site will have been referred to or quoted in other scholarly publications, sometimes frequently, and so this new process of "publication" should reasonably require open access to the versions that have been cited.[19]

Postprint self-archiving serves the interests of both the author and the public by facilitating the immediate and costless dissemination of

15. Gunnarsdóttir 2005, p. 563.

16. Manuel 2001, p. 61, quoting McGinty 1999, p. 100.

17. For studies of this process, see McKiernan 2003, 2005; Harnad 2000. For some of the problems, see Kling 2004.

18. For an influential statement on the role of dispersed knowledge in establishing price, and the suggestion that dispersed knowledge is the central problem for all social science, see Hayek 1945.

19. For early reactions to the PSWPC by members of the open-access community, including discussion of the archiving issue, see the online blog-interview of Ober conducted by Richard Poynder, with subsequent comments, at http://poynder.blogspot.com/2005/12/oa-as-instrumental-good.html (December 22, 2005).

credentialed scholarship. Yet it may interfere with the economic interests of scholarly publishers who invest resources in the credentialing process but are unable to recoup costs when the work circulates in the form of self-archived postprints. Therefore, at present, self-archiving of postprints requires greater circumspection than the posting of preprints or working papers. The author always holds the copyright to preprints—unless the work was undertaken "for hire"—and he or she cannot legally be constrained from posting existing preprints beyond the publication of an article's final version unless this right has been expressly forfeited in a contractual agreement with the publisher. Of course, publishers may, as a matter of policy, prevent authors from making the final version of an article available outside the journal itself.[20]

In keeping with the overall trend toward open access, however, a growing number of academic journals already permit the self-archiving of postprints. In a sample of 9,861 periodicals produced by 199 publishers, 6,297 journals and 166 publishers, or some 64%, currently permit the self-archiving of final postprints free of charge or time restrictions.[21] While the overwhelming majority of these publications are from the sciences, some are relevant to this discussion. This group includes Johns Hopkins University Press, which publishes the *American Journal of Philology* and the *Transactions of the American Philological Association;* Cambridge University Press, which publishes *Archaeological Dialogues* and the *Cambridge Archaeological Journal;* the University of California Press, which publishes *Classical Antiquity;* and Brill, the publisher of *Mnemosyne.* Several other academic publishers impose limited embargos. For example, Oxford University Press, the publisher of *Classical Quarterly* and *Classical Review,* bans self-archiving of postprints within 24 months from publication in the arts and humanities, and Routledge within 18 months. The embargo policies of the University of Chicago Press *(Classical Philology)* and Blackwell *(Oxford Journal of Archaeology)* vary according to the journal.

At the same time, substantial gray areas persist in our field. Many important journals are published by professional associations without the intermediation of major publishers. Unlike the journals of larger organizations, such as the postprint-friendly American Anthropological Association, they tend to be missing from www.eprint.org's listings. Major players such as the *American Journal of Archaeology, Journal of Hellenic Studies, Journal of Roman Studies,* and *Phoenix* belong in this category. It was only very recently that *Hesperia* itself took the lead by deciding to incorporate a postprint self-archiving option into its copyright-transfer agreements.[22] Other publications, most notably the *Journal of Roman Archaeology,* are the product of small operations, while still others come out of continental Europe, where they are subject to local conventions and are without readily accessible pertinent policy information—or without any such policy at all. The considerable uncertainties and attendant information costs generated by this intense fragmentation of scholarly publishing in classical studies are bound to slow the spread of open-access practices in postprint self-archiving.[23]

It has, however, long been recognized that even in cases where publishers curtail postprint self-archiving or their pertinent policies are not

20. Especially in the field of archaeology, the practice of using copyrighted images complicates the issue of preprint self-archiving: authors need to explore whether explicit permission from copyright holders is required, and whether separate permissions need to be obtained for the working-paper version and the formal publication.

21. According to http://romeo. eprints.org/stats.php (accessed March 18, 2007).

22. Tracey Cullen (pers. comm.).

23. The fact that small and not-for-profit publishers accept postprint self-archiving less frequently than large and commercial publishers represents an additional obstacle: see Cox 2006, p. 275. In practical terms, however, publishers' policies may have little impact on self-archiving practices, which are primarily determined by the customs and expectations that are specific to particular disciplines; see Antelman 2006.

easily discernible, authors can circumvent these difficulties by making their latest preprint (i.e., the version that precedes the final peer-reviewed and revised paper as published) accessible beyond publication, and then posting a separate list of corrigenda that reflect the changes between that preprint and the published version. This procedure, albeit more cumbersome than straightforward postprint self-archiving, maintains the integrity of the copyright-protected published version without depriving users of open access. In the current publishing environment, preprint self-archiving sites such as the PSWPC provide a convenient and essentially costless forum for authors who wish to self-archive postprints of their articles published in periodicals that do not impose restrictions or merely place temporary embargos on this practice, and for those who wish to complement existing preprints with separate updates that re-create the content of the final product.

In general, work for hire and publications that attract royalty payments may not be self-archived beyond publication without the publisher's permission. Although these arrangements do not normally apply to publication in academic periodicals, they severely limit the potential of open-access initiatives in fields such as classics that rely to a significant extent on books and book chapters to disseminate research and evaluate the academic standing of scholars.[24] While book chapters may seem similar to journal articles in terms of length and style, they often—though not always—result in publications that entail the disbursement of advances and royalties or—primarily in the case of handbooks and encyclopedias—involve up-front honoraria. While the latter, designated as work for hire, necessarily precludes self-archiving, the former may leave room for postprint archiving if the author retains the copyright and the archiving process does not conflict with specific contractual obligations. At the end of the day, the scope for postprint self-archiving of parts of academic books will be determined by bargaining between authors and publishers, and is likely to vary greatly among different publishers. For this reason, and to avoid any confusion about copyright issues, a preprint site such as the PSWPC is unlikely to embrace postprint self-archiving of most kinds of nonjournal publications.

WHAT'S NEXT?

The future of the PSWPC site, which is still in an early state of development, is uncertain. It was originally planned as an experiment, as a bit of a provocation and a possible example to other Classics departments, and as a temporary location where the ongoing research work of faculty and graduate students in the departments of Classics, and allied disciplines, at Princeton and Stanford could be opened to a wider readership in advance of formal print publication. The original thought was that if the site was successful, the demonstrated need might prompt and encourage a large professional organization, such as the American Philological Association (APA) or the Archaeological Institute of America (AIA), to support a much larger working-papers site for the wider discipline. In the meantime, the success, in terms of gaining readers, or at least visitors to the site, that the

24. As already noted in Suber 2005, based on a paper given at the 135th Annual Meeting of the American Philological Association in 2004, available at http://www.earlham.edu/~peters/writing/apa.htm (February 2, 2004).

PSWPC has had so far raises the question of whether and how to expand its membership and scope.

In theory, for example, an e-print site such as the PSWPC should be able to accommodate doctoral dissertations. A more suitable means, however, has recently been created by the decision of ProQuest's UMI division to launch an open-access service that complements the traditional sale of dissertation printouts or files. This new service, although somewhat more costly to the author, promises to optimize access by offering downloads of deposited dissertations free of charge and making them accessible via standard search engines (http://www.proquest.com/products_umi/dissertations/epoa.shtml). This new policy represents a welcome shift from the established practice of double-billing authors as well as end users, which was necessary in a time of microfilms and photocopies but has become increasingly hard to justify for the almost costless distribution of PDF files. It also obviates the need for the self-archiving of dissertations on e-print Web sites. At the same time, it merits attention that elements of larger theses are perfectly suitable as preprints: polished chapters that were used as writing samples for job searches may be the most obvious examples.

But why not expand the site to include the work of scholars at other universities, as some of our commentators have urged? The main technical problem that Sanclemente foresees with substantial expansion is that the existing structure of the site, designed from the beginning as an open-access site, was intended to support the limited number of persons who were expected to submit research in progress from the two university departments. Any significant increase in the number and volume of posted research pieces would require a significant redesign of the Web site to cope with a proper indexing of the whole. This step would be necessary in order to enable the casual viewer of the expanded site to have adequate access to its contents. As it stands, unlike many working-papers sites, the PSWPC site is not formatted as an e-periodical, but rather gives continual and immediate access to all its contents simultaneously through general subject and author indexing.

It therefore seems preferable at this juncture to maintain the existing character of the PSWPC site as a project of the two departments and to hope that its success will provoke the development of other working-papers sites.[25] The development of prepublication WP sites in other disciplines has sometimes followed this pattern. One might imagine the development of a single larger site, such as the *arXiv* site for physics and ancillary areas in mathematics and computing that is maintained by Cornell University (see above). An alternative would be the development of diverse large sites, such as those found in the discipline of linguistics, with distinct, fully developed, and autonomous working-papers sites at MIT, Harvard University, the University of Toronto, and the University of Pennsylvania, among others. It might well be argued that classics and ancient history will be better served by the latter model. Yet another alternative that lies between these two models is a Web Ring system that would link different WP sites into one large reference site where all papers could be searched. It may well be that this is the function that could be best served, in some fashion, by the APA or the AIA as a central support organization.

25. It may be noted that there are other comparable cooperative efforts between two universities in disciplines analogous to classical studies (culturally broad in definition but encompassing specialist subfields), such as the cooperative WP site in Latin American studies maintained by the University of North Carolina, Chapel Hill, and Duke University: The Carolina and Duke Consortium Working Paper Series; http://www.duke.edu/web/las/papers.html (accessed January 14, 2007).

Possible future developments for the PSWPC include making the site searchable—a need that becomes ever more pressing as the site becomes larger—and better enabling e-responses by providing dialogue boxes. Dialogue boxes could be directly and immediately accessed by readers who might respond to the author more directly and rapidly than by e-mail. As a result, authors might hope for more numerous and immediate comments on interpretative content, mistakes of fact, and so on. But these developments remain in the future, and, as noted above, would require substantial modification of the site as it is currently designed.

Meanwhile, in view of the legal and practical constraints related to archiving, we think that scholars in the humanities currently stand to benefit most from the following initiatives:

1. The promotion of preprint and—wherever feasible—postprint self-archiving on the largest possible scale. As discussed above, this objective requires the creation of a whole network of WP sites or, alternatively and perhaps more efficiently, of a centralized repository that is capable of catering to a much larger constituency of scholars. Recent studies consistently show a positive correlation between open-access practices and citation rates, leaving no reasonable doubt about the intrinsic benefits of self-archiving.[26]

2. The involvement, as quickly as reasonably possible, of larger professional organizations in the field, such as the APA and the AIA, both in organizing and facilitating the large-scale e-publishing of research on WP and similar sites, and also in discussing, analyzing, and establishing policy about the ways in which these new forums of research publication should be evaluated in professional career development.

3. The systematic inclusion of classics, classical archaeology, and other humanities journals in existing databases that elucidate the postprint self-archiving policies of all relevant academic publishers and associations. This project will also encourage those publishers who have not yet formulated a policy to do so.

4. Contractual bargaining between authors and publishers regarding the self-archiving of books and, perhaps more realistically, book chapters, especially in cases where royalty payments are absent or minimal.

5. A move among institutions of higher education toward greater flexibility in considering what counts as "publication" in the new electronic media, even for fields in the humanities. There are some indications, even now, that the significant differences between traditional publication and e-publication are likely to be addressed in the near future.[27]

6. Monitoring the results of our experiment and attempting to discern trends that are likely to be followed within our discipline. We ought not to extrapolate directly from existing trends in the natural and social sciences to predict trends in the

26. For a substantial and relevant survey, see Hajjem, Harnad, and Gingras 2005, based on 1.3 million articles in 10 disciplines, including political science, economics, sociology, law, and education, although there has been some discussion of the methodology; see, e.g., Antelman et al. 2005.

27. The recent Modern Language Association (MLA) report on rethinking tenure, for example, in which institutions of higher education are being urged to give more serious consideration to understanding, evaluating, and crediting research work published in "new media," is surely not the first sign of such changes in the way in which disciplines in the humanities will evaluate publication in the future; see http://www.mla.org/tenure_promotion (December 7, 2006).

electronic dissemination of research or, more importantly, the modes of these transfers. Although studies of these other disciplines have indeed shown that "the shift toward the use of electronic media in scholarly communication appears to be an inescapable imperative . . . [nevertheless] the shifts are uneven both with respect to field and with respect to the form of communication."[28]

Our relatively short experience with the PSWPC—after all, at the time of writing, our site has been around for fewer weeks than *Hesperia* is now celebrating in years—leads us to conclude that there is good reason for classical scholars, and other humanists, to embrace the use of the Internet and Web technology for preprint circulation and self-archiving. There are many unresolved issues with open access, but none appears to us to diminish the value to authors and readers of the widest possible dissemination of preprints. While the ultimate impact of the PSWPC, and of other Internet-based publishing enterprises, remains impossible to determine, for the time being we believe that working papers in the field of classical studies can best be understood as complementary to the traditional processes of scholarly publishers in making public final versions of scholarly work, certifying that it has been competently peer-refereed, and archiving that work for the benefit of future generations of scholars. At the same time, the principal advantages offered by working papers—quick registration, immediate feedback from other scholars, and free access—highlight areas in which formal journals could learn from this model and enhance the services that they provide to the academic community.

28. King and McKim 2000, p. 1306; cf. Swan and Brown 2005 for a detailed study of field variance within natural and social sciences.

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