

The Humanist: "Dances with Wolves" or "Bowls Alone"?

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I agree with many of Blaise Cronin's assertions, in "Scholarly Communication and Epistemic Cultures," about the humanities as an epistemic culture--for example, it is true that in the humanities "the scholarly monograph is revered and ... collective cognition ... [is] virtually unknown" (8). It's true that "sole authorship is still overwhelmingly the norm." But it's also true, as Cronin says in the second paragraph of this essay, that "a great deal of ... scholarly communication ... is informal in nature"--and that informal communication is quite a bit less solitary and monologic than the more formal, formally published, scholarly communication in the humanities.

Over the last ten years, I've spent a good deal of time writing and thinking about the epistemic culture(s) of the humanities, and especially about the impact of information technology on them. In what follows, inspired by Blaise's own example (pp. 4-5), I'm going to do something I've never done before: I'm going to go back and look at some of what I've said over the past decade, and see if I made any sense. A dangerous game, but I have the luxury of selective quotation. In doing this, I'll be focusing on three different aspects of today's subject. First, I'll talk some about informal scholarly communication in the humanities. Next, I'll talk about ways in which information technology can influence the content of scholarly communication without necessarily changing its outward forms. And last, I'll talk about an emerging genre of scholarly communication in the humanities, one that is native to the Web, and raises some interesting challenges for the disciplines. Most of my time will be spent on the first of these three topics, because if we're honest about it, that's where most of the action is, at present, in the humanities. The other two forms of activity do exist, but again, if we're honest, at present they are mostly indicators of future developments, rather than trends the existence of which we could already demonstrate at any scale. In fact, I think that's my major disagreement with myself, as I look back at what I've said in the past: I have often spoken as though the future, which I saw quite clearly, was already present. This explains why, over the past ten years, some people have thought I might be hallucinating.

I. Informal communication and social capital

Robert Putnam's influential book, Bowling Alone: The Collapse and Revival of American Community (Simon & Schuster, 2000) is worth injecting into my title and into this discussion because it offers a concept to balance the sort of solitary intellectual capital that's represented by a scholarly monograph, namely social capital. In his opening chapter, Putnam writes, "social capital refers to connections among individuals -- social networks and the norms of reciprocity and trustworthiness that arise from them." The premise of Putnam's book is that, in American culture in general, social capital is declining. My argument here is that, in the humanities, the effect of the internet has been to increase social capital dramatically, something that is overlooked in almost all of our discussions of "the crisis in scholarly publishing."

In fact, I find the comparison of formal/solitary communication to informal/social communication much more useful than the opposition we usually draw in these discussions, between print and electronic communication. On that subject, in 1994, at the annual convention of the MLA, I said this:

Already, scholarly exchange takes place at all levels of the network, from the trivial and ephemeral to the highly filtered and presumably durable. In real-time chat sessions, person-to-person email, networked discussion groups, newsletters, peer-reviewed journals, multimedia databases, and any number of other forms, the network has, for scholars, begun to organize itself into a sort of pyramid: there's a great deal of mostly unfiltered stuff at the base, a smaller amount of more specialized but still fairly conversational discussion groups in the middle, and an even smaller amount of tightly constructed, highly filtered material at the top. And rather than having to choose one or the other of these levels, most of us participate in all of them at one point or another. Indeed, for many of us, annual conferences are becoming the supplement to our disembodied conversations during the rest of the year--the time when we meet each other, sometimes for the first time--and usually feel a little strange about reconciling the physical presence with the networked one. I venture that [many] scholarly projects [have] had [their] genesis and much of [their] incubation in the usually informal, collaborative

atmosphere of the internet. As for presence, any participant in a networked discussion group will testify that personality and personal presence are, if anything, amplified in that medium.

I still believe that this pyramid metaphor works pretty well, and while in 1994 the "most" in "most of us participate" was probably wildly optimistic, I don't think it is an overestimate any more.

Fast-forward about ten years. In January of this year, at the AHA, I gave a paper in honor of the 10th anniversary of H-Net, in which I returned to this subject. I said:

Email discussion groups, like those at the heart of H-Net, have played an important part in academic life over the last decade--as Richard Jensen says in "Internet's Republic of Letters," "[a]nnual conferences and conventions [create a community of scholars] a couple days a year, rather like Brigadoon. H-Net communities live every day." And although we don't count participation in these groups for any kind of professional credit, the contribution to scholarship, and to academic community, that's made by through these email-based communities is very real. Jensen's 1997 essay goes on to say that

[t]he hundreds of pages of evaluation reports H-Net received from subscribers indicate [that] . . . H-Net has sharply increased the quantity, quality and diversity of communications among historians, especially those who otherwise would be remote from the centers of scholarly activity. While professors at the major graduate universities are already well-connected, the H-Net lists provide a scholarly lifeline to independent scholars, librarians and archivists, public historians, graduate students, and teachers at smaller or less well-funded colleges, community colleges and universities, offering intellectual stimulation and a chance to maintain a dialogue with leading scholars in their fields of interest.

--from "Internet's Republic of Letters: H-Net for Scholars," by Richard Jensen (<http://members.aol.com/dann01/whatis.html>)

Today, I would say that Jensen and I agree that the annual, physical conference is being superceded by other, electronic conferences that go on all year long. I love his "Brigadoon" image for the physical conference, because it captures the unnatural

periodicity (and the strange wistfulness) of these events so well. But more important is his observation that the social capital being developed in networked discussion groups is particularly important to those "at smaller or less well-funded colleges, community colleges and universities." This is very true, and it is a concrete example of what people gesture at when they talk about the democratizing influence of the network.

In the humanities, in fact, social capital is probably **more** important than in some other areas. What matters, in the humanities, is brilliance, usually measured in citation--that is, reputation--not (frankly) efficacy, or proof, or any other outcome. These network discussion groups--which are really communities of interest--make it possible for people to break out of their underfunded, undercapitalized, under-recognized institutional contexts, and become recognized for their own contributions to the community. This provides a kind of access and even mobility that formal publication would not, precisely because of the weakness of the peer review system in the humanities—and that's not a situation that will be improved if peer review is replaced by career review, the halo effect, or other alternatives mentioned by Blaise in his opening talk today.

A somewhat paradoxical development that follows from the success of these informal communities is the need for formal frameworks. In the AHA paper, I drew a contrast, in this regard, between H-Net, a framework that facilitates a large number of informal communities of interest, and stand-alone discussion groups:

One of the great strengths of H-Net is that it consists of many such communities, not one, and when one of its constituent communities dies out, there is a framework that makes it easy for another to spring up to replace it.

Behind that one word, "framework," are some carefully crafted documents -- the bylaws and constitution of H-Net -- which are the real key to H-Net's longevity and success, in my view, as well as being the objective evidence that a virtual community has actually come into being here. It may strike some of you as depressing to think that bylaws are evidence of community, but they are--if you look at the H-Net bylaws, you can almost hear the echoes of the community crises that brought them into being. For example, consider Section 2.02, Dispute resolution procedure:

"Academic debate and discourse inevitably, and usually constructively, invite controversy. The editors of H-Net's networks normally apply common, if evolving, professional standards in judging the value of content for publication. All network welcome messages will indicate any departure from or special application of these standards to the network's mission. Those standards entail the balancing of intellectual freedom with the need for civility and restraint. Messages that in the judgment of the editors harass, defame, slander, or libel others, that abuse intellectual property rights, are subject to rejection or revision to remove the offending passages."

Here, today, If we look at these informal communities individually and synchronically, they might seem unimportant--a passing fad, producing nothing of lasting value, not to be taken seriously. At most, when they rise to the level of articulating bylaws, they might seem self-aggrandizing. But consider the persistence that bylaws imply, and then consider the diachronic perspective--consider the impact of such communities over time, as multipliers and markets of social capital. It's a new thing that scholars in a discipline can (and do) communicate, in groups, on a daily basis, over great distances, year in and year out. This intensification of informal communication is bound to have an impact on the culture of the humanities, epistemic or otherwise.

But don't take my word for it. In a lecture to be delivered next week in London (which I received in draft form by email, the day before yesterday), Stan Katz, past president of the ACLS, writes:

We use e-mail daily in order to communicate with our students, mentors and other scholars. We become colleagues, and sometimes mentors, for graduate students and scholars whom we have never previously met, in parts of the world we have never visited. We e-mail drafts of papers to colleagues for review, and read theirs. We also use "Track Changes" and comparable technologies to distribute the editing of our writings, and thus use electronic communication to facilitate collaboration in ways that used to be largely unknown to humanists. The key word in what Stan is saying here, from my point of view, is collaboration. It's something we have done before, but it is now raised to a new scale, and thus to a new

level of significance, by something as simple but ubiquitous as email. On that point, I think I disagree with Blaise's estimate of the low importance of collaboration in the humanities, though I'd agree that so far it is mostly happening beneath the radar on which authorship blips.

Back in 1996, I wrote a paper interrogating Mark Taylor's claim that "The Only Responsible Intellectual is One Who is Wired," and in that paper, I discussed the shift toward collaboration:

I think that the character of academic work in the humanities is already in the process of shifting from a cooperative to a collaborative model: in the cooperative model, the individual produces scholarship that refers to and draws on the work of other individuals; in the collaborative model, one works in conjunction with others, jointly producing scholarship that cannot be attributed to a single author. This will happen, and is already happening, because of computers and computer networks. Many of us already cooperate, on networked discussion groups and in private email, in the research of others: we answer questions, provide references for citations, engage in discussion. From here, it's a small step to collaboration, using those same channels as a way to overcome geographical dispersion, the difference in time zones, and the limitations of our own knowledge.

There is another reason, more compelling than the ease of communication, for predicting that computers will make us work collaboratively. Computers make it possible to pose questions, to frame research problems, that would otherwise be impossible to imagine. The computer provides us with the ability to keep track of enormous amounts of information, to sort and select that information rapidly and in many different ways, and to uncover in reams of mute data the aesthetically and intellectually apprehensible patterns on which understanding depends. But in order to take advantage of these capabilities, we first have to gather and structure the data: this requires collaboration of two sorts. First, because of the sheer size of the undertaking, it requires collaboration with colleagues in one's discipline: it takes many hands to assemble the enormous quantities of raw data on which this kind of research depends. Second, it requires collaboration with professionals of

another sort, namely computer professionals. It may be the case, at some point in the utopian future, that computers will understand people; for now, we need to do this work in conjunction with people who understand computers, and who can help us to make them do what we want them to. This is more true the more we depart from the kind of operations on data that are current in the world of business, science, and entertainment. Spreadsheets, database programs, and multimedia authoring systems are tools adapted to the analytical and communicative practices of those worlds, and to the extent that our needs fail to fit those models, these tools will be useless. The computer, however, is at bottom a general purpose modeling machine, and with the right collaborators, we can use it to model analytical and expressive practices not yet imagined by Lotus, Microsoft, or Disney.

Collaboration may well make us uncomfortable, since it implies dependence on others and the consequent loss of autonomy. In exchange, though, we get a vastly expanded territory of intellectual inquiry: instead of concentrating on major events, historians can examine and compare the lives of individuals; instead of establishing a single text, editors can present the whole layered history of composition and dissemination; instead of opening for the reader a single path through a thicket of text, the critic can provide her with a map and a machete. This is not an abdication of the responsibility to educate or illuminate: on the contrary, it engages the reader, the user, as a third kind of collaborator, a collaborator in the construction of meaning. This third kind of collaboration is, I want to emphasize, a game with a net: the reader's participation is bounded by the perspective of the researchers and the availability of information; the result can be an understanding of the practice of the discipline, on the part of the reader, that is experiential rather than received; it can also be a conclusion unforeseen by the researchers yet supported by the data. I'd go even further and argue that it is our responsibility, not only to provide the opportunity for this kind of collaboration in our research, but to teach our students to work collaboratively with one another in our classes: this will be the way they work when they leave the university, even if they enter our profession.

II. Digitally-based Print Scholarship

In this 1996 essay, I was arguing that work based on large datasets will lead to our being able to ask and answer new kinds of questions. That argument doesn't necessarily imply that the scholarship itself will take a new form, though at the time I think I assumed that it must. Five or six years later, I was beginning to see that we might actually put this new wine in the old bottles, at least sometimes, and that there might be such a thing as digitally-based print scholarship. Speaking in 2002 to my colleagues in the English department at the University of Virginia, some of whom had embraced digital scholarship but most of whom had not, I asked:

What new opportunities for traditional scholarship have been created by the conversion of primary resources to digital form, or by the creation of new, born-digital resources, or by the availability of tools designed to be used with these digital materials? Do digital resources make possible new answers to old research questions? Do they make possible entirely new kinds of research questions? Do they open the way for new paradigms of humanities research? And can they do all these things in print?

..... Our habits of research in the humanities, and particularly in literary study, can be affected--sometimes renovated, sometimes mooted--by several kinds of novelty:

- * New materials for research
- * New perspectives on familiar materials
- * New methods or tools

Digital primary resources are already quite interesting in the first way--the digitization of cultural heritage materials in the US and elsewhere has made much more available many rare materials, and many underutilized materials as well--for example, rare historical maps, or diaries of daily life in earlier times (e.g., "California as I saw it"). There are many in this department who have embarked on digital research projects in the past ten years and have faced the problem of having to create their own digital primary resources first, in order to do enable scholarship, but that situation is really changing now--not everything (by a very

long shot) is available in digital form, but there are now some substantial collections of primary materials that were, in their pre-digital form, difficult to find, difficult to get to, or difficult to use. These collections offer valuable new materials for research--usually not because those materials were never available before, but rather because the expense and impracticality of consulting them made it extremely unlikely that research would be done on them. In this category--new materials for research--I would put The Making of America ("a digital library of primary sources in American social history from the antebellum period through reconstruction. The collection currently contains approximately 8,500 books and 50,000 journal articles with 19th century imprints") and the Library of Congress's American Memory project ("a gateway to rich primary source materials relating to the history and culture of the United States. The site offers more than 7 million digital items from more than 100 historical collections"). All of this opens new possibilities for archival research projects, especially for graduate students, who may lack travel budgets.

New perspectives on familiar materials are also available, as a result of the creation of digital primary resources. As an example here, I would offer The William Blake Archive, which presents full-color images, newly transcribed texts, and editorial description and commentary, on all of Blake's illuminated books, with non-illuminated materials (manuscript materials, individual plates and paintings, commercial engravings, etc.) now coming on line. The Blake Archive makes it practical to teach Blake as a visual artist, by the simple fact of the economics of image reproduction on the web, and this is a fundamental change from the way I was taught Blake, through Erdman's text-only synthetic edition (which is also, by the way, available on the site). The Blake Archive also offers some good examples of new tools that could provoke new scholarship in print--for example, the image search and plate comparison features.

Finally, some new possibilities for print scholarship are presented by born-digital information and the tools one uses with that information—for example, geographic information systems. See the just-published [Past Time, Past Place: GIS for History](#), which includes contributions from some of our colleagues in

neighboring departments, history and religious studies, and which concerns the new modes of analysis, new arguments, and new conclusions available as a result of computer techniques that map all kinds of social information onto geographic space. Surely, these same tools and techniques can be applied in literary-historical research (and in fact, Michael Levenson has taken some steps in that direction in his Victorian London project), in literary criticism (I hear rumors that Steve Railton has a new project involving Faulkner's geography), in bibliography and in cultural studies. Other tools and techniques are also available—electronic scholarly editions (like Dug Duggan's *Piers Plowman* or Jerome McGann's Rossetti Archive) enable new kinds of literary criticism; text-analysis tools, though still clumsy and offputting for the layman, are turning a corner with the advent of XML, and we can expect interesting things here in the next few years; and spatial modeling of textual features (as, for example, in Deborah Parker's interactive 3D model of Dante's *Inferno*) suggests all sorts of possibilities for the discovery of patterns of almost any sort in literary texts. All of these resources and methods can and should be part of the future of literary study—even if, in that future, we choose to publish the results of our studies in print.

A year later, in 2003, I think there's still much to be done to bring these new opportunities for research to the attention of scholars in the humanities, and I think we will have to work harder on that, if only because we will be asked to justify the investment we've made in digital libraries, over the last ten or fifteen years, and the final justification cannot be that it makes it possible for scholars to visit the library without getting dressed. In fact, I think there is probably a good deal of invisible use of electronic resources in the production of print scholarship already. I have only anecdotal evidence, but that evidence suggests that people use digital resources to find things which they then cite in their print form—so, for example, people might use the Blake Archive to find and examine a particular plate in a particular work, and then cite the Blake Trust volume containing that work. Citation is only part of the issue, though: if there is such a thing as digitally-based print scholarship, it has to go beyond citation to become interesting. The GIS-for-history book, mentioned in the 2002 essay ([Past Time, Past Place: GIS for History](#)) is a better example, because it brings a new methodology into the picture, and

although the scholarship that uses this methodology takes the final form of print, the method itself is natively digital, and the (print) results are digitally derived.

III. New Genres

So far, we've been talking only about changes to the epistemic culture that are, in some sense, behind the scenes. This is not the sort of thing we were led to expect, by the rhetoric of revolution that accompanied the advent of e-journals (lo these many years ago) and (more recently) the whelping of the web. I do believe that there are new forms of scholarship emerging as a result of information technology, and I do believe that these raise all the thorny issues that people have predicted, for the epistemic culture of the humanities. In 2000, at the NINCH building-blocks meeting, I applied a label to what seems to me a major new genre, calling it the "Thematic Research Collection." This is a term others have used before me (Daniel Pitti may be the originator of the term; Susan Schreibman has also used it, and her use could probably be traced to Daniel; Carole Palmer, at UIUC, has also come up with, independently, I believe). In my account, thematic research collections have the following characteristics. They are:

1. Extensive but thematically coherent
2. Structured but open-ended
3. Designed to support research
4. Interdisciplinary
5. Collections of digital primary resources (and they are themselves second-generation digital resources).

That definition, then, begs another two namely the definitions of "digital primary resources" and "Second-Generation Digital Resources." These are not so much genres of scholarship as classes of resources. I took a stab, in 2001, at defining these classes, in a talk given at the Digital Resources in the Humanities, given at Sheffield University, where I said that second-generation digital resources are

“originally digital scholarly (or other) creations that call digital primary resources (produced and maintained by others) into play.” That is to say, they are:

- 1) Born digital rather than digitized;

- 2) Complex, potentially multi-author, potentially very large collections of multimedia, including structured data, possibly in SGML/XML or databases—not just primary records, but also commentary, annotation, editorial apparatus, and other “secondary” materials;
- 3) Produced on the basis of, in response to, and/or using digital primary resources.

[And digital primary resources, in turn,] are “either digital surrogates for physical artifacts or born-digital ‘evidence’ for a secondary resource.” Obviously, then, once second-generation digital resources exist, they may find themselves playing the role of digital primary resources in someone else’s scholarship.

A couple years later, I still find these distinctions useful. First there are digital primary resources, which are digital surrogates or born-digital evidence; next, built on the basis of these, there are second-generation digital resources, which would be things like electronic scholarly editions or, perhaps, thematic research collections. These do exist—I know, because I’ve helped to produce quite a few of them—but I would be overstating the case by quite a bit if I claimed that this new genre was sweeping the nation like some new dance craze.

So, we have a kind of pyramid, once again—but actually, thinking about the volume of material at each level of that, I would say that the narrow bit at the top is the second-generation digital resources, and not the formal print publication that might be (and probably increasingly is) based on some use of digital resources. That’s the middle layer, it seems to me, at least in terms of volume. Why? Why isn’t the peer-reviewed, formally published, expensively printed part the smallest portion? Because the danger to one’s own professional fortunes increases as you go from digitally-based print scholarship to born-digital scholarship. It’s dangerous because we don’t know how to formally evaluate it, and often we simply don’t take it seriously. And it’s not only more dangerous, for all the reasons we’ve heard about in other talks today, it’s also more expensive and more difficult—and for those reasons, it’s still almost unheard of for a publisher to get involved in publishing born-digital scholarship in the humanities. And lest we in the library world pat ourselves on the back too much here, it’s also almost unheard of, for the very same reasons, for libraries to support second-generation digital scholarship even in

terms of so simple a matter as stable URNs for electronic resources, much less for libraries to collect and archive digital materials produced outside their walls.

No peer review, no publishers, no archives—the situation looks pretty grim for dances with wolves, the collaborative digital humanist. But don't forget that social capital he's been accumulating, through his persistent daily communication with other supposedly lone wolves, and don't underestimate the cultural transformation that represents. Dances with wolves doesn't like to bowl alone any more, and I don't think he's going back. Whether or not this culture produces the new epistemic behaviors, or new approval mechanisms, is another question. As Dr. Corn said this morning, I think we'll be living with multiple systems of scholarly communication for some time. If there's a reason to believe that a new epistemic culture **will** emerge, it is the very one that Dr. Corn cited in connection with the human genome project—the necessity of organizing our scholarship differently because of we have decided to focus on certain kinds of questions that can only be addressed using computers. And since I haven't hallucinated recently, I'll close by doing so now: I think we're just around the corner from a set of tools that, used in conjunction with our existing digital libraries, will make it possible, and more importantly, compelling and desirable, to ask questions in the humanities that can only be answered with the computer—and I'll go even further, can only be answered by working collaboratively. When that happens, we'll sort out the peer review, the publishing, and the archiving.