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Futures for Library Research (Yale Version)
Andrew Abbott
University of Chicago

Let me begin with the obvious. I am about to give you a lecture. I have a real argument, one that cannot be represented by a diagram of colorful but undefined blobs and arrows. There will be words, sentences, paragraphs, logic. Ten years of ideas are crammed in the next fifty minutes.

And yes, you can safely infer from my tone that I do not believe in a great new advance in knowledge; or that today's undergraduates are better educated and better multitaskers than yesterday's; or that their papers are better than those of their parents whom I taught thirty years ago; or that my younger colleagues' research is better than ours was at their age; or that the new world of reference tools is better than the old. That's the polite way of putting my personal feelings, which are mainly a mixture of anger and contempt at what I view, on both historical and theoretical grounds, to be folly and stupidity. But while as a library researcher, I am passionately committed to research libraries and the pleasures and wonders of working in them, this talk needs to detail a careful argument, so the sociologist of history and knowledge must do the talking.

My basic analytic message is that a number of different historical forces, of varying historical depths and importance, both external and internal to scholarship, have combined to make this a particularly desperate moment for the library-based research enterprise. Research of this type has always been a largely parasitic activity, particularly in the humanities and social sciences. Few people in the society care much about it, and the resources it has acquired were gathered in the name of other things and while no one was looking. Now that the larger historical conjuncture has turned against it, it is as usual without defense. The fact of the matter is that real intellectual life in these fields may soon leave the universities.

Let me begin with some theory about how social change happens. The social world is continually changing; that is why it is actually more proper to speak of "the social process" than "the social world." But continuous social change is generally restrained by the woven net of

local stabilities and vested interests that is our everyday world, as well as by the fact that change is usually happening at different rates and in different directions in the various parts of the social process. Major social change becomes a possibility only occasionally, when a number of such sub-processes happen to become aligned, all of them presenting the possibility of change at once.

This is such a moment, with alignment among external processes as well as among those internal to academic life itself. The external processes are more familiar, and I begin with them - five processes that shape intellectual life in the humanities and social sciences and that have simultaneously entered moments of transition. I shall discuss them in order, from the local changes to the broadest ones. They are:

1. The demographic evolution of universities and academia
2. Neoliberal university management
3. The invasion of knowledge by profit-oriented capitalism,
4. The emergence of a one-size-fits-all model of knowledge
5. The cultural transition from verbal to imagistic media.

1. Demographic evolution.

The modern university system in America began in the late nineteenth century with the creations of Johns Hopkins, Clark, and Chicago - the first European style universities in America. Harvard, Yale, and the rest soon joined these three in creating a new type of university, with a German graduate school top and an English undergraduate school bottom, linked together by one faculty and democratized in various ways. The more advanced of the land grant schools emulated the new model.

Initially, the university system was tiny, educating perhaps 2% of the 18-24 year-old cohort, virtually all of them men. But it expanded steadily through the First World War, passing 5% of the cohort in 1920, and growing exponentially between the wars. After the Second World War it expanded exponentially again until around 1970, living off GI bill funding and the influx of women. By 1970 it was enrolling a third of the two-gender cohort. Paralleling the expansion was the upgrading of college faculties, which finally reached the standard of "PhDs for all A&S faculty" some time after the Second World War.

The rapid expansion meant what rapid expansion means in any demographic system. Most faculty were young. Graduate students outnumbered junior faculty who in turn outnumbered senior faculty. Since young people have fewer obligations and more time to read and think, there was on average more reading and thinking. And since few faculty were in the ages then characterized by extensive scholarly writing, there was much less to read. Moreover the strong seller's market for academic talent created by the expansion meant there was no pressure for young people to publish. The result was that in the late 1920s a scholar could read everything published annually in his entire discipline if he read about 500 pages a week. That's a documented fact.

Since it lasted for about seventy years, this expansionary demography established normative models for graduate education, research, and the scholarly life course in the humanities and social sciences. The system was unhurried. Scholars took time with major work. By comparison with later periods they spent much more time actually teaching students, both graduate and undergraduate. There were lots of graduate students for few senior faculty. There was a lot of reading and thinking, but much less writing. At the same time, most of what was written was actually read.

With the ending of expansion, this demography rapidly changed. The PhD market became a buyer's market, with consequent pressure to publish more and to publish earlier. The resulting publication explosion was not caused by increases in intelligence, expertise, training, or "critical mass." It was purely demographic. If one inspects the PhD publication series of the late nineteenth and early twentieth century universities - a purely routine form of publication required for the degree and typically paid for by the student - one finds them filled with fine efforts, every bit as excellent as today's hot new monographs from the University of Chicago Press. But these dissertations were seldom read, even then; they were simply statutorily required publications. Today, by contrast, my graduate students must try to publish the course papers that even my own generation gladly threw away.

The new demography also meant that the average age of professors rose more than ten years. So the increasing amount of publication faced a professoriate at ages where it typically had less time to read, because it was more busy with middle-aged things like book series, centers, and other forms of institution-building. The scholarly world became subdivided, pressured, rushed. All of this happened because of an inevitable demographic transition. Our

"traditional" model of graduate school was in fact definitionally a transitional one, because it was, in fact, built on a Ponzi scheme. There is nothing to be done about this - the old demography of the university can never return. Indeed, such a structure can only return if intellectual life leaves the universities and starts over in some other institutional location, where exponential expansion would be again possible.

2. Neoliberal Management

My second transition is involves management. Universities have in the last thirty years been seized by a neo-liberal management largely external to the intellectual enterprise. This change has roots in various earlier transformations. Educating 40% of all 18 year olds of both sexes is qualitatively different from educating 2% of all 18-year-old, mainly elite, men. It necessarily involves mass teaching. Since less than one quarter of the economy's jobs require a bachelor's degree, it necessarily involves vocational education. Given the decline in the country's secondary education system, it necessarily involves remedial training. Moreover, universities house multiple freestanding research institutions as well as enormous medical establishments and numerous professional schools. They run large physical plants and employ tens of thousands of people.

Having become giant businesses, the universities are managed as such, and the current trend of university management is predictably anti-intellectual. The arts and sciences faculty with its pure research is just one of twenty or thirty such units, in effect just another division of the university. In most cases it is among the most prestigious, but also among the most impoverished. Like most managers at a distance, university administrations administer such faculties as if they were manufacturing firms. They tout intellectuality, but in practice they count articles.

By creating such intellectually perverse incentives, neoliberal management has in effect destroyed the system of scholarly communication. The majority of scholarly publication in the social sciences and humanities today serves no purpose other than providing grist for evaluation. The very authors of the articles know that perfectly well. Take my lecture today. Fifty years ago such things were never published. Now, I and my colleagues do our best to publish every single one.

The facts proving the meaninglessness of most current publication are many. We know that in the United States, the rates of scholarly publishing per scholar are much higher today

than they were prior to the 1970s, even though there is no reason to think those earlier scholars stupid, or lazy, or untrained. We know also that publishing has become common at younger and younger ages, even though graduate students today are no smarter or better educated than their predecessors. Moreover, we know that - in part because of this decline in quality - no one is in fact reading much, as can be easily seen from the disappearance of citations that identify particular pages as sources rather than entire articles or books. I have carefully read a year's worth of articles (110 of them) citing my own first book, for example, and it is clear on internal evidence that at least half of those who cite my book do not understand its main argument and that at least 10% of them cannot possibly have read even a chapter of it.

This degradation of our communication system can be remedied only by two strategies. First we must defend the elite of journals against second-rate work. This will prove difficult, as the pressure to print graduate student material is great, and the willingness to conduct real peer review is declining. Second, we must change the evaluation system for academics. The late Roger Gould, one of Yale's most distinguished sociologists, used to suggest that we should announce that we would read only 75 pages for any tenure case, but that we would read them very well. Perhaps if ten great universities made that change, we could stem the tide of garbage.

Another dangerous effect of neoliberal management is what is called coercive isomorphism. Coercive isomorphism labels a situation in which all units are forced by competitive pressures to be alike, typically because of implicit or explicit rating schemes. The most familiar example in academia is the 19-student class, enforced by US News's definition of the "small class" as under 20 students. From the point of view of library research, the consequence of coercive isomorphism is that it prevents any consortium solution to the problem of the disappearing research library. It is obvious to everyone that the national research system in the humanities and social sciences needs at least a few great research libraries in which everything is onsite and immediately available. But no single university has the money to fund such a thing, many of whose users would be faculty elsewhere who are losing their browsable libraries and who would need to travel to a consortium facility. At the same time, everybody who would not have such a consortium facility has the incentive to be hostile to the creation of one elsewhere. The same process caused opposition to the creation of CRL sixty-five years ago, and as older librarians know well, also explains the longstanding refusal of university faculties to countenance collection specialization among university libraries. In any case, the fact is that

if we want there to be ANY great browsable research libraries in the United States, we have to turn the existing possible candidates into consortium institutions, with immense main libraries and active fellowship programs providing short to medium length stays for those scholars from elsewhere who need to work in such environments. That's why Chicago built the Mansueto Library.

3. Invasion of the Capitalists.

My third transition is the invasion of knowledge by the for-profit world. I don't need to tell any of you about this. The days of the beneficent monopolist H. W. Wilson are long gone. At first it seemed that the capitalist plan would be simply to buy all the material of scholarship and then rent it out. That proved impossible, although Google tried and will try again and again until it can smash copyright and achieve the monopoly it desires. The interim strategy is to create a new means of access and then charge monopoly rents for it. The real money was to be made in the sciences, which were backed by massive industrial and government funding, and where intense inter-university competition guaranteed the effectiveness of scare-tactic sales strategies. Hence the rapid amalgamation of all science journals and the banditry of Elsevier. Better yet, the monopoly publishers discovered that the pressure to publish provided by the buyer's market in academic talent and the bean-counting of the deans meant that faculty had incentives to found infinite numbers of new journals, which could then be charged for, etc. Financially, of course, the humanities and social sciences world was not worth the trouble, but consolidation simply swept them along with the more profitable sciences.

This system is of course scientifically pernicious - the publishing of unimportant crap is just as problematic in science as elsewhere - but it has also siphoned considerable money away from other things: budgets for services, for collections in other areas, digitization, preservation, and so on. Deep down, it is clear that to many people knowledge seems a natural commons, that it can all be stored in one place, delivered electronically, and paid for on a fee for service basis that supports maintenance and perhaps research, on the old ATT plan. Quite aside from whether current capitalism would abide such a socialistic dinosaur, it's not clear what the future would be for research librarianship in that scenario.

In the medium run, it's clear that many of the traditional functions of research librarianship have been taken over by the vendors: much of cataloging, indexing, research

bibliography, reference services, even acquisitions. For the smaller libraries this may have been a good thing. For the larger ones, it is more worrisome. The vendors' work seizure has forced librarians towards service - guiding the students and even the faculty through the vendor world, which is made chaotic by the continuous sale and redesign of particular tools. Hence also the attempt of librarians to teach students how to do research, something in which librarians have usually not been trained, but which the faculty is apparently not bothering to teach, and which so serves as an obvious new work area for professional survival of research librarians.

For the researchers, the great invasion of the vendors and their digital stuff has several important consequences. First, the theoretical expectation is that expanded access has probably lowered the average quality of research. Since librarians always selected material on quality, the "more" that is available is generally of lower quality and importance. Moreover, the best scholars already had the best access, so the new work is being done by lower-ranking scholars (although scholarly oversupply militates against this.) So it is probable that universal weakens the research enterprise as a whole. My own experience with students and even colleagues is that it simply loses weak researchers in the welter.

Second, this new welter is the harder to handle because the digital move has reduced real indexing. The quality difference between conceptual indexing and keyword indexing is enormous, and the conceptual indexes are nearly all gone. Even back of the book indexes are degenerating into keyword indexes and, ominously enough, our students in fact believe that the indexes in pre 2000 books were keyword indexes produced by hand. In fact, our students do not have even the idea of conceptual indexing. On the automation front, there is no sign that the "topical analysis and themes" algorithms in text mining are going to do any better than did previous types of cluster analysis, which have been with us for fifty years without affecting the course of scholarship in the slightest. So the bottom line here is that real indexing and, more dangerous still, even the IDEA of real indexing are fast disappearing.

Third, it seems probable that the digital tools have furthered among faculty the decline of reading that was previously under way for life course and overload reasons. The avalanche of material now available is so large and of such mixed and indeed imponderable quality that it is in most cases impossible to do anything more than cruise abstracts and read an occasional article based on some Bayesian prior about its quality: venue, author, dataset, etc. Most articles are, in effect, immediately archived, to be retrieved only if they prove useful to someone and

can begin the process of becoming citations. Piling-on processes in citation - and, I am embarrassed to say, the increasing practice of referees in asking themselves to be cited - lead to the eventual take-off of certain works as citation classics. As I noted earlier with respect to my own classic, there is no indication that these particular works are actually read.

To be sure, the digital tools do permit some things never before possible, and eventually - perhaps in forty years - there will be disciplines of quality for automated work with digital tools. At present, their main use in the humanities and social sciences - via data mining - is simply to produce junk. I have worked with these techniques for thirty years - long before anybody outside of a tiny research community even knew about them - and am quite confident of this judgment. Like any advanced technique that has been commodified and put in the hands of people who don't understand it, it is worse than useless, flooding the market with garbage.

In short the digital impact on scholarship is almost entirely negative, because of overload, loss of indexing, decline of average quality, and the ensuing decline of reading. This is not because positive impact is not possible, but because it would be very expensive for its return, and the vendors are bottom line firms. They are happy to profit from monopolies, but actually aiding real research is not something that will produce profits. Therefore, every single major indexing tool has had its front end steadily dumbed down steadily, in the attractive and democratic name of "universal access," of course. But nobody really believes that undergrads are going to do great things using "America: History and Life." Rather by dumbing down the front end the vendors feel that they can get more universities and colleges to subscribe. The result of course is to keep the front-ends constantly changing - just what an expert doesn't need - and to push important information about coverage, gaps, relevancy algorithms, and so on off where it can't be found. Every single one of these major tools is of lower quality today than it was in print, and every single one gets harder and more dangerous for scholars to use as it dumbs down for the undergraduate market. All the vendors want from the scholars is legitimacy. They want it admitted that their lies about quality are true. They aren't. They're just lies. Often, the vendors do not actually know what their tools are doing, as I have shown elsewhere.

I may as well say here what is going to happen, since there's nothing really that we can do about it. What will probably happen is that the vendors will ultimately break up the copyright law in such a way that there will exist some one or a few single repositories for all

sources in humanities and social sciences. Access will be fee for service, with all the perverse incentives and hierarchical effects that implies. The net effect on knowledge, because of loss of real browsing, decline of indexing, disappearance of quality, and so on, will be negative for at least 25 years. In effect, they will trash what the twentieth century thought was knowledge. "Knowledge" will be redefined to mean whatever it is that Google et al. deliver. After about fifty years or so, some group will emerge inside Google or whatever it is then called, which will reinvent real knowledge, just as the universities were reinvented by intellectuals in the late nineteenth century. We will not be around for that, but it will happen eventually. And we will then be eventually rediscovered and claimed as precursors in the scholarly battles of that later era. That's what is going to happen.

4. The One-Size-Fits-All Model.

My next great transition is the emergence of the one-size-fits-all model of knowledge. There is at present in the culture a notion that that there is only one type of knowledge, and that is science - or since science isn't really science any more - technology.

This is a quite general trend, but its implications for library research are quite specific, because essentially they mean that scholars with no training or even interest in the subject matters of the humanities and social sciences are in the process of invading those areas of knowledge, producing large amounts of very flashy results, and claiming to have answered the main questions which have so long confused their stupider brethren. Thus the physicists have taken over social network analysis and think they can answer the major questions about social structure with a few months of reflection and modeling. Thus the data miners have created their giant corpora of published texts and will soon announce that their algorithms have solved the intellectual problems of the humanities. Such groups not only think they can answer all the important questions that have puzzled the social scientists and humanists, they also feel that the questions their methods cannot answer are for that very reason unimportant questions. Indeed, for them, matters their methods cannot address are simply noise or chance. These new "scientists" of the human thus redefine the great questions of the humanities and social sciences out of existence, even while they claim to answer all the questions that have puzzled us for so long.

An important part of this change is that natural scientists for the most part genuinely believe that there is no need for libraries. They do not use physical libraries at all at this point. Many of them do not think that the humanities and humanistic social sciences produce disciplined research, but rather opinion decked out in erudition and fine words. In 2006, I had to write a theoretical article giving a full computational theory of library research merely to convince the scientist on Chicago's Library Task Force that we shouldn't just shut the place down.

On the social science side, the one-size-fits-all ideology is less of a problem. There have been recurrent such "scientizations" of the social sciences in the last century, and only one has come close to succeeding - the transformation of economics from a broad form of highly rigorous theory and reflection into the mere engineering of capitalism. This recurrent failure of scientization follows from the political importance of social science results. The more useful social science is in politics, the more the political losers invest in critique of the "scientific" social science, on substantive, methodological, and data-quality grounds, usually by experts hired for the purpose. That critique then inevitably pushes the social sciences back towards semi-humanistic and semi-normative inquiry; even subtle methodological debates become, in effect, the weapons of concealed normative arguments, as we see from the endless debates of the literature on inequality.

The humanists seem to me more vulnerable. My colleagues in the humanities seem to be in love with "digital humanities," even though it is clear that many of the results it produces are artifactual. Having never lived in disciplines combining scientific and humanistic methods, the humanists are unprepared for this debate, which has raged continuously in my own discipline over the last hundred years. Perhaps once they get over their initial enthusiasm they will figure out that digital humanities doesn't really tell us much of any importance. An amusing example concerns keyword indexing. I wrote an article three years ago showing (with quantitative methods) that over the period 1870 - 1940 the published keyword indexes to thirty of the major British poets almost certainly had no effect on the amount of scholarship done on those poets. You will be amused to know that *Digital Humanities Quarterly* turned the piece down on the grounds that it wasn't relevant to them. That's the kind of people who apparently dominate digital humanities today - naive enthusiasts.

In the long run, however, the one-size-fits-all trend will fall back, as it always has. But we will need to be much more explicit about how exactly it is that humanistic knowledge works. That is what I have been doing in a series of papers on the theory of library research, ideals for non-cumulative knowledge, and so on. Our colleagues in the humanities have not mounted a serious theoretical defense of their enterprise, perhaps because they regard such a defense as too "scientific" in itself. But it will be required in a "one-size-fits-all" universe, because such a formal theory is the only kind of argument that will be heard.

5. From Print to Picture

Finally, my fifth great change is the shift of the culture from print to images, a process that began with newspaper and magazine photography, that triumphed in television, and that has invaded the remaining strongholds of print via the internet. The main effect of this change on library research is its effect on our potential recruits to real scholarship, the undergraduate students. Let me say a few things about them. I should underscore that as a Chicago faculty member I routinely teach in the Chicago core, teaching great classics of social science to small groups of random elite 18-year-olds. And I have done a great deal of specific investigative work on these students, so what I am about to say is not simply opinion, but data based on dozens of interviews, special assignments, solicited reflections, and ethnographic work.

Our students' idea of knowledge is more shaped by surfing the internet than by reading discursive texts. Even the best students in the U. S. draw their concept of knowledge from their internet experience. They therefore believe that knowledge consists of commodities rather than of arguments. They think that to know something is to know its location. They believe that knowledge is something one finds rather than something one creates. They do not even understand what knowledge IS, much less can they fashion genuine knowledge out of those few things that they do in fact know. Adept with their machines, they are able to fashion texts that appear to be scholarly. Yet on careful reading, these texts prove to be mere simulacra. Moreover, the students do not know their texts to be simulacra, because they have no image of real knowledge by which to make that judgment. In fact, much that is in their texts is directly borrowed, for they also do not understand the difference between thinking for themselves and copying the thoughts of other people. They have lost the very idea of independent creation. Although weirdly sophisticated, they are simply illiterate, in the literal sense. They cannot parse

complex texts. They cannot entertain complex arguments. Their notion of knowing is gliding over the surface of some complex ideas and producing a clever insight.

These things wouldn't matter, of course, if the images they handle so well could effectively represent arguments. But they cannot. In the short run - meaning forty or fifty years - there appears to be no possibility that we will be able to represent in images the kind of complex discursive structure that is the essence of expert knowledge. We cannot with pictures prove the fundamental theorem of the calculus or analyze the nature of justice or explain the origins of the Second World War. We can illustrate these things with pictures or movies, but we cannot reason about them. Rigorous imagistic arguments about such things may eventually be invented. But they do not exist now and will not do so for at least fifty - more likely one hundred - years.

As a result, the fact that even our most able students are becoming weaker and weaker at processing complex thought is a big problem, not just for library research but in fact for all forms of complex reasoning and expertise. Our students lack a set of skills that earlier generations brought to college by default, having been forced to learn them in secondary education. Therefore, we must systematically train a few students to follow us as experts in complex discursive thought, to follow us in what will be a lonely way, at least for several decades. This teaching will be harder than before, because potential intellectuals will not come to us with the skills we ourselves brought to graduate training. We have to do an immense amount of remediation. And I'm afraid that there are not necessarily going to be academic jobs for such people. The academic jobs will be taken by the professionalized simulacra, with their fatuous blogs, their flabby articles, and their self-advertisement. But we must focus on creating a few successors as real intellectuals. Where they work doesn't matter. What matters is that they exist and that they, too, be able to reproduce themselves.

II The Scholars Themselves

So those are my five major external trends, and my rough predictions for what can be done about them in the short run and what will happen in the long. Having shown these great external changes, let me now reflect on the changes in the scholars themselves.

I must first make an important distinction, between autonomous and heteronomous changes in researcher behavior. These things are very different. I can illustrate this distinction

with the example of stored material. Many librarians have found that stored material is not used as much as they or faculty expected it to be. There are of course two possible theories for this phenomenon. One is that we overestimated faculty interest in stored material. The other is that harried faculty simply pass over things that aren't available and find work-arounds for stored material. On the second theory, access drives use.

The second is clearly the true explanation. So for example, I reviewed eight years of circulation data from Chicago's Regenstein Library and found that 21% of the 4.5 million items in Regenstein had circulated at least once to a patron. Half of that material circulated only once, from which one could infer that it was unusual material, necessary only to a researcher. A trustee or a librarian might say "it's cost-effective to send this material offsite." But 450,000 items over the course of $365 * 8$ or 2,920 days means that 154 times A DAY a researcher found something on the shelf when he or she needed it, and that is JUST material that was circulated. Given that we know that in traditional library research several items are considered for each item circulated, that means if these things were stored, on the order of 500 items a day would not be found by researchers who needed them when they needed them.

Now obviously, researchers who run into stored items dozens of times per research day are forced to change their practices. There's no choice in the matter. If the laboratory is locked, you have to do non-laboratory work. So you become more theoretical in your research, you do administrivia, you scan acres of irrelevancies on the internet, and so on. To be sure, there could also be autonomous change in faculty behavior - that's what I'm about to address. But the important point here is that behavior never indicates choice pure and simple, it indicates choice under existing constraints. So it is a mistake to use researcher behavior as a simply guide to "research practices." The relatively low use of stored material mainly reflects constrained scholarly practices; it's a self-fulfilling prophecy.

This distinction must be remembered for all research behaviors in libraries. It means for example that Lib Qual and other kinds of library surveys tend to produce systematically misleading results, because they tend to ignore constraint. But it also means that in evaluating new developments, we need to remember the constraints and losses they induce. Thus, we have massive online keyword indexes, but we can no longer use access as a proxy for quality. We have huge numbers of on-line texts, but many of them are not warranted or even stable. We have search engines like Google, but we lack authoritative reference works, partly because the

vaunted importance of timeliness leads reference producers to rush underwhelming reference volumes into print or online. My library has 1001 print items published by Oxford with the word "Handbook" in the title, plus 568 electronic items. Needless to say, these works are of very uneven quality.

But while constraint is an important - even a central - determinant of researcher behavior, it is important to look at what is happening in the disciplines on internal grounds, and to try to think about why it is happening. Important parts of the future of library research depend upon this. There ARE some real causes for change within scholarship, and these too must be discussed. I shall consider three.

1. demographic restructuring
2. laziness and trendiness
3. boredom

1. Demographic Restructuring

A first change is, I think, derivable from the demographic pattern I discussed at the outset. As academia has aged, a larger proportion of all scholars are in the middle and later career stages. I noted earlier that this meant they had less time for reading and thinking. It also means that, according to the normative career model established during the years of expansion, they are supposed to be producing crowning works, major advances, decisive claims. And indeed there are more and more reviews and syntheses, more and more claims to major advance, more and more repackagings of past revolutions. The result is a massive churning of the scholarly record and an increase in the kinds of general claims, synthetic judgments, and comprehensive theories that are normatively appropriate to the life stages which now dominate the academy. The fact that these have been produced on the basis of less reading and thinking than they were heretofore is inherent in the scholarly world today's middle-aged faculty have inhabited, one in which overproduction has been a way of life since graduate school. So there's more general material, and it's of lower quality, just on life course grounds.

An important reason for this churning is that at the most general level, the humanities and the humanistic social sciences don't really cumulate. The general ideas are perennial ones, and while cumulation happens within the little groupings that I have elsewhere called generational paradigms, it does not happen at the level of "economics versus sociology" or

"what is the nature of the social self?" So what we have is a surfeit of personalistic syntheses, largely unreadable because they keep repeating the same things in slightly different languages. It is then quite unsurprising that colleagues are not bothering to read them.

All of this follows simply from the changing demography of the academic world. And as I noted before, there is no prospect of a change in that demography. Rather, we require new career norms to resolve this problem.

2. Laziness and Trendiness

Another possibility, and we need to be frank about it, is simple laziness. I have colleagues who for years have sent RA's to the library to pick up their needed books, as if shelf browsing didn't matter, and as if the on-line bibliographical system alone could match the productivity of bibliography done in the library with a mixture of on-line and print materials. I can understand this practice in literary studies, perhaps, with its supposed focus on infinitely careful reading of particular texts. But even so, editing and contextual analysis surely require the multiple editions, density of reference tools, and other such things available only in the physical library.

I do understand that this practice of RA checkout was in part installed by the librarians, and was seen by them as a convenience to faculty. But for the actual library researchers, rather than say the experimental psychologists whom the University of Illinois Library wooed by delivering copies of reprints to their offices, not being in the library is a real mistake. And in that sense libraries that pioneered service to the faculty doorstep were in fact simply catering to faculty laziness.

But what about the larger historical picture? In fact data seem to indicate that faculty presence in the main libraries has been falling since the 1950s. Partly that of course reflects the long-term reaction to the original policy of centralizing libraries, which dates from the interwar and destroyed the prior habitus of library research, which was based on departmental libraries. But departmental library practice and centralized library practice both relied heavily on density of tools and rapid moves from tools to sources to new tools and so on, something which is not possible electronically because the vast majority of monographic material - with its wonderful indexing and bibliographical contents - remains in print only.

Oddly, the single most important recent force taking faculty out of the libraries was the personal computer. We can see clearly from historical data that the early 1980s saw a serious drop in faculty presence. The early PCs were non-portable. And each scholar had only one, which was typically at home in those years. Materials began to be taken home even if there were faculty studies in the library. That induced a change in faculty habits that the laptop has not redressed.

At the same time, I think faculty laziness is increased by the pressure that arises from the new forms of management and from demography. Faculty have to publish, and have to publish fast. They don't have the time to read much, and they don't, really, have the time to do the kind of careful, subtle bibliography they used to do. For real experts in scholarship, the electronic tools have the wonderful quality of enabling one quickly to find extremely esoteric facts - although without the deep sense of their provenance and warrantability that would have come when one found such things through traditional research practices - and these can serve as astounding spices in one's scholarly products. Since in the old days such facts served as secret indicators of truly profound scholarship, it is all the better to be able to produce such indicators by a simple counterfeit.

Complaints of this kind of counterfeiting began to be made about law review articles not long after the coming of the Shephard's citation system in the late nineteenth century, and they could be made routinely now for scholarship in general. The ability to counterfeit the old signals of quality is very great, with the new tools, and clearly scholars - even undergraduates occasionally - are doing so. So yes I think laziness is a problem, even if it is driven by the external pressure and the increased competition based on the differential demography.

In any case, our own library is within three blocks of the entire humanities and social sciences university. And only about 40 faculty are in the building as much as one hundred times a year, and 100 faculty 50 times a year. For example, three quarters of the history faculty is in the library less than once a week. That's shocking. It may, of course, simply reflect generational succession. The fact is that many younger colleagues don't actually know HOW to use print sources. They've never been taught and are too proud to admit they don't know.

I have to add a comment on trendiness. As I noted earlier, although I'm principally a library researcher, I've worked with search technologies and data mining throughout my career. And I can't help noticing in my peers' new love for these techniques a certain mindless love of

technology, which I think comes perhaps from the desperate need of the baby-boom generation and its successors to pretend to be young and hip. This techno-hip is pathetically clear in some of my colleagues, particularly those most interested in shedding their identity - chosen many years ago in different times - of being specialists in dead white men of various sorts. If you must study dead white men, I suppose, the least you can be is hip to technology. There is a great deal of this in the baby-boom generation, at least, for the 1960s has made them wary of becoming the powerful and dominant people they spent their youth criticizing. It is hard to imagine anything less hip than a great research library, or anything more unthinkingly dominant than a giant building with the grandiose pretensions of a Sterling or a Widener. I am sure that this too is part of what is happening with faculty.

3. Boredom

Which brings me directly to my last and most frightening possibility. I think that a substantial number of scholars and researchers, at least of my generation, burned out fairly early on what they were trained to do and indeed, in many cases, became bored with their disciplines altogether. The clearest example of this, it seems to me, is studies of English literature and similarly canonical topics. I don't have life cycle data on these people, but I do think there's a pretty clear theoretical case to be made.

The mechanism is as follows. The whole idea of a modern canon was established around the turn of the twentieth century in the transforming American universities. The nineteenth century had already seen the emergence of collections of classic works, bound in common bindings, of the "Great Books" format, but aimed at the emerging middle class reading market.

The new young professors who came back from their German PhDs in the 1880s and 1890s had been bored by the philological approach of the Germans, and decided to turn English literary studies from philology towards appreciation of this canon, probably as a part of that general American mimicry of upper class European culture that was also evident in the robber barons, whose sons were, of course, the object of this newly canonical education in any case. The great sociologist William Isaac Thomas began his life as such an English professor as did Wilbur Cross, who of course was a Yale English Professor before he became a governor and eventually a highway.

So the early twentieth century period of rapid university growth began with the idea of canonical instruction in literature, the arts, philosophy, and related things. It also had the idea of PhD level teaching, which meant that all the new teachers had to write dissertations. Given exponential growth in the professoriate from 1900 to about 1970, with a brief hiccup for the Second World War, it takes little imagination to understand what happened to the canon. Everything that could possibly be said about it was said a dozen times over. New people were added - John Donne in the 1940s, for example, and everything that could be said about him was rapidly exhausted, too. I am fairly certain that it is this mechanism, rather than pure politics, that explains why the 1960s social movements - the new focus on race, class, gender, the subaltern, etc. - created such sudden excitement in literary studies. It enabled you to write rafts of new dissertations about the same old canon and, furthermore, to announce new canons ad infinitum.

I don't need to tell you what later happened. Everybody developed his or her own canon, which led to cacophony, since it turned out that having the canon was what enabled literary scholars to understand each other's work and the kind of allusion-filled prose that conveyed it. There resulted catastrophic fragmentation and the transformation of literary studies into a kind of second-rate social science, since most of the new critical readings of the canon were based on social and political analyses that were - by social scientific standards - naive at best.

But more important, I think it is also possible to perceive in the whole post 1970 change another wave of boredom and disgust, precisely analogous to that experienced one hundred years before by Henry Canby, Wilbur Cross and their peers during their European sojourns, when desiccated German professors spent whole semesters working through the precise philology of sixty lines of Christopher Marlowe, without bothering themselves at all with the exact cultural profile of the face that launched a thousand ships and burnt the topless towers of Ilium. Indeed, that couplet itself tells us what has ultimately become of the canon of Wilbur Cross and company. If I taught a class today about the topless towers, chances are that many of my students would be thinking about the twin towers of a topless Christina Hendricks, and wondering why Faust was settling for just a kiss. Not to mention wondering what was this eternal damnation that he was worried about.

I think that profound sense of irrelevance has basically gutted much of the humanities. Probably less through the change in individual faculty than in the demographic replacement of older faculty by younger people simply uninterested in the classical problematics of the humanities and social sciences as they developed over the twentieth century. Similarly, my own discipline of sociology has turned largely into applied inequality studies. Anthropology has turned into general cultural studies, with relatively little connection with its history before Clifford Geertz. Much of the discipline of history has become Social Democracy 101, bringing this or that subordinated group into visibility and placing it at the center of attention. Much of the humanities proper - both here and in England - has turned very strongly towards contemporary literature and arts - particularly film - and also towards performance rather than scholarship.

And it could well be that this is not simply because sixteenth century theater is not relevant to contemporary adolescents, but also because, in fact, perhaps the basic intellectual questions of the great disciplines have been in fact resolved to the point where they are no longer interesting. Maybe the program of sociology laid out by Durkheim, Weber, Marx, and their generation has in fact been basically worked out. Maybe we understand the evolution of classical music quite fully. Maybe we have at last run out of the new things to say about why the First World War took place.

Thus it may not be so much that boredom is setting in as it is that the academic enterprise of the twentieth century actually succeeded beyond its wildest imagination, and it is time for some new way to arrive of being intellectual, of engaging the great and persistent ideas, of creating a truly new form of knowledge. In that sense, the opting-out that we see across faculty is just like Buddhist monks conniving at the destruction of a beautiful garden. They want the pleasure of building another.

That is a great and admirable challenge. As a creature of the old system, however, I just want to make sure that that challenge is not short-circuited by the ridiculous claim that what seems to be coming into existence is better than the great body of twentieth century achievement, or somehow transcends it, or improves it. No, it is basically starting over, and I wish it the best.

For myself, I'll witness for the old system, for the delightful practice of swinging along from source to source, both print and digital, of browsing and scanning, of reading and

pondering, all in order to produce some limited piece of truly well-founded scholarship, using perhaps 10% of what I've found, rich in collateral references, seriously embedded in many contexts. I think that kind of thing is more likely to survive among amateurs than among academics being managed like hamsters in a cage. And I think it will preserve a certain ideal of knowledge that will be necessary to provide the yeast of intellectuality that will leaven the otherwise leaden and tasteless mass of digital and, perhaps ultimately, imagistic scholarship. Traditional library research stands for a kind of associational, aesthetic, and personal form of reasoning that when combined into a corporate project produces a form of knowing that is essential to humanity as a project. It's our job to preserve it until it is again recognized as centrally important, and connected effectively to whatever are going to be its lineal descendants in the next great effloration of knowledge.