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Libraries and Graduate Education: Opportunities for Collaboration

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Academic Libraries and Graduate Education: Advocating for Points of Confluence in the Graduate Student Experience

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Urban sociologist Elijah Anderson's paper, "The Cosmopolitan Canopy," offers useful insight into sociocultural conditions in cities that is also pertinent to understanding colleges and universities. Using Louis Wirth's portrayal of urbanism and its role in the emergence of the modern city, Anderson has argued that the city "is more racially, ethnically, and socially diverse than ever, with profound cleavages dividing one element from another and one social group from another."

As the urban public spaces of big cities have become more riven by issues of race, poverty, and crime, much of what Wirth described as urbanites' blasé indifference seems to have given way to a pervasive wariness toward strangers, particularly anonymous black males ... In places such as bus stations, parking garages, and public streets and sidewalks, many pedestrians move about guardedly, dealing with strangers by employing elaborate facial and eye work, replete with smiles, nods, and gestures geared to carve out an impersonal but private zone for themselves.¹

Like cities, today's college and university campuses are also more culturally and socially diverse than ever before, with subcommunities separated by cultural and disciplinary differences that create a similarly fractured environment. Yet Anderson's fieldwork has also revealed subtle points of confluence in cities, where populations converge under what he refers to as a "cosmopolitan canopy." For Anderson, locations of intercultural engagement in cities occur in such varied public or semi-public locations as public markets and jazz clubs. They are, in his words, "heterogeneous and densely populated bounded public spaces within cities that offer a respite from this wariness, settings where a diversity of people can feel comfortable enough

to relax their guard and go about their business more casually." The cosmopolitan canopy enables "people of different backgrounds the chance to slow down and indulge themselves, observing, pondering, and in effect, doing their own folk ethnography, testing or substantiating stereotypes and prejudices or, rarely, acknowledging something fundamentally new about the other."²

The need to identify and cultivate such points of confluence in colleges and universities has no less significant meaning then it does for the city, given the breadth and depth of diversity found in academic environments. Not only is the persistence of division evident in analysis of campus demographics but also among disciplines, the social and cognitive differences of students, and other less visible aspects of diversity. Nowhere is the existence of diversity more sharply observed than in *graduate* education, and in particular among the professional desires and goals of graduate students. If points of confluence serve to unite otherwise disparate groups, then can the intellectual space afforded by college and university libraries serve as the cosmopolitan canopy much needed within the campus?

The essay that follows attempts to offer justification for libraries to seek out and engage in collaborative advocacy³ with other academic and research units within the campus to create points of intellectual and social confluence. Specifically, the essay examines the potential for such intra-institutional engagement between libraries and graduate schools with hopes of improving the quality of academic life and community for graduate students. It begins with an effort to identify and review several salient trends in graduate education that have a direct bearing on the formation of partnerships between libraries, graduate schools, and other campus units. These trends are juxtaposed with three promising focal points for collective advocacy. These focal points may serve to strengthen the academic and professional development of graduate students as they prepare to meet broader societal expectations with advanced scholarly and professional knowledge.

Trends in Graduate Education

Research libraries will be called upon to (1) support scholarship in an educational environment characterized by increasingly fluid boundaries between disciplines, departments, and curricula, and (2) provide services to a new type of student—one that

many folks now refer to as the "millennials." Their capacity to do so will, in fact, make possible the new forms of scholarship/research that may characterize 21st-century knowledge production.⁴

So observed Susan Ortega and Carol Lynch as they presented a keynote address before a 2007 ARL/CNI forum on graduate education in the 21st century. Both the changes resulting in interdisciplinary teaching and research and enrollment of graduate students steeped in emerging technologies are crucial starting points for collaborative advocacy. Ortega and Lynch offer a succinct analysis of important trends in graduate education, juxtaposing broader societal developments with the campus as a microcosm of that society. For these veterans of graduate education administration, there are several key factors that capture the trends in graduate education: changes in research and scholarship, the nature and structure of graduate student learning experiences, and the challenges of educating future generations of students with increasingly varied cultural identities, socioeconomic characteristics, and educational and academic interests. The factors can be parsed to include demographics and discipline, technology and delivery of teaching and scholarship, interdisciplinarity, and financing and accountability.

Demographically speaking, graduate students are more diverse than ever. Throughout history, the expansion of graduate education in the United States has been consistent with the diversity of those students seeking educational opportunities beyond the baccalaureate degree. Graduates of Historically Black Colleges and Universities across the Southern United States have attended Master's and doctoral degree programs in leading universities in Northern, Mid-Atlantic, and Midwestern states for over a hundred years. After World War II, students from outside of the United States, especially from nations emerging from colonialism and hegemonic governance systems, enrolled in advanced programs reflecting national and transnational interests in developing new or revised political and economic systems and scientific enterprises. Yet in recent years the global sociocultural milieu has created an important occasion to change the fabric of graduate education. By 2005, nearly 2.2 million full time and part time students were enrolled in graduate programs in the United States, up from 955,000 in 1969. Moreover, the gender balance has shifted substantially among students choosing to pursue graduate

degrees. Although some disciplines continue to be heavily subscribed by male students, by 2005 more than 1.3 million (or approximately 60%) graduate students were women, up from 1969's reported female enrollment of 366,000 (or 38%).⁵

The racial and ethnic distribution across graduate student populations has also changed in recent years. In 1976, one in ten graduate students (134,500 students) was from a U.S. minority population. However, by 2005 the number of U.S. minority graduate students grew to 22.7%, or 475,000 students, with substantial gains realized from African American, Latino (a), and Asian American populations. White student enrollment also increased from 1.1 million to more than 1.4 million; however, the proportion of white students actually declined from 84.4% of the graduate student population to 65.3%. Changes in these figures also reflect an increase in the number of international students enrolling in graduate programs in the United States.⁶

Graduate education in the United States has also been heavily redefined by the increasingly international character of the graduate student populations found on college and university campuses. While U.S. graduate programs have attracted students for many years from many different countries, by the first decade of the 21st century, the impact of the interest by international students and their countries in pursuing graduate study in the United States has changed the constitution of students enrolled in graduate programs. As an National Science Foundation study, while 10.2% of those students receiving doctoral degrees in the United States between 1960 and 1964 were temporary residents, by the late 1990s, that number had risen to 22.9%, with a significant increase in the number of permanent residents enrolled in U.S. doctoral programs (from 2.8% to 7.9% during that same period). These numbers vary significantly by field of study, with the greatest increases reported in scientific disciplines.⁷

More than numbers, the changing demographics of graduate education have also changed educational experiences substantially. Multiple languages are spoken within single campuses, exhibiting increasingly complex ethos of academic interests and achievement, social interactions, and cultural subcommunity growth and development affecting not only the future composition of faculty, industry, and government and public service, but the very experiences of all students—undergraduate and graduate alike—seeking higher learning.

Beyond characteristics of the graduate student population, the differing academic interests of students have altered the way in which

learning and scholarship takes shape in graduate schools. Tracking trends in *doctoral* enrollment and degrees earned may serve as an important bellwether on graduate education; however, a significant number of students enroll in Master's and post baccalaureate graduate and professional certificate programs. The Master's degree in particular may be an important indicator of the degree to which professional requirements and the market value of higher education have shifted to post baccalaureate study and degree attainment. According to the National Center for Educational Statistics, 91% percent of the graduate degrees awarded in 2005 were awarded to students enrolled in Master's programs, with large concentrations in Education, Business, and other professional fields.⁸ The number of Master's degrees awarded has grown from 21% of the overall number of undergraduate and graduate degrees awarded in 1970-71 to 28% in 2005, while the percentage of doctoral degrees awarded has remained relatively unchanged during that same period. In other words, the credentialing of U.S. workers and employees worldwide with advanced degrees has experienced its most significant growth at the Master's level.⁹

Two Cultures / Blurred Genres

These increases in the number of people enrolling in graduate programs, and especially among Master's degree programs, have created stresses and strains on learning, pedagogy and changes in the design and delivery of programs of study. Two important features of graduate program development entail differences in values and definition of the purpose of graduate education. First, ever since C. P. Snow resurrected a 19th century debate over a gap between scientific and humanities worldviews in his published lectures, "The Two Cultures," higher educators have debated the importance of such distinctions in contrasting disciplinary traditions in scholarship and learning. Although Snow's ideas are highly contested,¹⁰ the distinctions between sciences and the humanities continue to be evident across disciplines. Graduate student training, and the resources that accompany graduate education, have been clearly divided by the requirements of research and publication, training in teaching, and in available funding to support graduate education. The persistence of the image of the solitary English doctoral student alone in the library stacks between his research and teaching multiple sections of composition and the Chemistry student spending long hours—well beyond a 20-hour per week research assistantship—working on her mentor's heavily grant-

supported laboratory serves to illustrate difference in individualized and collaborative scholarship and financial support between humanities and scientific disciplines.

Yet such images may also conceal an increase in hybridity and interdisciplinarity that blurs the surface-level differences among disciplines. More opportunities for interdisciplinary research and learning, for example, enable graduate students across the humanities, social sciences, and sciences to find points of confluence on substantive if not methodological grounds. The end results are likely to be that of a scientific community more cognizant of writing and communication and a humanities community trained in the ethics of human subject research or engaged in the digitization and computer based analysis of information.

Consistency in teaching and scholarship across otherwise disparate disciplines has been encouraged by opportunities to advance interdisciplinary research and program development between traditional disciplines and among international studies programs and in new fields of scientific advancement and cultural understanding in areas as far reaching as mathematical biology, computational linguistics, bioinformatics, and gender studies. Interdisciplinarity, by the opening of the 21st Century, has become a driving force in graduate education as the translation of faculty interests in collaborations and exchanges of ideas across disciplines that have spurred graduate student collaborations and the advance of new programs of study spanning the boundaries of scientific, social science, and humanities branches of learning. Such collaborations have helped to offset the effects of disciplinary isolation.

Although there is still some merit in revisiting C.P. Snow's contribution to understanding traditional disciplines gaps, his thesis never fully anticipated the seriousness of a greater gulf only alluded to in the "Two Cultures." There is an even more pronounced distinction between basic or traditional graduate education ultimately leading to the doctor of philosophy degree and the emerging power of professional education. As Paul Starr has carefully documented in his study of the rise of medical education and the medical practice, the field of medicine developed over a period of a hundred years as an enterprise that commands not only an elevated status but also a substantial investment and expenditure of resources within campuses with the programmatic and financial support of state, federal, and nonprofit agencies.¹¹ Since the middle of the 20th Century, professional Mas-

ter's programs, including recent enthusiasm over the concept of the Professional Science Master's degree, enroll a major share of students enrolled in graduate programs, all with an eye toward the market value of degrees in everything from human resource management to bioenergy to creative writing.

The goals of basic graduate and professional education cannot be assumed to be identical. While doctoral graduate training involves the pursuit of original ideas and cutting edge scholarship, professional education more often than not entails *praxis*, or the application of theories and concept in real world situations faced in professional practice. Moreover, professional education involves training in accordance with sets of ethics or codes of behavior that govern social interaction between working professionals and their respective clientele. The lines of distinction between the communities of doctoral and professional education are grey and their relationships are complex. Most professional studies programs have formed advanced programs for doctoral-level research, where theories from core disciplines are routinely used and transformed by professional values and practice. In some instances, similar programs exist within a single campus, such as the teaching of economics in liberal arts and business schools, and the most distinguishing characteristics have to do with the applications of concepts to professional activities.

Consequently, observable differences between basic graduate and professional programs pose challenges to goal congruity for graduate education. Many policies have been formed and services implemented from the vantage point of doctoral education, while many of the nation's graduate students are enrolling in Master's programs. Resource needs and requirements may vary; yet, financial and human costs are substantially higher for doctoral students given the length of time and dedication needed to pursue doctoral study. Likewise, more Master's students and some doctoral students are pursuing their degrees part-time and are only partially engaged in the life of the university. Their needs may often be expressed through remote access to classes, libraries, computing centers, and advising services. Such situations are likely to require institutions to restructure approaches to support and access to resources based on distance and virtual models of teaching and service.

The "New Human Environment"

The presence of part time and online students in graduate education

is but one component of the trend in the way that technology has and continues to affect education and scholarship. As Marshall McLuhan is often quoted as saying, "Any technology tends to create a new human environment."¹² There are a number of different ways that technology has affected graduate education and its students. For one, the opportunities to pursue advanced degrees virtually through online study and *blended* learning opportunities are critical to understanding how graduate education has grown in recent years. Students prepare using multimedia lectures and participate in synchronous and asynchronous discussions without regard to geographic boundaries. The opportunities for sharing ideas are improved by the mix of geographic localities of students enrolled in distance courses. Conversely, for the very same reasons, community building is difficult and equal access to resources is unevenly distributed within the distance learning environment. Resource support presents both opportunities and challenges to the well-structured virtual learning environments in that they have the capacity to go beyond emulating traditional classroom settings and take full advantage of different forms of communicative technologies to socially network, simulate, digitize, and provide remote access to a wealth of information to augment new or revised learning models. Other uses of technologies serve graduate student communities by making it feasible to establish and grow social networks and sub networks of disciplinary or interdisciplinary communities, enabling an exchange of ideas and shared access to research across disciplinary, institutional, and geographical boundaries. Some graduate students have embraced the idea that there are benefits to social networking technologies such as blogs to communicate within and between scholarly communities and to advocate for open access.¹³

Nowhere has the adoption of Web-based information technologies been stronger than in the migration of theses and dissertations from print to electronic environment, thanks to advances in the development of software for portable document format (PDF) and markup languages.¹⁴ Electronic theses and dissertations (ETDs) have been actively developed by universities in North America and Europe since the mid-1980s and by 2008 have become adopted in Europe, the United States, South Asia, Africa, and Australia as a method of access and preservation of graduate theses and dissertations. The ETD has become the preferred method of access and delivery for the UMI / ProQuest Dissertation Publishing Program, and many universities are choosing to add them to their institutional repositories.¹⁵ Because of

advances in technology, ETDs also have the potential to augment text with sound and visual media.

ETDs present both opportunities and challenges for universities seeking to offer them as either an option or as a requirement. ETDs stand to broaden access to students' research, much of which will not likely appear in published form. Moreover, they provide an opportunity for an electronic submission and review process, thereby eliminating not only the physical deposit of thesis work but enabling interaction between students and their advisors and departments as well as graduate school thesis examiners prior to the electronic transfer of the final product to the library, institutional repository, and to UMI / ProQuest or other external repository. Since the speed of digital access to thesis is greatly enhanced by ETD initiatives, useful controls are also fostered by the very same technology to enable students to exercise their authors' rights to embargo their work from premature release for specified periods of time.¹⁶

Perhaps the most significant challenge posed by ETD technology involves the preservation of intellectual property rights in a digital environment. Placing an embargo on students' work to prevent premature release is intended to offset or allay students and their advisors' concerns about future publishing opportunities by insuring the student authors' rights during subsequent book and journal publication negotiations. More challenging, however, is the widespread use of copyrighted materials in theses and dissertations that suddenly becomes substantially and more immediately accessible with Web access. The convergence of technology and intellectual property presents educators with a new human environment replete with dilemmas concerning effective training on issues associated with copyright and the meaning of fair use, not only in the dissemination of an electronic dissertation but in the classroom as well, where many graduate students are teachers as well as students.

Financing and Accountability

Finally, given the cost of education, the financial constraints to accessing graduate education are of real concern not only to higher education but to government and policy makers and to the broader society. What the next generations expect from graduate education will likely reflect broader societal issues and priorities and will be inextricably tied to the capacity for all who seek and are prepared for graduate education to obtain access.

According to reports by Kenneth Redd of the Council of Graduate Schools, "From 1995 to 2004, the cost of graduate education increased more than 60%," and that funding in the form of fellowships and scholarships, grants, and assistantships cannot keep pace with the demand for access to graduate education. Acute among the differences in funding are gaps between scientific disciplines and professional degree programs and substantial increases in borrowing for education. Heavy reliance on loans means that an increasing number of students are increasing their overall indebtedness to pursue advance degrees. The growth rate in indebtedness, the author speculated, may affect attrition among graduate students as well as their choices of as part time or full time students.¹⁷

The cost of pursuing higher education has caused great angst among educators and policy makers, students and families. These costs are further exacerbated in graduate education. The vortex created by the cost of education and options for online or virtual learning over residential enrollment and participation in graduate education, and higher education in general, may have a long term effect of forging a two-tiered system of postsecondary education—those who are on campus and those who are not and, therefore, subject to differing standards and measures of accountability. It is entirely plausible that such a two-tiered system may also further divide those disciplines that can afford to fund students and those that cannot or will not do so. Further, if specific demographic student subpopulations are concentrated more heavily in disciplines where little opportunity for funding exists outside of loans, as Redd has observed, the long term consequences might also slow increases in the overall diversity of students receiving advanced degrees. This may function as a canary in the coal mine for the larger population seeking entrance into fields where opportunities for funding are generally scarce, as well as for Master's students who have fewer funding options.

How Libraries and Graduate Schools Can Respond Together

The practice of advocacy involves the degree to which practitioners can influence individuals or groups into action.¹⁸ In social care, advocacy helps to form networks of interdependent agencies that serve the good of those individuals in need.¹⁹ Librarians and graduate educators can respond together through a partnership that not only blends these approaches but considers advocacy as a shared practice.

Through collaboration, libraries, graduate schools, and other agencies within a university can work together toward common goals, evoking influence strategies to provide necessary resource support to graduate students and programs. This form of advocacy as an outgrowth of partnerships between campus units is referred to here as *collaborative advocacy*.²⁰

There are clear prerequisites for successful collaborative advocacy that will likely have the most impact on graduate students. For one, the organizational structure of graduate education focuses on the centrality of the graduate program and the relationship between faculty and students from admission to graduation. Influence in graduate education is achieved through resource support and the formation of new concepts and models in learning. This occurs where there are clear benefits to mastery of knowledge and pursuit of original and applied research goals, enhanced support from new information technologies, and opportunities to create space for individualized and collaborative study.

A second, more obvious prerequisite carries deeper implications. Students enrolling in undergraduate education are, for the most part, admitted to the institution and are free to roam their college or university in pursuit of the right major. However, graduate students are usually admitted to a single program and their relationship to their educational objectives is typically defined within their program of study only in association with broad institutional parameters. Program requirements, research methods and training requirements are distinguished by discipline and program objectives, and most graduate students' energies are concentrated within a single area or subarea of study. In the face of such traditions, students are crossing disciplinary boundaries and, together with their faculty, are creating new opportunities for interdisciplinary scholarship in research and the formation of interdisciplinary programs and research centers. The leadership role of graduate deans and administrators varies from campus to campus; however, all possess a strong commitment to removing the obstacles that inhibit interdisciplinary research but program development.²¹

A third prerequisite considers market driven forces that shape the creation of new programs and discontinue others. Responsibility-Centered Management (RCM) has forced some institutions to streamline their degree programs and consider the market value of new initiatives. Among Master's programs, a number of new initia-

tives are built around the demands from industry and government. Many Professional Science Master's programs have been created around partnerships with industry and integrate internships into the overall required program of study. Conversely, RCM and market-driven initiatives have forced institutions to carefully assess the efficacy of troubled or low enrollment programs and individual courses.

Taken together, these three prerequisites are drawn from broader set of issues that drives collaboration between graduate schools and other partners within their institutions. Both faculty and graduate students are more likely to identify with their respective departments, schools, and colleges, thereby limiting the line authority of graduate deans. Graduate deans are able to exert influence through policy setting and resource allocation because these and other prerequisites for collaboration are largely out of their hands. Given these constraints, strategies that are advocacy-based and focused on influence, persuasion, and collaboration on academic support services are likely to be more effective than those that attempt to impose top-down decisions.

Understanding the Information Needs of Graduate Students

Libraries and graduate schools have numerous points of confluence. Three are identified for further discussion. They are information needs and requirements of graduate students across a broad spectrum of academic and professional interests, tangible resource support for the pursuit of graduate study, and the desire to find or create physical space that overcomes disciplinary and cultural boundaries.

Thus far we have identified some of the implications of several important factors that affect graduate education, including variations in the makeup of graduate student populations and their disciplinary foci, as well as the distinctions drawn between research and professional-focused goals in graduate education. While services in higher educational institutions have usually been designed to navigate differences among students across academic dimensions, it may be more useful to focus on points of confluence during the development of a collaborative advocacy strategy supporting graduate students. Three specific issues should be considered in assessing information requirements of graduate students. Given demographic considerations, graduate students speak *in all languages*, reflecting both cultural and disciplinary backgrounds and characteristics. Language is a tangible demonstration of the web of cultural plurality that is most evident among graduate student populations. Here points of confluence need

to be formed, where culturally diverse communities find common ground and mutual interests in the pursuit of knowledge through scholarship and learning.

Beyond demographic points of confluence, there are commonalities across disciplines. As John Unsworth has noted, *scholarly primitives* may be particularly useful in shifting focus toward converging information needs of graduate students. Unsworth used the idea of primitives "to refer to some basic functions common to scholarly activity across disciplines, over time, and independent of theoretical orientation. These 'self-understood' functions form the basis for higher-level scholarly projects, arguments, statements, interpretations—in terms of our original, mathematical/philosophical analogy, axioms."²² While his comments are primarily directed toward defining research in the humanities, the concept that there are universal considerations in research—from discovery to representation—is significant enough to provide guidance on information requirements spanning disciplinary boundaries.

Studies of the information needs and requirements of graduate students constitute a relatively small research thread; however, important themes have emerged from a few key studies. Graduate students continue to treasure personal contact with faculty, fellow students, librarians, and others they feel possess relevant information. Accordingly, the need to provide support for students in research-based degree programs is compelling. While accessing information has been deeply affected by Web-based resources using common search engines, such information has not supplanted the use of online and print resources accessible from libraries. Some studies that have given insight into how graduate students interests move from general Web searching to the use of library databases, taking into account variance by discipline. A University of Minnesota study noted the differences among disciplines in sources of information, where graduate students in the sciences were heavily reliant on online resources, while students in the humanities and social sciences continue to value libraries and their print collections in their research.²³ There is also a growing interest in setting the information requirements of graduate students within the context of scholarly communication.

According to a 2007 report of a study of Association of Research Libraries' member institutions, 29 institutions surveyed (53%) had not yet targeted scholarly communication activities for graduate students. However, 22 (40%) and 4 (7%) targeted specific disciplines

had begun to engage in programming and Web-based tutorials for graduate students. The opportunity presented here calls for a broadened engagement between libraries, graduate schools, and research administrators in educating graduate students on a full range of issues that include authors' rights, intellectual property, academic integrity, an research conduct.²⁴

These studies point to a need not only for continued research into the needs of graduate student, but to possible points of collaborative advocacy between libraries and graduate schools. There is an ongoing need to foster support, including technological support, for the mentoring relationship between students and faculty and social networking between students to ensure the continuance of invisible networks for information sharing. Moreover, graduate administrators' understanding of evolving issues affecting libraries, including emerging information technologies and issues in scholarly communication, can serve as focal points in collaborative advocacy during the process of institutionalizing changing practices in scholarly communication and managing intellectual property and the conduct of research.

Supporting Resource Needs through Collaborative Advocacy

The concerns about the information needs of graduate students leads to a second opportunity for collaborative advocacy, to combine efforts to promote institutional resource allocation to advance basic graduate and professional education programmatically, and to provide the necessary resources for high quality graduate educational experiences. Next to financing higher education, the specific issues that are likely to dominate graduate education involve securing fiscal, human, and technological resources. Much of the public attention in higher education in the past few decades has focused on undergraduate issues. Without sacrificing those vital issues concerning academic progress and engagement of undergraduate students, issues affecting graduate students have begun to move to the foreground of discussions about the short-term future of higher education. Areas of increasing importance are likely to include a concern for a range of intellectual property issues, most importantly having to do with authors' rights and a reevaluation of the meaning of fair use as it is practiced in the digital era. A growing number of institutions are, through offices of research, libraries, and graduate schools, developing workshops, documentation, and tutorials directed primarily at graduate student audiences to further their understanding of intellectual property issues and protect

them from legal entanglements over the use of their work and the works of others.

Other areas of collaboration that involve the use of institutional resources pertain to involve collaborative implementation of various technologies designed to enhance access, communication, and preservation of students' research and creative work. Electronic theses and dissertations' projects have involved close association between the staffs of graduate schools, libraries, and computing centers to insure effective preparation and transmission of thesis work through the thesis review process, preservation in digital repositories, and access by designated communities of interest. ETDs constitute but one area of collaboration for which the need to advocate for resources to support graduate students is imperative. What is also apparent is a need to engage students who are "not bound by traditional modes of research exchange...students are using all the technologies at their disposal to engage in scholarly discourse—including blogs, wikis and tagging tools." Yet graduate students must also balance, if not temper, enthusiasm with full recognition of the hegemony of enduring traditions in scholarly communication that protect authors' and publishers' rights and rigorous academic peer review bound by disciplinary conventions.²⁵

Creating the Space

Finally, the need to create or invest in physical and virtual spaces continues to be an ongoing concern in creating the proper environment for graduate education. As has been noted in studies conducted at New York University and the University of Minnesota, graduate students continue to need space not only for work and study but for intellectual engagement with one another.²⁶ In a virtual context, social networking is presented as a mechanism for reaching all graduate students and encouraging the creation of subgroups devoted to specific academic, social, or cultural interests. Additionally, creating physical space for engagement and collaborative activities, or for independent work in collaborative environments such as scholarly commons and technologically enhanced centers for teaching and research support, can be crucial to building communities.

Conclusion

Elijah Anderson's cosmopolitan canopy is situated to foster engagement across demographic, cultural, and socioeconomic boundar-

ies. In the circumstances of social exchange in everyday life, people converse about "what they have in common with other human being, regardless of their particularity."²⁷ Placed in the context of graduate education and given the argument that graduate student communities are loosely structured yet yearning for points of confluence, it follows that efforts toward building community among graduate students will require greater collaboration between units within institutions of higher education.

This essay attempted to identify key trends affecting communities of graduate students throughout the United States and their implications for forging a response from graduate schools and libraries to address the quality of graduate educational experience. Given the enduring scarcity of resources in higher education and traditional emphases on undergraduate education and the needs of undergraduate students, strategies employing collaborative advocacy between librarians and graduate administrators will likely have the greatest effect on institutional strategic planning and resource allocation.

Notes

1. Anderson, "The Cosmopolitan Canopy," 14–15
2. Ibid, 15, 25
3. The term collaborative advocacy is derived from Spicer, *Organizational Public Relations*, 247–267
4. Ortega and Lynch, "The Changing Nature of Graduate Education"
5. 2007 Digest of Educational Statistics
6. Ibid
7. *U.S. Doctorates in the 20th Century*
8. 2007 Digest of Educational Statistics
9. Ibid
10. See, for example, Gould, *The Hedgehog, The Fox, and the Magister's Pox*, which observes shortsightedness in Snow's thesis. Gould, *The Hedgehog, The Fox*
11. Star, *The Social Transformation of American Medicine*
12. McLuhan, *The Gutenberg Galaxy*
13. See "Working with the Facebook generation"
14. ETD Guide
15. ETD Repository and Submission
16. Surratt, ETD Release Policies
17. Redd, "Financing Graduate Education"
18. Todaro, "The Power of Persuasion"
19. Levy, Jean and Malcolm Payne. "Welfare rights advocacy in a specialist health and social care setting: A service audit." *British Journal of Social Work* 36, no. 2 (February 2006): 323–331.
20. Bartunek, Foster-Fishman and Keys, "Using Collaborative Advocacy"
21. It should be noted that the concept of interdisciplinarity is not unfamiliar to higher education. Since World War II, area studies programs flourished with

support from U.S. governmental agencies and private foundations, and since the late 1960s, many institutions developed racial/ethnic and gender studies programs with a presence in graduate education. While the appearance of interdisciplinary scientific programs is quite recent by comparison, much of the present day discussion of interdisciplinarity is focused on new and emerging scientific collaborations. In the humanities and social sciences, evolving programs include areas as widely diffuse as film or cinema studies and social inequality.

22. Unsworth, "Scholarly Primitives"
23. Marcus and Williams, "Assessing Graduate Student Research Behaviors"
24. Newman, Blecic, and Armstrong, "Scholarly Communication Education," 14
25. "Working with the Facebook Generation"
26. Covert-Vail and Mandel
27. Anderson, "Cosmopolitan Canopy," 29

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