OPEN ACCESS, SCHOLARLY COMMUNICATION, AND THE MILLENNIALS

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The Open Access (OA) movement and its potential impact on scholarly communication may be relatively unfamiliar to some educators in composition and rhetoric. The Open Access movement developed during the 1990s as a result of both dramatic increases in journal subscription costs and exponential growth in communications technology. Open Access refers to knowledge made freely available on the Internet, most often in the form of journal articles. The pace at which the movement develops varies by discipline and has been greatest in the sciences, technology, and medicine where increases in the cost of journal subscriptions and the need for access to the latest information are highest.

To date, there are only a handful of OA journals in the fields of composition, writing, and rhetoric (a list is included at the end of this article). However, journal costs are rising across disciplines. Over the past five years, the average subscription cost of journals in languages, literature, and education (in which composition and rhetoric journals are typically categorized) have risen 46% and 47% respectively (Van Orsdel and Born, 2006). Perhaps even more important are changes in the students of composition, writing, and rhetoric themselves. The ubiquitous (to them) nature of electronic communication has effected remarkable changes in the way they seek, use, and communicate information. In order to teach them effectively and help them to navigate this new communication environment, educators need to understand both where students are coming from (their attitudes and

behaviors toward communicating information) and where they are going (some at least will be the next generation of scholars).

With the rise of OA publication, web sites that collect and archive such material have become increasingly important and more numerous. The *DOAJ (Directory of Open Access Journals)*, http://www.doaj.org/, maintained by the Lund University Libraries in Sweden, was created to help scholars and researchers identify freely-available journals. **OpenDOAR** (http://opendoar.org) is a directory of OA Repositories. It is a joint collaboration between the University of Nottingham in the U.K. and Lund University in Sweden. **ROAR** (http://archives.eprints.org/), the Registry of Open Access Repositories, is another directory of repositories of Open Access articles based at the University of Southampton. Both link to a large amount of material on writing and composition freely available to readers.

A few examples of recent developments in the Open Access movement reflect the impact that it is having on scholarly communication. The National Endowment for the Humanities (NEH) recently announced its preference for Open Access projects (that is, those projects whose results would be published in Open Access journals and other Open Access forums instead of in forums to which access is restricted by a fee) in its funding priorities. In August 2006, the Scholarly Editions Grants Program of the NEH adopted a policy to favor Open Access projects over non-Open Access projects. However, after some complaints, the guidelines were modified to restrict the Open Access preference to "online projects."

Two of the strongest Open Access bills ever introduced in Congress—FRPAA (Federal Research Public Access Act of 2006) and the American Center for Cures Act— will be debated in Congress. These bills would *require* open access to publicly-funded research. U.S. government agencies with annual extramural research expenditures of over $100 million would make manuscripts of journal articles stemming from federally-

funded research publicly available via the Internet within 6 months after publication in a peer-reviewed journal.

In July 2006, the provosts at 25 research universities came out in favor of FPRAA, saying that the current model of research publishing results in outrageously expensive journal prices that are making it impossible for our nation's academic libraries to subscribe to needed journals and making it difficult for people to follow the progress of research. The presidents of 53 liberal arts colleges issued a joint letter backing the legislation as well (Jaschik 2006). As of January 2007, the tally of university provosts and presidents endorsing FRPAA had reached 131 according to the Scholarly Publishing and Academic Resources Coalition (SPARC) (Suber 2007). Peter Suber, editor of the SPARC Open Access Newsletter, stated, "The public deserves open access to publicly-funded research, regardless of the discipline. It's good for students and scholars not affiliated with wealthy institutions; it's good for authors who enlarge their audience and impact; and it's good for the funding agency and taxpayers who increase the return on their investment."

The financial interest in this issue is only one reason for educators' willingness to speak out on the topic. There is "a philosophical view" that is spreading, according to Nancy Dye, president of Oberlin College—"Knowledge is made to be shared." Many scholars are of the opinion that the creation of new knowledge, their stock-in-trade, is slowed by barriers to its dissemination such as high subscription fees. An MLA Task Force on Evaluating Scholarship for Tenure and Promotion urged academic departments "to accept the legitimacy of scholarship produced in new media. And to the extent that some professors and departments don't know how to evaluate quality in new media, 'the onus is on the department' to learn, not on the scholar using new media." The report notes that digital media is "pervasive in the humanities" and "must be recognized as a legitimate scholarly endeavor" (Jaschik 2006).

According to Peter Givler, Executive Director of the Association of American University Presses, "Change in the

relationship between publishing and tenure will come, but it may come a little more slowly than the MLA would like. I think there is going to be change, but it is going to be generational," he says. When assistant professors get on tenure committees, "the pace of change will accelerate" (Jaschik 2006).

The generation that is likely to quicken the pace of change in these and many other facets of scholarly communication is the Millennial Generation. Millennials, also known as the Echo Boom Generation, Generation Y, Gamers, and the Net Generation, are second in size only to the Baby Boom Generation. They were born between 1978 and 1994; the bulk of them currently dominate college classrooms while the eldest among them are turning up as faculty. They are fundamentally different from previous generations in learning and communication style; in fact, a growing body of evidence suggests that their cognitive and social development are significantly different from their forebears (Prensky, 2001b). Different; not better, not worse, but different.

Marc Prensky coined the terms "digital native" and "digital immigrant" to describe differences between the Millennials' experiences with communications technology and earlier generations' experiences with it (Prensky, 2001a). The analogy of native and immigrant is obvious; for the Millennials, computers and the Internet have always been ubiquitous. For them, computers are central to communication, entertainment, information seeking, and learning, whereas earlier generations have immigrated to computers from earlier technologies for these same functions.

However, the native/immigrant analogy only scratches the surface. The processes through which Millennials think and learn, and even their academic performance, can seem foreign to digital immigrants working to educate them. The myth of their poor academic performance is slowly being erased by measurements of competencies that exceed earlier generations at the same educational stage (Abrams, 2006). In fact, there is scientific evidence that their IQ scores are increasing at statistically

significant levels and MRI studies show that their brains are growing in size (Abrams, 2006).

Many behaviors resulting from these differences are already evident on college campuses. Millennials are results oriented, experiential learners with a preference for case studies and simulations over lectures. They are impatient and typically accelerate learning by performing several tasks at once. Although these characteristics may be interpreted by digital immigrant educators as shortened attention spans, their ubiquitous use of emergent technology has programmed them to learn in this way. They expect flexibility and convenience as well as the ability to personalize and customize their learning experiences just as they do their communication and entertainment experiences. They are accustomed to instantaneous and constant feedback and respect intelligence and education (Sweeney, 2006).

Thus it is not surprising (and any librarian and most educators will tell you from experience) that their information source of choice is the Internet. In a recent qualitative study of differences in information seeking and use behaviors between generations, one of the authors found that while all generations of students recognize the usefulness of electronic indexing, students of the Millennial generation are less aware of information formats other than electronic formats. While students and educators of other generations are more familiar with methods of print information seeking and thus may have greater knowledge of the variety of resources (e.g. indexes, dictionaries, thesauri, encyclopedias), Millennials don't know the difference between types of resources or resource formats and don't see the need to know. This finding supports evidence in the literature of another characteristic of Millennial Generation students: the format or medium in which information is created and/or presented is irrelevant as long as students can obtain it quickly and easily (anytime, anywhere).

The native/immigrant analogy brings to light a classroom example of the differences between Millennial Generation students and Baby Boom Generation faculty. Just as confusion can arise between those who are native to a language (having learned

and used it from birth) and those who have learned that language as adults, confusion and misperceptions can occur between digital native students and digital immigrant educators. Assignments or syllabi often include direction about acceptable information resources based on format (e.g. both print and Internet resources must be used to inform the students' work). Assignments are made by and are clear to faculty of a generation for whom the format or medium by which information is disseminated is a proxy for the legitimacy of that information. However, this assumption can cause confusion to the Millennial Generation student who is used to making judgments of information legitimacy based on criteria other than format (e.g. content) and for whom "the Internet" contains a wide variety of formats (print, audio, visual, etc.). What may not be clear to the Millennial Generation student is the difference between scholarly articles from born-in-print resources (e.g. scholarly journals) that are obtained via fee based electronic indexes on the Internet and scholarly articles from born-digital resources (e.g. OA journals). Indeed, it may not have occurred to the Millennial Generation student that there is a difference. Explanations, translations if you will, that cross this generation gap serve to improve Millennial Generation student understanding and learning.

Evidence in the form of increased usage of OA journals also points to the Millennial Generation's impact on the OA movement. Studies comparing the citation rates of OA articles to non-OA articles show that while citation rates vary by discipline, OA articles are consistently more heavily cited than non-OA articles (Hajjen et. al., 2006). Increased use of OA journals is also evident in less traditional measures of use such as hits on web sites, article download counts and article linking (these methods include OpCit, http://opcit.eprints.org/, Citebase, http://citebase.eprints.org/, Citeseer, http://citeseer.ist.psu.edu/cs, and the Usage/Citation Correlator, http://citebase.eprints.org/analysis/correlation.php).

Based on their format agnosticism, their native skill at manipulating an electronic world of almost infinite information

choices, their expectation of flexibility and convenient access to that information, and their desire for speed and efficiency, it is easy to see why the Millennial Generation can be expected to embrace the OA movement. Given the numbers, it is also likely that this generation's influence will have a dramatic effect on the success of OA. Moreover, since the single largest birth year for this generation was 1990 (Sweeney, 2006), the greatest increases in their use of OA journals are predictably yet to come.

The Millennial Generation's effect on the larger system of scholarly communication can also be expected to increase as they enter the ranks of college and university faculty. In addition to those behaviors already noted, their propensity for communication (as evidenced by their enormous networks of friends) and the wide variety of media through which they effect their communication (cell phones, instant messaging, and electronic social networks like MySpace and Facebook) as well as their superior collaboration skills cannot help but change the norms of scholarly communication.

Clearly, the Millennial Generation's information behaviors differ from their elders'. Although the full effect of their influence is difficult to predict since the largest numbers of Millennials are only getting ready to enter college, it is certain that the system and processes of scholarly communication will be as different in ten years from what it is today as Millennial Generation scholars are from current scholars. The success of the OA movement is only the tip of the iceberg.

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Van Orsdel, Lee and Kathleen Born. "Journals in the time of Google." *Library Journal* 131. 7 (2006):39-44.

Open Access Journals in Writing, Composition, and Rhetoric

Across the Disciplines, http:// wac.colostate.edu/atd/

Composition Forum, http:// /www.fau.edu/compositionforum

Cuneiform Digital Library Journal, http:/ /cdli.ucla.edu/pubs/cdlj.html

CW3: Corvey Women Writers on the Web, http://www2.shu.ac.uk/corvey/CW3journal/

Enculturation: A Journal of Rhetoric, Writing, and Culture, http://enculturation.gmu.edu/

Kairos: a journal for teachers of writing in webbed environment, http://english.ttu.edu/kairos/

Linguagem e Ensino, http:// rle.ucpel.tche.br

Poroi: An Interdisciplinary Journal of Rhetorical Analysis and Invention, http://www.doaj.org/doaj?func=further&passMe=http://inpress.lib.uio wa.edu/poroi/poroi/index.html

RhetOn, http://www.rheton.sbg.ac.at

Rhetorical Review: The Electronic Review of Books on the History of rhetoric, http://www.nnrh.dk/RR/index.html

For More Information

Directory of Open Access Journals (DOAJ). http://www.doaj.org/

Directory of Open Access Repositories (OpenDOAR), http://opendoar.org.

Create Change. "How Scholarship is Being Transformed." http://www.createchange.org/digitalscholarship.html.

Pew Internet and American Life Project, http://www.pewinternet.org/.

Registry of Open Access Repositories (ROAR), http://archives.eprints.org/.