DOCUMENT RESUME

ED 414 941 IR 056 799

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TITLE Cost and Value in Electronic Publishing.
PUB DATE 1997-04-00
NOTE 11p.; Paper presented at the Conference on Scholarly Communication and Technology (Atlanta, GA, April 24-25, 1997), see IR 056 774.
AVAILABLE FROM Association of Research Libraries (ARL) Web site: http://www.arl.org/scomm/scat/index.html.
PUB TYPE Reports - Descriptive (141) -- Speeches/Meeting Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Classics (Literature); Computer Mediated Communication; Cost Effectiveness; *Electronic Publishing; Faculty; Influences; Information Networks; Information Technology; *Medieval Literature; Online Systems; *Publishing Industry; Scholarship
IDENTIFIERS *Bryn Mawr College PA; University Presses

ABSTRACT

A founding co-editor of Bryn Mawr Classical Review (BMCR) examines the costs and benefits of networked electronic communication for scholars. Some of the tools that have the potential to change the way scholars work include: online reference; online productivity information; e-mail as a productivity tool; and formal online publishing endeavors. A large part of the working practice at BMCR has been facilitated by the Internet; the operations of BMCR would not be possible without the productivity-enhancement of e-mail and word processing. In July 1993, BMCR began to publish a listing of "books received." The experience with Bryn Mawr Medieval Review (BMMR) has been instructively different. When the Medieval Institute of Western Michigan University "gave the journal a home" and some institutional support, the productivity increased significantly. Both BMCR and BMMR stand to gain from the Mellon Grant, which has provided for new information technology. What they still lack is any kind of economic model for the most effective use of information technology in education and scholarship. (AEF)

Scholarly Communication and Technology

Conference Organized by The Andrew W. Mellon Foundation

at Emory University
April 24-25, 1997

Session #8 Sustaining Change

Cost and Value in Electronic Publishing

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Gentlemen, Here is the current version of my paper from the conference. It follows closely what you had seen before with the main amendment of inserting the illustrative bit about indulgences, which arose in situ in response to something naive Andy Odlyzko had said and seemed usefully illuminating. This is not the hard-edged analytical stuff that gave that conference its best moments, but it may still have its use. I'm very open to any editorial suggestion, etc., that you may have. If you would like it in some other electronic form or even on, gasp, paper, I'd be happy to supply that as well.

James J. O'Donnell
June 24, 1997
via e-mail

Cost and Value in Electronic Publishing
J.J. O'Donnell

This paper is read perhaps best through binocular lenses. On the one hand, it is an account of the value and function today and for the foreseeable future of the kinds of electronic networked texts. But on the other hand, it questions our ability to account for such value and function. In search of the particular, it risks the anecdotal; in defense of value, it expresses skepticism about calculations of cost and price.

I am a student of the works of St. Augustine and shall begin accordingly with confession. The single most transforming feature of cyberspace as we inhabit it in 1997 for my own scholarship can be found in a warehouse on the edges of downtown Seattle. I mean the nerve center of www.amazon.com. I have conducted strikingly extensive experiments over the last year and can now say conclusively that it is possible to go from a supine position on my living room sofa, just vaguely tickled by the thought of a book I might be interested in, to a seated position a few feet away in my study striking the "Return" key to complete and execute an order for the book, which will appear 48-72 hours later at my office, in three minutes flat. The impact, retrospective and prospective, on the finances of my sector of higher education, could well be catastrophic. Participants in this conference will immediately recognize that I speak not merely of the cost of the books and the cost of my time reading, or my time feeling guilty about not reading, them, but also of course the cost of space on my shelves and the cost of my time and energy reshelving them each time I take them down to read, or to feel guilty about not reading, them. A couple of months ago, I had the chance to take the tour of Amazon.com's facilities vigor and excitement that positively swirls over the printed word as electronic media of communication are used to whisk volumes to all parts of the world.

If my approach seems whimsical, do not be misled. The real habits of working scholars often fall outside the scope of discussion when new and old forms of publication are considered. I will have some things to say shortly about the concrete results of surveys we have done for the Bryn Mawr Reviews project funded by Mellon, and more of our data appear in the paper by my colleague Richard Hamilton, but I want to emphasize a few points by personalizing them first.

First, and most important, Amazon books is a perfect hybrid: a cyberspace service that delivers the old technology better and faster than ever before. As such it may seem to be no more than an exemplification of the old McLuhan dictum that I like to quote, that the content of a new medium is an old medium. But we need to pay closer attention to what happens to books when they begin to move faster and in greater quantities.

Second, therefore, my ritual allusion to the paradox of the scholar wallowing in information that he does not actually read is not merely humorous: it is a fact of life. The file drawers full of photocopies, read and unread, that every working humanist seems now to possess are a very recent innovation. As best I can recall for myself, they started to accrue around 1980, toward the end of my time as an assistant professor. When the joking began -- "Once you photocopy the article, you don't have to read it" -- I cannot say, but I suggest it marks an important self-awareness. Photocopying is a service that has declined sharply in price -- if measured in real terms -- over the last twenty years, and it is certainly the case that graduate and undergraduate students can tell the same joke on themselves today. Perhaps only full professors today reach the point where they can joke similarly about books, but if so surely we are the leading edge of a

wedge. The "superstores" brought scholarly bookbuying to more eyes and fingertips than ever, starting about five years ago, and now on-line sales offer the opportunity more broadly. It is very certainly the case, for example, that the city where I went to high school, the nineteenth largest in population in the US today, was still in the summer of 1995 when last I visited it, exactly the desolate wasteland for book purchasers that it was when I haunted a few miserable shops 30 years ago (cherishing the small rack of distinctively covered Scribner paperbacks, for example). But in the two years since, it has acquired a Barnes and Noble superstore and at the same time anyone with Internet access is now just as close to that Seattle warehouse as I am. They joke that they run the world's largest bookstore, with 42 million locations around the world. The joke has a point to it. (Among other things, 30% of Amazon's business is already overseas. It makes perfect sense to think that a mechanism for speeding delivery of American books would be well-received abroad.)

But abundance is not wealth, for wealth is related to scarcity. This, I think, is the point of our jokes. When each new book, pounced on with delight in a bookstore, was an adventure, and when each scholarly article was either a commitment of time or it was nothing, the mechanical systems of rationing that kept information scarce also kept it valuable. But if we now approach a moment when even quite serious books are abundantly available, then their individual value will surely decline. To continue in confessional vein a moment, I think I have seen this when moving house a couple of times in the last couple of years. Dignified, serviceable, but somewhat tired hard-cover copies of well-regarded fiction -- George Eliot, say, or Henry James -- the sort of thing I used to snatch up with pleasure for $2 in a second-hand shop, to lay by against the time when I would read them: these veterans, whether read or not, have found themselves heading back to the second-hand shops. Not because my respect for the texts, or my guilt at not *yet* having read them, is any the less, but because I know that when I find I really do need to read *Daniel Deronda* --- a need I am quite sure will arise someday -- I have come to be confident that there will be a superstore, or an Internet terminal, close to hand. Eliot hasn't yet declined in value, but I am content to point out that our calculations of such value are made on a slippery slope.

(I am fond of historical illustration. A student of mine at Penn is now working hard on a dissertation that involves late medieval indulgences -- not just the theological practice of handing out remission of punishment but the material media through which that remission was attested. It turns out there were indeed some very carefully-produced written indulgences before printing was introduced, but indulgences were among the first printed artifacts ever. The sixteenth century saw a boom in the indulgence business as mass-production made the physical testimony easier to distribute and obtain. The "information economy" of indulgences showed a steady rise through several generations. [The *price* history of indulgences seems still obscure, for reasons my student has not yet been able to fathom; it would be interesting to see if supply and demand had more to do with the availability of the artifact or was rather measured by the number of years or purgatorial remission.] But there came a point at which, almost at a stroke, the superabundance of printed indulgences was countered by loud assertions of the worthlessness of the thing now overpriced and oversold. There followed the familiar cycle of business process re-engineering in the indulgence business: collapse of market, restructuring, downsizing, and a focusing on core competencies. The indulgence business has never been the same.)

A third and last confessional point. As founding co-editor of Bryn Mawr Classical Review (BMCR) since 1990, I think I may reasonably assert that I have been thinking about and anticipating the benefits of networked electronic communication for scholars for some time

now. Yet, as I observe my own practices, I must accept that my powers of prognostication have been at best imprecisely focused. Yes, a network connection at my desktop has transformed the way I work, but it has done so less through formal deployment of weighty scholarly resources and more through humbler tools. I will list a few:

1. On-line reference: Though I happened to have owned the compact OED for over twenty years and now in fact own a set of the Encyclopedia Britannica, I rarely in fact used the former and rarely remember to look at the latter. But their electronic avatars I consult now daily: "information" sources on myriad topics far more detailed and scholarly than any previously in regular use. This process went so far that in 1994, I found myself giving away my compact (magnifying-glass edition) OED as simply too bulky and not enough useful beside the electronic version. On the other hand, my trusted, not to say revered, desk copy of Henry Fowler's *Concise Oxford Dictionary* sees hardly any use at all: I consult the more comprehensive resource for ready reference. (Greg Crane of Tufts University reports that the same phenomenon has occurred with the various on-line versions of the standard Liddell-Scott lexicon of Greek literature that he has created. Though the concise desk dictionary is available, users regularly and overwhelmingly prefer the "unabridged" version.)
2. On-line productivity information: Under this category I include far better information about weather and travel weather than ever before; access to current airline schedules and other travel information including hotel directories; nationwide telephone directories including yellow pages; on-line newspapers and newsfeeds; and -- essential reading for anyone lately gone over from the traditional academic life to managing a large staff -- a daily update of the latest "Dilbert" cartoon. I no longer purchase newspapers (with the interesting effect that I am less well-informed about Philadelphia than I have ever been: my Philadelphia awareness used to come as a bonus along with world and national news either by newspaper or at 11 p.m. on TV, but now my news needs are satisfied without ever having to find out what is going on within blocks of my residence), and my forty-year-long habit, going back to when I learned to read as a child, of consulting the *World Almanac* for every factual question, is fading.
3. E-mail as productivity tool: The positive impact of e-mail communication on scholarship for me cannot be underestimated. Relatively little of my e-mail has to do with my scholarship, but that proportion is important first of all: news of work in progress, often including copies of papers, and ongoing conversation with specialists elsewhere is a great boon, no question. But the real enhancement comes from the way e-mail lets me handle more mundane responsibilities. I have far more contact with my students than ever, and spend much less time sitting in my office for "office hours" waiting for them to turn up. With the staff who now report to me, ordinary business gets done on quick turnaround almost in real time. With both students and staff, face to face time is increasingly used for more substantial interaction and less busy work. There really are fewer meetings.
4. Formal on-line publishing endeavors: I confess that I use the kinds of resources that Mellon grants support far less than I might have expected. I did indeed point my students to a specific article in a MUSE journal a few months ago, and I browse and snoop, but it was only in writing this paper that I had the excellent idea to bookmark on my browser MUSE's Journal of Early Christian Studies and JSTOR's Speculum -- they appear just below the exciting new URL for the New York Times Book Review on-line.

So we, or at least I, live in a world where electronic and print information are already intermarrying regularly, where the traditional content of print culture is declining in value, and where the value of electronic information is not so much in the content as in the

interconnectedness and the greater usefulness it possesses. For a conference as explicitly devoted as this one is to carrying traditional resources into electronic form, all three of those observations from experience should give pause. In fact, I am going to argue that the intermediacy and incompleteness of the mixed environment we inhabit *today* is an important and likely *durable* consideration. We must be careful not to imagine ourselves forward too quickly into a transformed and perfected world that we may in fact never reach. The implications of this argument will return later in this paper. To give them some weight, let me recount and discuss some of our experiences with BMCR. For some in this audience, there will be some familiar tales told here, but with I hope fresh and renewed point.

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When we began BMCR, we wrote around to publishers with classics lists and asked for free books. An engaging number responded affirmatively, considering we had no track record. Oxford Press sent many books, Cambridge Press did not respond: a 50% success rate with the most important British publishers seemed very satisfactory for a startup. During our first year, we reviewed many OUP books, few if any Cambridge titles. There then appeared, sometime in 1991 or 1992, an OUP Classics catalogue, with no fewer than two dozen titles appending blurbs from "Bryn Mawr Classical Review." (From this we should draw first the lesson that brand names continue to have value: OUP could have chosen to identify its blurbs, as it more commonly does, by author of the review than by title of the journal, but we had chosen our "brand" well.) Approximately two weeks after the OUP catalogue appeared, we received unsolicited a first handsome box of books from Cambridge, and we now have a happy and productive relationship with both publishers. Our distinctive value to publishers is our timeliness: books reviewed in time to blurb them in a catalogue while the books are still in their prime selling life, not years later. The practical value to scholars is that information about and discussion of current work moves more rapidly into circulation. (Can a dollar price be placed on such value? I doubt it. I will return later to my belief that one very great difficulty in managing technology transitions affecting research and teaching is that our economic understanding of traditional practices is often too poor and imprecise to furnish a basis for proper analysis. In this particular case, we must cope with the possibility that a short-term advantage will in the long term devalue the information by increasing its speed of movement and decreasing its lifetime of value.)

We began BMCR in part because we had already in place a circle of collaborators. Rick Hamilton had created Bryn Mawr Commentaries in 1980, offering cheap, serviceable, reliable texts of Greek and Latin authors with annotation designed to help real American students of our own time; in a market dominated by reprints of texts for students in the upper forms of British public schools in another century, the series was an immediate hit. It quickly became the most successful textbook series in American classics teaching. I had joined that project in 1984 and in slightly over a decade we had almost 100 titles in print. In the course of that project, Hamilton had assembled a team of younger scholars of proven ability to do good work on a short deadline without exclusive regard for how it would look on a c.v. -- textbook-writing is notoriously problematic for tenure committees. This group formed the core of both our editorial board and our reviewing team. If you had asked us in 1990 what we were doing, we would have said that we were getting our friends to review books for us. This was true insofar as it meant that we could do a better job more quickly of getting good reviews moving because we had already done the work of building the community on which to draw.

But what surprised us most was that a little more than a year after we began work, we looked at

the list of people who had reviewed for us and found that it had grown rapidly beyond the circle of our friends and even the friends of our friends. A book review journal seems unusually well situated to build community in this way, because it does not wait for contributions: it solicits them and even offers small compensation -- free books -- to win people over. If then it can offer timely publication, at least in this field, it is possible to persuade even eminent and computer-hostile contributors to participate. (To be sure, there are no truly computer-hostile contributors left. The most recent review we have published by someone not using at least a word processor is three years old.)

But the fact of networked communication meant that the reviewer base could grow in another way. A large part of our working practice, quite apart from our means of publication, has been facilitated by the Internet. Even if we only printed and bound our product, what we do would not be possible without the productivity-enhancement of e-mail and word processing. We virtually never "typeset" or "keyboard" texts, a great saving at the outset. But we also do a very high proportion of our communication with reviewers by e-mail. Given the difficulties of moving formatted files across platforms that persist even now, we still receive many reviews on floppy disks with accompanying paper copies to assure accuracy, but that is only a last step in a process greatly speeded by the speed of optical fiber.

Further, in July 1993 our imitation of an old practice led to a fresh transformation of our reviewing population. We began to publish a listing of "books received" -- enough were coming to hand to make this seem like a reasonable practice, one we now follow every month. By stroke of simple intuition and good luck, Hamilton had the idea to prepend to that list a request for volunteers to review titles yet unplaced. (I may interpose here that Hamilton and I both felt acutely guilty in the early years every time one or two books were left after several months unplaced for review. Only when we read some time later the musings of a book review editor for a distinguished journal in another field well known for its reviews and found that he was publishing reviews of approximately 5% of the titles that came to his desk did we start to think that our own practice [reviewing, on a conservative estimate, 60-70% of titles] was satisfactory.) The request for volunteers drew an unexpected flood of requests. We have now institutionalized that practice to the point that each month's publication of the "books received" list needs to be coordinated for a time when both Hamilton and I are prepared to handle the incoming flood of requests: 30-40 a month for a dozen or so still-available titles.

But the result of this infusion of talent has been an extraordinary broadening of our talent pool. Though a few reviewers (no more than half a dozen) are household names to our readers as authors of more than a dozen reviews over the seven years of our life, we are delighted to discover that we have published, in the classical review journal alone, 430 different authors from a total of about 1000 reviews. Our contributors come from several continents: North America, Europe, Africa, Asia, and Australia. By the luck of our having begun with a strategy based in praxis rather than ideology (beginning, that is, with people who had contributed to our textbook series), we have succeeded in creating a conversation that ranges widely across disciplinary and ideological boundaries. The difficulty of establishing working relations with European publishers remains an obstacle that perplexes us: but that difficulty chiefly resides in the old technology of postal delays and the fact that even e-mail does not eradicate the unfamiliarity that inheres when too few opportunities for face-to-face encounter exist.

Our experience with Bryn Mawr Medieval Review has been instructively different. There we began not with a cadre of people and an idea, but merely with an idea. Two senior editors, including myself, recruited a managing editor who tried to do in a vacuum what Hamilton and I

had done with the considerably greater resources described above. It never got off the ground. We put together an editorial board consisting of smart people, but people who had no track record of doing good work in a timely way *with us*: they never really engaged. There was no cadre of prospective reviewers to begin with, and so we built painstakingly slowly. In the circumstances, there was little feedback in the form of good reviews and a buzz of conversation about them, and publication never exceeded a trickle.

We have speculated that there are some intrinsic differences between "classics" and "medieval studies" as organized fields in this country that are relevant here. Classicists tend to self-identify with the profession as a whole and to know and care about materials well beyond their immediate ken. A professor of Greek history can typically tell you in a moment who the leading people in a subfield Latin literature are, and even who some of the rising talent would be. But a medievalist typically self-identifies with a disciplinary field (like "history") at least as strongly as with "medieval studies", and the historian of Merovingian Gaul neither knows nor cares what is going on in Provencal literature studies. I am disinclined to emphasize such disparities, but they need to be kept in mind for what follows.

After two and a half years of spinning our wheels, with to be sure a fair number of reviews, but only a fair number and productivity clearly flagging, we made the decision to transfer the review's offices to new management. We were fortunate in gaining agreement from Professor Paul Szarmach of the Medieval Institute of Western Michigan University to give the journal a home and some institutional support. Western Michigan has been the host for a quarter century of the largest come-all-ye in medieval studies in the world, the annual Kalamazoo meetings. Suddenly we had planted the journal at the center of a network of self-identified medievalists. The managing editorship has been taken up by two WMU faculty, Rand Johnson in Classics and Deborah Deliyannis in History, and since they took over the files in spring 1996, the difference has been dramatic. In the last months of 1996, they had the most productive months in the journal's life and on two occasions distributed more reviews in one month than BMCR did. BMCR looks as if it will continue to out produce BMMR over the next twelve months by an appreciable pace, but the gap is narrowing.

Both BMCR and BMMR stand to gain from our Mellon grant. A new interface on the WWW, a mechanism for displaying Greek text in Greek font, enhanced search capabilities, and other features you may well surmise will be added to what is still the plain-ASCII text of our archives which are still, I am either proud or embarrassed to claim, on a gopher server at the University of Virginia Library. When we began our conversations with Richard Ekman and Richard Quandt in 1993, indeed, one chief feature of our imagined future for BMCR was that we would not only continue to invent the journal of the future, but we would put ourselves in the position of packaging what we had done for distribution to others who might wish to emulate the hardy innovation of an electronic journal. About the time we first spoke those words, Mosaic was born; about the time we received notice of funding from the Mellon foundation, Netscape sprang to life. Today the "NewJour" archive based on a list co-moderated by myself and Ann Okerson on which we distribute news of new electronic journals suggests that there have been at least 3500 electronic journals born -- some flourishing, some already vanished. Though BMCR is still one of the grandfathers of the genre (Okerson's 1991 pathbreaking directory of e-journals listed 29 titles including BMCR, and that list was near exhaustive), we are scarcely exemplary: it's getting crowded out here.

But meanwhile, a striking thing has happened. Our users have, with astonishing unanimity, not complained about our retrotech appearance. To be sure, we have always had regrets expressed

to us about our Greekless appearance and our habit of reducing French to an accentless state otherwise seen in print chiefly in Molly Bloom's final soliloquy in the French translation of Ulysses. But those complaints have not increased. Format, at a moment when the web is alive with animation, colors, java scripts, and real audio, turns out to be far less importance than we might have guessed. Meanwhile, to be sure, our usage has to some extent plateaued. During the first heady years, I would send regular messages to my co-editors about the boom in our numbers. That boom has never ended, and I am very pleased to say that we have always seen fewer losses than gains to our subscription lists, but we are leveling out. Where Internet usage statistics continue to seek the stratosphere, we saw a "mere" 14% increase in subscriptions between this time twelve months ago and today. (Our paper subscriptions have always remained very consistent and very flat.) It is my impression that we are part of a larger Internet phenomenon that began in 1996, when the supply of sites began to catch up to demand and everyone's hits-per-site rate began to level off.

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But we are still a success, in strikingly traditional ways. Is what we do worth it? How can we measure that? My difficulty in answering such questions is that in precisely the domain of academic life that feels most like home to me, we have always been astonishingly bad at answering such questions. Tony Grafton and Lisa Jardine, in their important book on Renaissance education From Humanism to the Humanities, make it clear how deeply rooted the cognitive dissonance in our profession is between what we claim and what we do. Any discussion of the productivity of higher education is going to be inflammatory, and any attempt to measure what we do against the standards of contemporary service industries will evoke defenses of a more priestly vision of what we are and what we can be -- in the face of economic pressures that defer little if at all to priesthoods.

But I will also suggest that there is one additional reason why it is premature to begin measuring too closely what we do. Pioneers are entitled to be fools. Busting sod on the prairie was a disastrous mistake for many, a barely sustainable life for many many more (read Wallace Stegner's luminous memoir *Wolfwillow* for chapter and verse), and an adventure rewarding to few. But it was also a necessary stage towards a productive and, I think we would all agree, valuable economy and culture. I suggest that if we do not know how to count and measure what we do now on the western frontier with any certainty, we do already know how to fret about it. We know what the issues are and we know the range of debate.

By contrast, any attempt to measure the value of electronic texts and images or of the communities they facilitate is premature in a hundred ways. We have no common space or ground on which to measure them, for one thing: a thousand or a million experiments are not yet a system. We do not know what scales, what survives, what has value that proves itself to an audience willing to pay to sustain it. We can measure some of the costs, but academic enterprises are appallingly bad at giving fully-loaded costs, inasmuch as faculty time, library resources, and the heat the keeps the fingers of the assistant typing HTML from freezing are either unaccounted for or accounted for far more arbitrarily than is the case for, for example, amazon.com. We can measure some of the benefits, but until there is an audience making intelligent choices about electronic texts and their uses, those measures will be equally arbitrary.

Let me put it this way. Was an automobile a cost-effective purchase in 1915? I know just enough of the early history of telegraphy to surmise, but not enough to prove, that the investment in the first generation of poles and wires -- Ezra Cornell's great invention -- could

never possibly have recouped itself to investors, and in fact as with many other "new technologies" of the nineteenth century one important stage in development was the great crash of bankruptcies, mergers, and reorganizations that came at the end of the first generation. "Western Union," in which Cornell was a principal shareholder, was one economic giant to emerge in that way. A similar thing happened to railroads in the late nineteenth century. Such a reading of history suggests that what we really want to ask is not whether we can afford the benefits of electronic texts but whether and how far we can allow universities and other research institutions to afford the risks of such investment.

For we do not know how to predict successes: there are no "leading economic indicators" in cyberspace to help us hedge and lay our bets. Those of us who have responsibility for large institutional ventures at one level or another find this horribly disconcerting, and our temptation over the next months and years is always going to be to ask the tough, green-eyeshade questions, as indeed we must. But at the same time, what we must be working for is an environment in which not every question is pressed to an early answer and in which opportunity and openness are sustained long enough to shape a new space of discourse and community. We are not yet ready for systems thinking about electronic information, for all that we are tempted to it: the pace of change and the shifts of scale are too rapid. The risk is always that we will think we discern the system of the future and so seek to institutionalize it as rapidly as possible, to force a system into existing by closing it off by main force of software, harware, or text-encoding choices. To do so now, I believe, is a mistake.

For one example: "Yahoo" and "Altavista" are powerful tools to help organize cyberspace in 1997. But they are heavily dependent on the relative sizes of the spaces they index for the effectiveness of their results: they cannot in present form scale up. Accordingly, any and all attempts to measure their power and effectiveness are fruitless. For another example: there is as yet no systemic use of information technology in higher education beyond the very pedestrian and pragmatic tools I outlined above. Any attempt to measure one experiment thus falls short of its potential precisely because no such experiment is yet systemic. There is nothing to compare it with, no way to identify the distortions introduced by uniqueness, or by the way the demands of present institutional structures distort an experiment in ways that limit its effectiveness.

What we still lack is any kind of economic model for the most effective use of information technology in education and scholarship: that much must be freely granted. The interest and value of the Mellon grants and this program, I would contend, lies in the curiosity with which various of our enterprises push our camel-like noses under one or another tent flap, in search of rewarding treats. Until we find them, we must, however, be content to recognize that from a distance we all appear as so many back ends of camels showing an uncanny interest in a mysterious tent.

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