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Voices from the Field:

Create, Communicate, and Collaborate:

Graduate Education and the Future of Scholarship

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It is safe to say within the digital humanities that we are witnessing a groundswell of interest in the ways in which humanities research and scholarly communication might be transformed via the dialogic interplay between digital tools and modes of inquiry. Numerous reports generated over the last decade document the sweeping changes and their ensuing questions, from "Our Cultural Commonwealth: The Report of the ACLS Commission on Cyberinfrastructure for the Humanities and Social Sciences" (2007), which outlines the need to fully understand computationally intensive research as it redefines scholarly practice, to the more adamant calls for change issued often in manifesto form, such as the *Digital Humanities Manifesto* that emerged from UCLA in 2008 (and was followed by a 2.0 version soon after). At the same time, workshops and discovery sessions are being hosted nationally, as evidenced by reports such as "Working Together or Apart: Promoting the Next Generation of Digital Scholarship" (2009), which followed a workshop cosponsored by the Council on Library and Information Resources and the National Endowment for the Humanities. Sometimes these reports are rather timid: a report issued by Ithaka for the Association of Research Libraries titled "Current Models of Digital Scholarly Communication" (2008), for example, identifies eight new forms of scholarly resources enabled by networked communication, including blogs and e-journals, but does not include examples of interactive or immersive scholarly communication as evidenced by journals such as *Vectors Journal of Culture and Technology in a Dynamic Vernacular* and *Kairos*.

Perhaps more pertinently, the field itself seems to be riding the momentum of all of this activity, and is reaching a crucial turning point. As Christine Borgman notes in a recent essay for *Digital Humanities Quar-*

*terly* (2009), "This is a pivotal moment for the digital humanities." She then asks, "Can we seize this moment to make digital scholarship a leading force in humanities research? Or will the community fall behind, not-quite-there, among the many victims of the massive restructuring of higher education in the current economic crisis?" (2009, 1) Similarly, Johanna Drucker (2009, 1, final paragraph) asserts that we currently face "a critical juncture" with regard to faculty interest in crafting digital tools, and calls on scholars to take seriously the task of imagining the future of digital scholarship.

This sense of urgency, in conjunction with the array of reports and workshops, demonstrates a vexing conundrum: despite the clear shifts in communication practices, the use of digital resources, and initial attempts to reimagine modes of scholarly communication and deeply embedded practices such as peer review, widespread change within scholarly communication is occurring quite slowly. Indeed, the Center for Studies in Higher Education at UC Berkeley published a report in January 2010 titled "Assessing the Future Landscape of Scholarly Communication: An Exploration of Faculty Values and Needs in Seven Disciplines," which shows strikingly low levels of uptake in new modes of technology-enhanced scholarly communication among faculty and graduate students in seven academic fields. The writers of the report state, "We find no evidence to suggest that 'tech-savvy' young graduate students, post-doctoral scholars, or assistant professors are bucking traditional publishing practices" (ii). The authors go on to claim, "The lack of easy-to-use authoring tools, the perceived difficulty of evaluating [media rich] publications, the prohibitive financial and opportunity costs to produce truly multimedia monographs all suggest that experiments with these genres will likely be rare in the near term" (ii).

We might add to the list of challenges noted here structural impediments associated with the ways in which the digital humanities are fostered and supported on individual campuses. Some campuses boast centers devoted to encouraging new modes of scholarly expression via the creation of tools, the allocation of resources for faculty development related to digital media, and an understanding of the need for long-term strategic thinking. Examples in this category include George Mason University's Center for History and New Media, Georgetown's Center for New Designs in Learning and Scholarship and Stanford's Humanities Lab. Other institutions have expertise in broader mandates related to cyberinfrastructure and archives. An example in this category would be the Illinois Center for Computing in Humanities, Arts and Social Sciences (I-CHASS). In 2007, Diane M. Zorich conducted a survey of digital humanities centers across the United States in preparation for the 2008 Scholarly Communication Institute. Commissioned by the Council on Library and Information Resources (CLIR), the report, "Digital Humanities Centers: Digital Scholarship," offers a useful taxonomy of possible mandates for digital humanities centers. They include:

- transforming humanities scholarship
- promoting the value of the humanities in an increasingly digital world
- serving as "sandboxes" and idea incubators
- eliminating boundaries and fostering interdisciplinarity
- extending audiences for humanities scholarship
- engaging a broad community of professionals
- leading pedagogical innovation
- building collaborations
- enhancing the scholarly research process
- providing operational services to the scholarly community

Zorich goes on to highlight many of the challenges facing digital humanities centers, and emphasizes the fact that many efforts related to the creation of various tools designed to enhance scholarship remain siloed efforts, located on individual campuses without broader impact. However, what again is so striking is the clear evidence of a striking number of myriad activities related to the digital humanities.

There exists, then, a contradiction: clear evidence demonstrates widespread interest in the digital humanities among faculty and administrators, and campuses are increasingly devoting resources to creating centers to support research and digital authorship;

however, at the same time, there is also evidence of resistance to the emphasis on the digital, whether with regard to tools, research practices or authoring modes, alongside a trend in which faculty divest their interests and expertise, relegating design and implementation decisions to IT staff. That a cultural transformation should incur resistance is not surprising; however, the sense of disparity among attitudes on various campuses is troubling, as is the potential damage to a generation of graduate students caught at the interstices of this transformation. Indeed, the impact of this apparent schizophrenia bears scrutiny, as does the ethical commitment of those who mentor these students; these students will certainly enter a job market in great flux with increased demands for a broad range of skills, some of which surely will include basic digital media literacy, if not more sophisticated expertise with digital scholarship. While graduate students might seem to offer great hope in rethinking scholarly research practices and communication given their access to various digital technologies as youths, they are at the same time the most precarious with regard to the need to adhere to the disciplinary standards of their field generally, and their departments more specifically.

In this essay, I will briefly examine the history of attempts to bring critical media literacy and authoring practices into the college-level curriculum, and then propose a model for the adoption of media production skills that aligns with the guiding metaphors and practices in a digital culture more broadly. "Critical media literacy" in this context is derived from the definition that emerged from the 21st Century Literacy Summit hosted by the New Media Consortium in 2005 that states that 21st century literacy as "the ability to understand the power of images and sounds, to recognize and use that power, to manipulate and transform digital media, to distribute them pervasively, and to easily adapt them to new forms" (2) Although this definition is often used in conjunction with undergraduate education, it offers a useful, if broad, goal for graduate students as well. Therefore, in this essay, I will move back and forth between the efforts aimed at the undergraduate population, where much work has centered, and query the need to reimagine these efforts for graduate students, who I would argue remain gravely underserved.

The low levels of uptake described in "Assessing the Future Landscape of Scholarly Communication" exist despite more than 30 years of advocacy for computers and technologies in the classroom, as well as a decade of theory and practice across the undergradu-

ate curriculum, with a good deal of effort by writing instructors dedicated to creating new “writing spaces” and defining new literacies. The seminal work of the New London Group, for example, in “A Pedagogy of Multiliteracies: Designing Social Futures” (1996), recognizes the need for students to develop competencies in multiple “modes” in the 1990s, for example, while more recent calls invite us to explore the promise of digital writing spaces. We might recognize here, too, the efforts of several key organizations, such as the Conference on College Composition and Communication (CCCC), the American Library Association (ALA), and the National Council for Teachers of English (NCTE), who have all advocated for many years for the need incorporate an understanding of technology and digital composition within the undergraduate curriculum.

There is also growing evidence that students in general now learn differently (Jenkins et. al. 2006), they communicate quickly and widely with their peers and diverse “publics” (Pew Internet & American Life Project) and they form identities that, in incorporating rich virtual lives, are very different from those of pre-digital generations (Thomas 2007). Many assume that, because these “digital natives” grow up in a media-saturated culture, they are somehow fully literate with respect to an array of digitally-enhanced practices, from the creation of avatars and Facebook accounts, to texting practices and the making of short videos for 6th grade science projects. They, of course, are both more and less skilled than we imagine, as a recent ethnographic report titled *Hanging Out, Messing Around, and Geeking Out: Living and Learning With New Media* (Ito 2009) so aptly shows.

Recognition of these differences in contemporary youth helps fuel a sense of urgency experienced by educators from the pre-k level through university education that feel that we are at a transitional moment with regard to the ubiquity of digital tools and education. From this urgency stems calls for educators and administrators to rethink not simply our curricula, but pedagogies, faculty development and assessment at all levels. I think it is clear that many educators across the country have collectively put their heads down to study and interrogate the ways in which we might rethink 21st century education, literacy and core competencies in light of new media, and how we might reconsider undergraduate education generally to make it more relevant for students today.

However, graduate programs are perhaps more insulated from these advocacy measures, and more rooted within specific academic traditions and practices. Therefore, once students enter a particular graduate program, they tend to adopt the practices and habits of their mentors, relegating the array of activities supported by digital tools and social media to their social interactions outside academia. Further, the enterprise applications adopted by many universities as course management tools, such as Blackboard, are designed to support the interests of the faculty member and not the student, and worse, imagine the student not only as a consumer who pays for limited access, but as a potential criminal who must be surveilled. Speaking more broadly, a tool such as Blackboard functionally discourages students from many of the productive habits they may have acquired via the social uses of media as a high school or undergraduate student, such as collaboration or the realization of connections among disparate communities or practices. Students are not able to work across a series of courses taken together in a semester within Blackboard, for example, nor are they able to gather and examine their work across the longer period of their enrollment within a program. While some would argue that e-portfolios serve this function, the portfolio paradigm is one of display; designed properly, Blackboard could be a productive research and scholarly authoring “space” or “environment” for students, designed to facilitate connections among disparate courses and ideas. Rather than offering a critique of Blackboard, however, my point is simply that we require more thoughtful considerations of the ways in which digital tools may enhance or discourage expansive models of scholarly research and communication in and through media. We need different models and metaphors.

One such model is that of the “digital research ecology.” Matthew Fuller describes ecology as the “dynamic interrelation of processes and objects, beings and things, patterns and matter” in his book *Media Ecologies: Materialist Energies in Art and Technoculture* (2007, 2). A digital research ecology, then, attempts to rethink traditional modes of scholarly communication and production through the impact of digital tools. This process of rethinking, however, is not simply one of remediation, although it often appears as such. Instead, it is one of reinvention. Scholarly communication and production are not merely enhanced, expanded or made easier via digital tools— they are transformed, often dramatically. The keys to this transformation are

certainly not new: they are centered on sharing, participation, collaboration and networked interactions, all of which might be crafted into a dynamic ecology that unites processes, objects and people.

A digital research ecology would also participate in what Mimi Ito refers to as “networked publics” (Varnelis 2008, 2). It would move away from traditional information economies, and facilitate what Yochai Benkler calls “decentralized individual action,” by which he means “cooperative and coordinated action carried out through radically distributed, nonmarket mechanisms that do not depend on proprietary strategies” (2008, 6). It would endeavor to create methods for curating the massive amounts of data now at our disposal as scholars, and further, help manage, annotate and share that data. And it would help scholars determine compelling ways to manifest findings, through the creation of interfaces for accessing them.

These activities of course vary dramatically by discipline. At the Institute for Multimedia Literacy within the School of Cinematic Arts at the University of Southern California, we are privileged to work with a cadre of graduate students within the interdivisional Media Arts and Practice Ph.D. program, which was established three years ago in order to support the next generation of scholar-practitioners. The program includes a core curriculum, after which students are invited to enroll in courses across all of the divisions within the school, including Critical Studies, Animation and Digital Arts and Interactive Media. Students are expected to conduct research, and to manifest that research within a media-rich project.

The students benefit, often indirectly, from the IML, which acts as both a physical space for the students – they share office space, a library, computer labs, seminar room and equipment – as well as a cultural space rich with workshops, visiting artists and scholars, and a broader commitment to transforming contemporary scholarly practices. Returning to the taxonomy of activities outlined by Diane Zorich, the IML embodies each, fostering interdisciplinarity, serving as a sandbox for ideas and tool creation, and extending the audiences for humanities scholarship. The IML also helps create a broader context for the iMAP students, showing how innovations in pedagogy and scholarly practices must unite undergraduate students, graduate students, faculty, staff and the administration, and must flow across an array of activities, including teaching, authoring, research, assessment and curricula.

Clearly, this group of students is deeply invested in the power and potential of digital media, and benefits in many ways from the environment in which they are located; however, they are also key contributors to the IML’s culture and research, bringing practice-based innovations to the larger IML community. I would like to highlight three specific areas of change led by iMAP graduate student investigation and design. In each case, a student, in the absence of existing research tools and communities, built his or her own.

### **Sifting, Sorting, Sharing: Jeff Watson**

We know that scholarship occurs within a dialogic relationship between a scholar, his or her community and that community’s intellectual products. We also know that the processes for forming and sustaining community have changed dramatically over the last decade, and the variety of products has increased. We work within often admittedly fragmentary and ad hoc communities of practice, and we no longer rely only on the written document as the sole, static output, but recognize the value of the “dynamic document,” one that can enact and support collaboration, negotiation and knowledge construction. Mere dissemination is not interesting any more.

Here, the work of graduate student Jeff Watson is significant: Watson has designed and developed a tool called Sifter that allows scholars to gather, curate and archive materials culled from social media feeds from a vast array of online sources. This entails actively collecting and curating people, interests and findings, and bringing them all together into a single, shared working space. Explains Watson in his unpublished qualifying exam documents, “Unlike earlier models for Web-based scholarly collaboration, Sifter is designed to embrace the inherently multimodal nature of online communication” (2010, 8). He continues, “In a post-Web 2.0 world, scholars increasingly find themselves communicating with one another across a wide range of platforms. Such platforms include bookmark-sharing services such as Delicious; status updaters such as Twitter; HASTAC-style group blogging platforms such as Drupal or Wordpress; bibliographic data sharing systems such as Zotero; forums and message boards, and so on. As useful as these services are on an individual basis, their proliferation has had the unintended consequence of scattering key sources for scholarly debate, conversation, and research materials across a multitude of platforms. Sifter enables scholars to assemble, orga-

nize, archive, and expose disparate sources – and the materials and conversations they contain – through a single, easy-to-use interface” (2010, 8).

Watson’s contribution highlights several new key activities in scholarly work, including curation, remix and information design as scholars increasingly need to determine, sort, sift and, often, disseminate streams of information based on their research.

### **New Knowledge Production: Laila Shereen Sakr**

Laila Shereen Sakr, who was admitted to iMAP for Fall 2010 after earning an MFA in Digital Arts and New Media at UC Santa Cruz, has created an archive called R-Shief, which is an Arabic-English participatory web-archive for exchange among activists, scholars and artists. She describes the project as a “software mashup” designed to create a space within which knowledge is contextualized by a community, which in turn impacts interpretation, knowledge-building itself and the history of that knowledge, which now becomes visible. While the creation of an online archive at this point may not seem like a groundbreaking act, the design of this particular project is deeply tied to the intellectual goals of a scholar. She writes on her portfolio website,

*A key principle in the proposed project is that disparate and discreet pieces of knowledge produced and promulgated in scholarship around the world could be (and should be) nuanced, revised, corrected, or enhanced by existing in concert with each other – that is, different forms of knowledge should be interactive and mutually engaged.*

### **Ambient Storytelling: Jen Stein**

And finally, Jen Stein, another iMAP student, is interested in ambient storytelling and the ways in which spaces might speak to us. Working with several colleagues, she helped design the *Million Story Building* project, which is an iPhone application that allows the School of Cinematic Arts building to communicate with users about current activity in the building, to reveal data linked to sensors, and display the interactions of inhabitants. Writing about her project on her portfolio website, Stein notes:

*As building inhabitants engage more frequently with the building, the building begins to build a relationship with its inhabitants and asks for help in learning about itself, its inhabitants, and the outside world.*

Inspiration for the project is aligned with the sentiments expressed by Julian Bleecker and Nicolas Nova in their essay, “A Synchronicity: Design Fictions for Asynchronous Urban Computing,” a Situated Technologies Pamphlet published in 2009 by the Architectural League of New York. The essay asserts a provocation, namely to rethink the fetishization of the real-time data-enabled city in order to “stretch out the space of possibility and the space of possible imaginings” (10). What does this mean? In short, Bleecker and Nova are less interested in how data delivered immediately and orchestrated bureaucratically in a top-down approach may “help” city-dwellers, and instead ponder the potential for more speculative and poetic layers of information, and for a notion of the city that is not static and fixed but rather in process. In the later part of the conversation, Bleecker says, “We’re in the realm of epistemological monkey-wrenching broadly conceived,” adding that he’s interested in “creating objects that shift meanings and provide new, unexpected points of view” (34).

In this instance, then, both Bleecker and Stein are participating in a shift away from the alignment of computation within the humanities with the certainty or instrumentality it connotes. Instead, both champion the potential for technology to spark the idiosyncratic, or the unexpected, and the ways in which both might help us within the humanities see something anew.

These are just three examples rather loosely dedicated to reimagining scholarly activities, in which research is communal, dynamic and shared; archives are deeply contextual, crafted by communities and dedicated both to product and the process of enrichment; and our work spaces have the potential to collect and share information. In all three cases, the tools or infrastructure for the scholarly activity did not fully exist so the students had to create them. In so doing, the students not only solved an individually challenging conundrum within their own scholarly practice, but contributed more broadly to the kind of research ecology noted above. They also undertook not a technical task, but a scholarly endeavor. As Johanna Drucker points out so well, “The design of digital tools for scholarship is an intellectual responsibility, not a technical task” (2010, 1, paragraph 10).

It might be tempting to read these acts as simply more evidence of the power of the digital, which carries with it a sense of zeal and utopian drive. However, as Stein’s project perhaps best indicates, we ought to be open to the ways in which our tools might disrupt easy assumptions. Indeed, Julia Flanders warns us to avoid

the hype so characteristic of digital rhetoric, and pay instead to the ways in which our tools create “productive unease.” She writes, “Digital tools add a challenge and give us a new set of terms – like a new planet in the system, they change the vectors of all the other things we have in our universe” (2009, 27).

### **Conclusion**

The work by graduate students described above should be supported broadly; it should not remain siloed within a particular program designed specifically for “scholar-practitioners,” nor should it be eclipsed by the proliferation of other tools. Instead, it should be welcomed within a broader institutional context that recognizes its power and potential. Imagine this kind of scholarly endeavor supported widely! The impact would be dramatic, and it is incumbent upon us to find ways to weave together professional development for graduate students associated with digital media for teaching and scholarly communication, recognition and analysis of other endeavors within disciplines, and overall, institutional support. Just as digital humanities centers have suffered a sense of isolation and a duplication of efforts related to siloing, so too do our graduate students without institutional attention and support.

Within the context of the university, it is clear that new literacies associated with critical digital media and new modes of scholarly authoring are difficult to achieve. Strategies for encouraging the digital research ecology noted earlier must center on creating the very possibility for such a thing. At the Institute for Multimedia Literacy, we target our efforts toward four enmeshed constituencies: undergraduate students, graduate students, faculty and administration. Shifts in all four areas are necessary for transformation, and indeed, the four are tightly imbricated. Faculty should model digital scholarship, for example, but have little incentive within current paradigms for tenure and promotion to stray beyond peer-reviewed articles and single-author monographs. Shifts, then, have to occur along the entire university spectrum.

At this point, unless a graduate student is enrolled in a program similar to iMAP, there is little incentive for students in many disciplines to rethink foundational scholarly practices, not only due to the students’ own precariousness within a system, but because the future of those disciplines has itself not yet been imagined within new metaphors akin to the digital research ecology glossed earlier. Instead, a large gap remains between the changes occurring outside the

academy where basic citizenry, social interactions and work life are being redesigned, and those occurring inside the academy, where these changes are happening more slowly.

I would argue that we should be cognizant of this widening gap, and of the near future and the impact of pervasive computing, 3-D imaging and a host of new modes of interactivity that, if we let them, could continue to alter, influence and even transform how we do our work as scholars. Indeed, as we develop new metaphors, we must build them from new epistemologies as well. Many of today’s graduate students will become tomorrow’s professors and scholars; they will chair departments and divisions; they will model teaching practices; and they will develop new curricula. More focus on the impact of digital media, emerging pedagogies and new modes of scholarship should be integrated into their current curricula, not merely within special programs such as the iMAP program, but broadly, and in a manner that emerges organically from and fully respects the needs of disparate disciplines.

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