# Are E-Books Making Us Stupid?
## Why Electronic Collections Mean Trouble for Libraries and Their Patrons

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## ABSTRACT

*In 2008, Nicholas Carr published a provocative article titled "Is Google making us stupid?" in which he ponders the effect of the internet and electronic sources generally on the brain. This paper discusses one source specifically, e-books, and explores whether libraries are acting wisely by moving from print to electronic book collections. The topic is considered from the vantage point of the library and from that of the patron. Specifically, the prospect of an all or largely all e-book future is considered and whether that future means an end to traditional library collections and services. The potential problems for "deep reading" are also considered, and, specifically, whether e-books can serve as an adequate substitute for patrons who will no longer be able to use electronic collections in the way they once used print. In short, this paper explores whether e-books are making us—librarians and patrons—stupid.*


*Keywords:* *Digitalization, Effects of Electronic Books, Electronic Books (E-Books), Electronic Collections, Libraries*

## INTRODUCTION

In 2008, Nicholas Carr published a provocative article entitled "Is Google making us stupid?" in which he ponders the effect of the internet on the brain. "As the media theorist Marshall McLuhan pointed out in the 1960s," Carr writes, "media are not just passive channels of information. They supply the stuff of thought, but they also shape the process of thought" (Carr, 2008). Specifically, Carr wondered if his own extensive use of the Internet had been chipping away at his ability to contemplate and concentrate; he also wondered whether or not he was alone in this. Indeed, in his casual discussions with friends and acquaintances, he noted a similar phenomenon—they confessed to an inability to "stay focused on long pieces of writing."

A recent study by scholars at University College London, apparently supported his informal observations. Computer logs which kept track of what a number of researchers were doing when consulting online journal articles, e-books, and other electronic sources of written information revealed that the researchers in question were exhibiting "'a form of skimming activity,' hopping from one source to another and rarely returning to any source they'd already visited. [The subjects] typically read no more than one or two pages of an article or book before they would 'bounce' out to another site" (Carr, 2008).

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Since concentration and focus have traditionally been regarded as traits necessary for intellectual and scholarly activity, Carr wonders whether electronic media might somehow be antithetical to such essential activities.

Studies such as that emanating from University College, in addition to a widespread nagging sense that users are no longer reading in the way that they once did, recently prompted Eric Schmidt, the 54-year-old chief executive and chairman of Google to express his concern that young people growing up in the mobile and instant information age might indeed experience problems with "deep reading." "'As the world looks to these instantaneous devices... you spend less time reading all forms of literature, books, magazines and so forth,' he told the World Economic Forum in Davos. 'That probably has an effect on cognition, probably has an effect on reading'" (Google, 2010).

Schmidt's intuition about the effect on reading is supported by a number of studies which indicate that we read online in a way which is different from the way we read print. According to Maryanne Wolf, at Tufts University (and quoted by Carr), "We are not only what we read. We are how we read." Reading online materials, she explains, results in a reading style which privileges "efficiency" and "immediacy" over deep reading and makes us "'mere decoders of information.' Our ability to interpret text, to make the rich mental connections that form when we read deeply and without distraction, remains largely disengaged" (Carr, 2008). Wolf analyses the situation further: "Because we literally and physiologically can read in multiple ways, how we read—and what we absorb from our reading—will be influenced by both the content of our reading and the medium we use" (Wolf, 2010).

Clearly, this unease on the part of some scholars has implications for libraries. The move towards the digitization of journals has been underway for decades, and the next wave—e-books—is here. Yet, as we discard print and head toward an electronic collection of monographs, there is almost a profound silence from information professionals on whether what we are doing is ultimately good for patrons, particularly those who are thereby forced to use e-materials for research and study. There is also remarkably little discussion on whether it is good for libraries.

Eric Hellman, former director of OCLC (Online Computer Library Center) New Jersey, is one of the few voices in the wilderness on this matter. "It's frustrating to a number of us in the library business that libraries are mostly sitting on the sidelines while technology is tipping towards e-books," he writes (Hellman, 2010a). Hellman believes that libraries may not even be able to lend books in the future, particularly given the roadblocks thrown up by publishers in this new regime. Indeed, some publishers are now refusing to supply any of the e-books they produce to libraries.

The "Annoyed Librarian," columnist for Library Journal.com (it's ironic and telling that we have to depend on electronic media to supply the needed critical assessments of the problem) has also weighed on the future of libraries in the world of e-books. Once books are only available digitally, she notes,

*We'll have a situation where libraries are useful only as cash cows for publishers, and content is controlled, organized, and made available only as the publishers wish. Forget about selection, because it won't be possible anymore. Libraries will take the packages of books on offer, or they won't. Publishers will realize that there's no point in pretending to sell individual books since they're just licensing content now. They'll be doing the selection for libraries, take it or leave it. There will be e-book packages based on obscure categories whose main purpose is to make money. There will be "academic" and "public" packages, but with enough missing from each that libraries will have to buy both to have even remotely comprehensive collections. There will also be current files and back files and every other possible way of dividing up the available books to make the most money from them. No matter what libraries try to do, they'll end up paying for a lot of junk they*

*don't want so they can get the bit they do want.* (Annoyed, 2010)

Librarians have always favoured the idea of information being made freely available to their patrons, but publishers are intent on making information pay. "Which group do you think will win?" the Annoyed Librarian asks.

The purpose of the present paper is to examine whether libraries are acting wisely in their race to adopt e-books. It will explore this topic from two vantage points—from that of the library and from that of the patron. Specifically, it will consider the questions: are libraries doing a service to their patrons and themselves as they move from paper to digital formats or are they promoting the end of deep reading and, ultimately, of libraries themselves, as some observers suggest? The paper will go on to discuss the possibility of whether an all or largely all e-book future will bring an end to traditional library collections and services, harming both libraries and patrons in the process. It will also explore whether e-books themselves provide an adequate substitute for researchers and scholars who depend on library resources and who are no longer able to use them in the way they once used books. In short, this paper will explore whether e-books are making us—librarians and patrons—stupid.

## A. E-BOOKS AND LIBRARIES

### 1. Adoption of E-Books

In 2011, *Library Journal* published the results of a survey which confirmed what most people already knew--that e-books were becoming much more prevalent in libraries of all types. The 2011 E-book Penetration & Use in U.S. Libraries Survey revealed that most academic libraries (95%) had e-books in their collections and expected their e-book budget to be close to 20% of their total budget within the next five years (Miller, 2011). Twelve percent of the academic libraries which responded to the survey noted that they circulated e-books on preloaded devices and it was anticipated that that number would double in the near future.

Public libraries were ahead of academic libraries in terms of circulating books on preloaded devices; the survey revealed that 15% were already doing just that. They were slightly behind in other respects; 82% of public libraries surveyed said that they offered access to e-books (compared to the 95% rate for academic libraries mentioned above). Public library respondents anticipated that their e-book budget would make up about 8% of their total budget in the next five years (Miller, 2011).

The survey revealed a definitive move on the part of libraries toward e-books. What the survey didn't measure, however, was the extent to which embracing the e-book also involved a concomitant rejection of print--another trend recently observed in libraries. At the University of Texas-San Antonio, for example, a new library opened with study rooms and computers but no books (Chen, 2010) while at the University of Phoenix, print was out and e-books were adopted almost exclusively (Nelson, 2008). Along similar lines, in August 2010, Stanford University's new engineering library opened with 85% fewer books than it once had. When asked about the future of the library, Stanford library director Michael Keller said that eventually there would be no books at all—everything would, instead, be available in digital form (Sydell, 2010).

Stanford is not the only library to do this type of thing. Higher education and corporate research libraries have been specifically identified as being leaders in e-book adoption over the next several years (Wilkie, 2008; Nelson 2008), and high schools and elementary schools are already leading the charge. One private high school in Massachusetts, for example, recently removed all the books from its library replacing them with computers and Kindles (Carr, 2011). More dramatically, in May 2011, the Florida legislature passed an education bill (Senate Bill 2120: K-12 Education Funding) which set up a timeline for educators to move from print to digital textbooks. The provisions of the Act

require paper textbooks to be replaced with virtual versions by the 2015-16 school year.

The reasons for dumping print and embracing electronic books wholesale are, to some extent, obvious: library patrons have grown accustomed to finding things online at any time via the Internet, and are looking for the same type of convenience in libraries through the instant delivery of library material. Proponents of e-books refer to their 24-hour-a-day online availability (particularly significant for part-time students and distance education) as a well as searchability along with other electronic bells and whistles.

The advantages for libraries of acquiring e-books are, to some extent, also clear. E-books do not take up space, and any space formerly used by books can be re-purposed as additional lounging, study or reading space for patrons. Not unimportantly, in an era of shrinking staff complements, e-books do not need to be checked out by circulation staff, nor do they require re-shelving. E-books are not physical objects and therefore do not require binding, repair or re-ordering when they are damaged or stolen. Additionally, libraries no longer have to worry about charging and collecting fines and dealing with books which are not returned.

Perhaps what is most appealing to the more idealistic information professionals, and librarians in particular, is the notion of books being more widely available to patrons, and from any one of a number of devices.

The problem with this appearance of wider access, however, is that as it is expanded, it is also restricted, and libraries have to surrender the type of control they once had when dealing with physical items. In the past, libraries rarely, if ever, were required to sign a contract when buying a physical book. Today, contracts are par for the course when libraries acquire e-books, and most of these contracts shift control heavily in favour of the publisher. These controls are over and above the general laws which govern copyright and digital rights, and often take away the rights permitted by these general laws for the use of copyrighted material in certain settings such as education or research. Certainly, numerous reservations have been expressed about this situation by members of the library profession, but the genie appears to be out of the bottle: despite the concerns, the 2011 E-book Penetration & Use in U.S. Libraries Survey predicts significant growth in e-book adoption over the next five years.

## 2. Technical and Collection Issues

Public, school, academic and other types of libraries all appear to have embraced the e-book phenomenon according to e-book use and penetration surveys. Even so, the technology through which these electronic books operate is in flux and various technical issues present great difficulties. For example, there is no single format for the e-book. Instead, e-books exist in multiple formats and can be read from one and sometimes multiple devices including on a computer screen, on an e-book reader, or on an iPhone. Some e-books exist merely as a .pdf version of a book in print. Others exist in a far more elaborate form with built-in reference materials (dictionaries, encyclopedia-like entries), audio-visual components and various interactive elements. Commentators compare these early e-book formats to the early days of videotape in which the VHS and Betamax formats waged war for some time until VHS edged out Betamax to become the standard home videotape system. At the moment, there is no clear indication that e-books and their reading devices will evolve and eventually settle on a single type and format.

The expectation, nonetheless, is that certain standards will emerge for the technology; what that will look like, though, is still the subject of much debate. Clearly, at the moment, the market has not settled enough for a universal file format to emerge, and this has caused some problems in terms of an even more comprehensive adoption of e-books. Indeed, when librarians are surveyed regarding the problems they encounter in dealing with e-books, they generally mention the sheer number of platforms, some of which are difficult to use, and e-materials which are difficult to read (Connaway, 2007).

Another problem is overlap of titles, a problem libraries first encountered with the introduction of electronic journals. In the case of e-books, although some titles may be available for purchase individually, many are only available via subject-based packages of titles (containing often hundreds of books) or cross-publisher packages.

Subject-based packages include titles in a particular area (e.g., history) from any one of a number of publishers. Cross-publisher packages are packages which are the titles printed by one or more publishers offered *en masse* regardless of their subject matter. For those librarians who have studied the content of these types of packages, overlap is already apparent, particularly in packages such as ebrary, Academic Complete, Knovel, Elsevier's MD Consult and so on (Stern 2010). This means that libraries have to pay for the same titles over and over again. This is particularly galling when these packages also contain older titles which already exist in hard copy on the shelves.

Administrators often believe that electronic titles mean less work for Technical Services departments or other library operations. This is not necessarily the case. For example, titles in e-book packages can drop out of packages from one contract to the next. New titles may also be added. This means constant adjustments must be made to the catalogue. Even in cases where vendors supply cataloguing records, there is always troubleshooting, customizing or additional work to be done. Continual follow-up and monitoring is needed, particularly where links cease to work or platforms are not functioning as they should.

As a result, even if library departments are no longer dealing with books in their physical form, the switch to e-books does not necessarily lessen the strain on workloads. In addition to all of the above, librarians will also be required to perform more yearly analyses of use data than they once did. In the past, librarians only felt obliged to look annually at how often physical books had been consulted or circulated if they were determining whether to weed collections or send certain titles to storage. In contrast, e-books and e-book packages are generally able to provide usage statistics. Ironically, given that many of the titles require an annual renewal, librarians will feel obliged to consult and compare these usage statistics annually and across years in order to determine whether to renew certain titles or packages.

Of course, librarians will not be the only group consulting statistics. Publishers will undoubtedly also track usage, where they can, to determine by how much the cost of an annual subscription might be increased, particularly when packages with popular titles are involved.

Cost, of course, will become a major problem--keeping track of the myriad of pricing, perpetual access and licensing models (Fisher, 2010). New and creative fees which could never have been foreseen in the world of print are now being introduced. As David Stern notes,

*Libraries traditionally paid for books as one time purchase or as parts of standing order sets. There were no platform fees, aggregator fees, third-party support costs or annual maintenance fees. In many systems, there is no way to show and account for such continuation commitments. There are also few options to handle and reflect multiple seat charge options, revised charges based on use data, reserves use fees (as a short-term option or as a permanent right), or storage of use data and continuation decision histories* (Stern, 2010, p. 31).

Such is the brave new world of libraries, e-materials, and publishers. Publishers, in particular, understand that never in their history has there been a time like this for maximizing profits. It is an opportunity which did not exist in the print world. At the same time, they are quite aware that they must not frighten away too much business or price themselves entirely out of the market. As a result, at this time loosely termed "experiments" with price are common, while publishers and libraries work out what the product will ultimately cost.

## 3. Price

Price is yet another area where it might be argued libraries are acting quite unwisely. In the past, when a library bought a book, it often paid the same price as any other individual buyer. But the library got far more use out of the book than the individual because, in theory, an unlimited number of people could borrow and read it. The library, in essence, had undisputed property rights over the book as a physical object. It could lend the book as many times as the book could physically withstand being lent. The library could then throw out the book, or burn it, or give it away, or sell it, or take it to pieces and use it for papier-mâché. In the United States, the legal foundation for this situation was the "first sale doctrine" established by the U.S. Supreme Court in 1908 in *Bobbs-Merrill Co. v. Straus*, 210 U.S. 339. The first sale doctrine placed a limit on copyright: it did not require the purchaser of a book, whether a library or an individual, to obtain permission from the copyright holder to sell or give the book away. This gave the library or the individual the same rights more or less with respect to the physical book as one would have regarding any other physical object such as a lamp.

Consequently, if a library wanted to buy a new book and found that book to be too expensive, it could then look to the used book market and buy a copy at a cheaper price. If the book was no longer in print, the buyer could also purchase the desired title from the used book market. Prices were kept in check because publishers generally found it unwise to price discriminate; if they did, the secondary market provided other options to the buyer (Spalding, 2009).

This is not the case with e-books. While distributors such as Amazon might attempt to keep prices of e-books for the general market lower (and not without great resistance from publishers (Abell, 2010), libraries will be obliged to pay more for the material they buy from publishers based largely on the assumption that multiple individuals will have the opportunity to use the resource (regardless of whether they actually do or not) (Spalding, 2009). As one commentator notes, "E-books will be expensive, just like they are now. Has anyone priced a scholarly book for the Kindle? Forget that $9.99 stuff. $70 is more like it, because scholarly books are priced for libraries, not individuals" (Annoyed Librarian, 2010).

Of course, there is no guarantee that an e-book will be available as a one-time purchase. Instead, access to the book in question might only be available via an annual fee, similar to paying rent for an apartment. By this method "libraries will be transformed into "simple" book-subsidy machines, not the special, advantaged ones they are now. That means they're either…forced to subscribe to fewer books, invest a lot more in their holdings or, for public libraries, convince voters to give them a lot more money. Those are bad options" (Spalding, 2010). The other implied possibility is that the minute the yearly fee can't be paid, access will disappear entirely.

Similarly, a secondary market for e-books will not be allowed to exist, since contracts entered into for the sale of digital material typically prohibit the transfer of the electronic book to anyone else. Ownership is no longer a certainty, and even when a library is permitted to "own" rather than rent the virtual book, that form of ownership lacks many of the same rights accorded to the owner of a physical book. In addition, higher prices are virtually guaranteed because the publishing model is monopolistic. There will be no used book stores for virtual books, on the scale that they exist for print.

Given that so much of this brave new world is still in flux, publishers have been experimenting with various payment models. Some are uncontroversial while others have caused a greater stir. In 2010, for example, HarperCollins announced to libraries that "new titles licensed from library e-book vendors [would] be able to circulate only 26 times before the license expire[d]" (Hardo, 2011). The publisher explained to *Library Journal* that the number 26 had been arrived at based on what

the publisher believed was the average lifespan of a book given the wear and tear involved in typical library lending (Hardo, 2011).

Librarians, in response, argued that the number was totally arbitrary. Some traditional books, for example, are circulated far more often than 26 times before they wear out. Not only that, but the number is also meaningless given the fact that one of the attributes of e-books is that they are supposed not to wear out (Public Enemies, 2011). The controversy, however, highlighted the fact that pricing and access models are contentious matters, and that publishers have far more power in the virtual world than they did in the world of print.

## 4. Access

In the e-book world, "access" has really, for the most part, taken the place of ownership; hence, in the case of libraries, publishers have been experimenting with offering a variety of forms of access. One model offered, for instance, is "perpetual access" in which the book in electronic format remains on the publisher's computers, and library patrons may access that book via a link in the library catalogue which leads to the publisher's site, presumably in perpetuity, without necessitating further fees being paid by the library. The big and questionable assumption is, of course, that the publisher itself stays in business "in perpetuity."

Yet another model is the "ownership" model, whereby the file is transferred from the publisher to the computer servers of the library or library consortium. This type of e-ownership does not depend on the continuing existence of the publisher. Nevertheless, the full rights of ownership—the ability to sell, transfer or give away—are still absent (Spalding, 2009).

Libraries which cannot afford perpetual access or which are not offered the "ownership" option will end up with the cable TV model—paying for annual access to books rather than owning them. Access is generally through a site licence which allows either unlimited access or access by a certain number of users at a time to books made available through the library. These site licences can be monopolistic. Yet, monopoly aside, other difficulties with the model are also obvious--the same material is paid for over and over and over again. During difficult times when libraries need to tighten their belts, access will inevitably vanish (Spalding, 2009).

Shifting content of packages of books which distributors choose to offer is yet another reason for concern. In the print world, when a library has purchased a book, it remains in the collection until it is physically discarded. Not so in the virtual world. Books which were available yesterday are quite capable of disappearing today.

Take the case of the University of Toronto (U of T) Press. In January 2012, U of T Press, which had numerous titles in the e Canadian Publishers Collection (one of three collections in the Canadian Electronic Library (CEL)), chose to withdraw its content which consisted of current titles along with a recent backlist (close to 600 titles). The reason had to do with changes which had been made to the e-book platform, ebrary, through which the Canadian Publishers Collection is available. In 2011, ebrary made some changes to its software which would allow users to "borrow" the electronic titles by being able to download them to portable devices. The University of Toronto Press was worried that this type of "borrowing" would have an impact on print sales. In response, it withdrew all its titles. On the heels of this, three other university publishers--McGill-Queen's University Press, Wilfred Laurier University Press and University of British Columbia Press--did the same.

Because of this action by the publishers, professors at various Canadian institutions who had intended to incorporate books from these various university presses into their reading lists for courses suddenly found that their home institution was without a copy. Libraries scrambled to buy physical copies or to find access to the material in some other way. But a very worrisome message had been sent: that publishers could withdraw material without consultation and without any regard to the institutions they might affect and the resulting

chaos they might create if the terms of access no longer suited them.

In 2011, another dispute about ownership and access made the news in Kansas. The Digital Library Consortium in that State learned that OverDrive, a digital content distributor was about to raise its license fees by almost 700% over the next few years. The Kansas Digital Library Consortium assumed, given the terms of the contract with OverDrive, that they owned the digital titles and could continue to access the titles even if they moved to a new distributor. In response, OverDrive claimed that the Kansas Digital Library Consortium did not own the titles and would lose all access if they did not renew their contract.

Surprisingly, the Kansas Attorney General's office got involved in the dispute, and decided that the Library did actually own the digital books. Kansas State Librarian Joanne Budler, determined to make certain that this was the case, began negotiations with 165 publishers to negotiate ownership of the titles (Russell, 2012). As of January 2012, Budler had received permission from 73% of the e-books publishers and 63% of the downloadable audiobook publishers to move the content to new platforms. Some of the publishers asked for additional money to agree to the content shift but Budler refused to pay. It was her opinion that the titles were already owned and that additional fees could not be charged. It is unclear whether those publishers relented; what is clear, however, is that twenty publishers did not respond at all (Budler, 2012).

Perhaps more alarming is that some publishers refuse to deal with libraries at all on the matter or digital content. In February 2012, the San Rafael Public Library posted a notice which said the following "These publishers refuse to sell or licence e-books to Libraries: MacMillan Publishing, Simon & Schuster, Penguin Group, Brilliance Audio, Hachette Book Group. Think that's wrong? We do" (Librarian in Black, 2012). The library urged patrons to contact these publishers and complain.

The San Rafael Public Library, however, is something of an outlier; most libraries seem unwilling or unable to rock the boat. For example, libraries who had originally intended to join in with a boycott on publishers who would not sell or licence e-content at all, backed down and changed their position on the HarperCollins' 26-Loan cap on e-books. In response, the Annoyed Librarian commented,

*Librarians are so desperate for e-books they don't care what the deal is. Libraries are actually stopping their boycott of HarperCollins e-books because HarperCollins is willing to let libraries pay them for e-books when other publishers won't. The lesson? Libraries have no clout when it comes to e-books and they'll take a bad deal over no deal at all. Good bargaining strategy! And let's be honest, any deal where libraries are giving publishers money for access to an e-book that is then loaned out to one library patron at a time as if it was a physical book is a bad deal. The arbitrary 26-loan cap just makes the deal worse. Oh, I know. Library patrons are demanding e-books! Thus, libraries should make whatever bad deal they can to get them. What library patrons should be demanding is that libraries stop spending their money on e-books that cost more than print books but come with the same usage limitations. Library patrons should be asking, why are we spending money on e-book titles and I still have to wait for 38 other people to read this book before I can check it out?* (Annoyed, 2012)

What is perhaps the biggest blow to libraries and the reason why they might be willing to take any deal even if it's a bad one, is this: publishers are beginning to signal that they don't need libraries at all, given this new model. As one observer has noted, "There is a very real possibility that the ability of libraries to lend books will not survive this transformation. The big publishers don't see libraries as a big part of their market; some publishers are openly hostile towards libraries" (Hellman, 2010a). It is not inconceivable that publishers might offer electronic versions of their materials online, either individually or through some Amazon-type clearing house, thus circumventing libraries

altogether. While the notion might once have seemed farfetched, a world in which publishers do not offer e-books to libraries is already beginning to evolve and libraries have actually been co-opted into the maneuver that will make them redundant.

## 5. Copyright

In the past, the use of a physical book after its purchase was governed by copyright legislation and any cases which interpreted that legislation. The advent of electronic journals changed this somewhat--libraries had to learn how and whether the content of electronic journals could be printed, downloaded, emailed, shared, accessed yearly or *in perpetuum*. Often, this depended on the provisions of various contracts that libraries had signed with the vendors of electronic journals in order to obtain access. No two contracts were alike, and libraries which subscribed to packages of journals from a range of publishers generally used spreadsheets and other software packages to keep track of the terms for each of these packages in order not to violate any contracts. Nonetheless, over time, certain patterns began to emerge and libraries grew more comfortable with e-journal licensing requirements and obligations. This did not eliminate the need for spreadsheets, it only meant that libraries grew more familiar with what they could not do with the new format.

The case with e-books is much more complicated. Compared to the e-journal marketplace, licenses for e-books are in a much greater state of flux (Horava, 2009). Just as they did with electronic journals, libraries will be required to keep the same detailed spreadsheets and databases regarding their various contractual obligations. As noted before, in an era of shrinking staff, this is no mean feat.

More alarming is that copyright law as it applies to e-journals and e-books is "trumped by contractual agreements. We sign license agreements that erode various user rights" (Horava, 2009). Copyright laws restrict how intellectual property may be used, but exceptions generally exist in education or in certain research environments. Now, however, the contracts which must be signed by libraries in order to have access to e-books narrows or even overrides these copyright law exceptions, and often there is little that can be done about negotiating new contract terms. Unless an institution or organization has a tremendous amount of power, most licensing agreements are of a "take it or leave it" nature, and if libraries want access to e-books, they have no choice but to take it.

## 6. Interlibrary Loans

In addition to the problems presented by price, access and copyright, libraries now have to confront the inevitable problem of whether their interlibrary loan services are likely to survive the new world of e-books. Traditionally, when patrons needed a library book which was not available at their home library, that library was able to borrow a physical copy from another library on behalf of their patrons. A book would be loaned for a short time to patron, and once that time had run out, the library with whom the patron was affiliated would send the book back to the library from which it had been borrowed.

The movement towards e-books has already changed and will continue to change the nature and extent of interlibrary loan. When a library purchases e-books or decides to subscribe to an e-book package, the publisher generally requires that a contract be signed which outlines the terms of use--including terms regarding interlibrary loans.

Now the fact is that publishers are, for the most part, not at all interested in allowing patrons from other institutions or libraries to access electronic books purchased by a particular library. Indeed, as John Sargent, CEO of Macmillan one of the largest publishers in the United States has noted, the very act of borrowing a book from the library has changed dramatically with the advent of e-books. In the past, he notes, borrowing a book from the library meant more work for all concerned. The patron had to go to an actual library to pick up the book. If the book was not available, the library had to take additional steps to make sure that

the patron could eventually have access—often this meant borrowing the book from another library: interlibrary loan.

Of course, that was at a time when, for example, books wore out and libraries would purchase additional copies to replace those which were no longer able to physically circulate. However, with the advent of e-books, Sargent comments,

*...you sit on your couch in your living room and go to the library website, see if the library has it, maybe you check libraries in three other states. You get the book, read it, return it and get another, all without paying a thing. "It's like Netflix, but you don't pay for it. How is that a good model for us?" [Sargent says]."If there's a model where the publisher gets a piece of the action every time the book is borrowed, that's an interesting model."* (Hellman, 2010b)

Thus, the e-book revolution has given publishers an unprecedented amount of control over the material they are selling. Naturally, like all entrepreneurial bodies they are interested in limiting, not increasing, access, if there is no advantage to them (Russell, 2012). This according to the Annoyed Librarian means the end of Interlibrary Loan:

*Once everything is available only in digital content and by license only, why would publishers allow ILL? If a library patron wants a book, the library can purchase the book, or rather, the library can subscribe to the package that will allow the patron to temporarily view the book. Maybe they'll be able to "rent" temporary access instead of "purchase" "permanent" access. I can just imagine the publishers chuckling over an arrangement like that."* (Annoyed Librarian)

Other observers have wondered, however, whether it means more than merely the end to interlibrary loan. In other words, aren't libraries themselves in jeopardy? A recent survey which asked students why they went to libraries (students were allowed to choose more than one answer) revealed that 87% went to libraries to either borrow or to browse books. Another 54% said they were looking for a quiet place in which to study. Given that a much smaller percentage goes to the library specifically to study rather than find books, the "finding seems to fly in the face of current library orthodoxy that if we add group study and relaxing between classes the proportion appreciating the qualities of the physical space increases significantly. The big question of course that needs asking is whether the provision of e-books will trigger the flight of students from the physical library space?" (Nicholas, 2008a).

Surely we must at least consider the possibility suggested by the survey: if patrons have access to books via their local library's catalogue online, will they bother to visit the library itself anymore? Will libraries then be able to justify the space they occupy? Even more worrisome--will publishers eventually offer e-book access directly to users without seeing the necessity of going through libraries? (Wilkie 2008). If so, how are libraries to survive?

## B. E-BOOKS AND PATRONS

### 1. Advantages and Disadvantages of the Medium

At first glance, e-books, from the patron's point of view, might seem heaven sent. Proponents extol, for instance, the virtues of 24 hour access; indeed, an ebrary study conducted in 2008 revealed that 24-hour anywhere access was the feature which students valued most about e-books (ebrary, 2008). Patrons have also said that they value searchability (Levine-Clark, 2008), the ability to cut and paste (Hernon, 2007), and added-value content such as built in reference works which help to illuminate the text. Unlike print books which, at best, may be a combination of text and static pictures, e-books can combine text, static visual images, moving images, video, and audio.

Updates to an e-book may be sent electronically by the publisher and downloaded

immediately. Libraries no longer have to wait for erratum or other print inserts or pages to arrive by mail. Unlike print, e-books (depending on the terms of use as set out by the publisher) can be backed up electronically and should, therefore, survive the usual library enemies—bugs, fires, floods and hurricanes—which would normally destroy print.

Similarly, e-book advocates have flattering things to say about portable readers which are sometimes used to read e-books. The portability of the e-readers is particularly relevant for students who have numerous textbooks to carry from class to class. It is also useful for people who travel and who like take a number of books along with them but often don't have the space. Given that some e-books come with value-added content such as dictionaries and encyclopedias which are not conveniently transportable in print, portability via an e-reader is also key.

Then again, the problem of patrons scribbling notes in the margins of print books, which librarians have always abominated, becomes a non-issue in the case of portable readers. Notes can be made electronically using e-book readers and simply erased without leaving a trace when they are no longer needed. Also, unlike print, word or phrase searches are done easily, and links often allow the reader to move back and forth between the book and the internet. Portable readers also allow the user to customize lighting, zoom and text-size options.

But the disadvantages of e-books become noticeable, even in what many regard as their greatest virtue: that the technology is environmentally friendly in that it does not require the destruction of trees for paper. Observers of the e-book phenomenon have noticed that despite the much advertised savings in the costs of printing, paper and distribution, the prices for certain types of e-books—in particular scholarly works and textbooks—have not dropped dramatically at all, and the limitations on the use of such works tend to raise eyebrows. Some e-book textbooks, for example, are programmed to expire at the end of a term so that students cannot sell or lend them. Once textbooks have expired, students have nothing to consult or refer to in subsequent years. In addition to this artificial phenomenon of the expiring textbook, most e-books also contain built-in software locks which prevent users from doing various forms of downloading, printing and/or emailing (Falk, 2011).

These limitations on the uses to which e-books can be put are only the tip of the iceberg. Perhaps the most common complaint is that reading e-material on the screen causes eye strain and fatigue (Spalding, 2009). Another problem is navigation; the traditional method of flipping between the pages of a physical book becomes that much harder with an electronic device (Berg 2010). The reader of a physical book can bookmark several pages and flip back and forth between those pages and the index or table of contents. This can be quite burdensome with an e-book, and can easily frustrate the reader who is then more likely to cut short his or her use of the work in question.

For those books which are digitized and available for viewing online, orientation of the page is also a problem. Printed books are usually higher than they are wider (generally referred to as "portrait mode.") whereas computer screens are more often wider than they are high (generally referred to as "landscape mode"). As a result, researchers are often only able to view only part of a page of a book, rather than the full page, online (Coyle, 2008). This is not only disorienting, but it means that users have constantly to move between the upper and lower portion of the page. Only devices specifically made for the job (such as a tablet or e-reader), and which allow an entire page to be viewed at once, eliminate this problem.

But, again, in terms of orientating oneself in a text, readers can tell how far they have come in a print work merely by looking at the amount of pages to the right and left of where they are at the work at the moment. Readers orient themselves both visually and spatially; they don't need to know the specific number of pages in a book to guess more or less correctly that they are half way through a book or a third of a way through a book. Such spatial orientation in print text is important. It does

more than merely let readers know how far they have come; it also plays a part in helping to remember where certain passages of text appear—something called "cognitive mapping." So researchers at the University of Washington, for example, discovered:

*...in addition to supporting attentive reading and flexible navigation, a printed book provides many subtle cues about a book's structure and contents. We make a "cognitive map" of a physical book as we read it: "When we read, we unconsciously note the physical location of information within a text and its spatial relationship to our location in the text as a whole." These mental maps help students "retain and recall textual information more effectively." E-readers sacrifice many of these navigational cues, and that's another reason why so many students end up frustrated with the devices. When students "have no cognitive maps on which to rely," the researchers wrote, "the process of locating information takes longer, they have less mental energy for other tasks, and their ability to maintain their desired levels of productivity suffers."* (Carr, 2011)

While future e-book platforms and readers might be able to do some programming to address this issue, clearly the way that the brain deals with the placement of text on a page in a print work plays such a huge role in cognitive mapping that it is unlikely electronic books will ever be able to duplicate if fully.

Enthusiasts might claim that what e-books lack in their ability to assist in cognitive mapping, they make up for in bells and whistles such as links, pop-ups, or assorted visuals. These are no doubt intended to enhance the product but actually may work counterproductively by distracting the user. Nonetheless, publishers, in their keenness to enhance educational e-books, are quick to adopt various features which they promote as "meaningful interactivity." But according to some observers they are often nothing more than gimmicks. As one e-book author has noted, "Just adding something that rattles around on the page does not mean you have enhanced the reading experience or added to the user's understanding of the subject" (Douglas, 2011). For him, more is not always better.

In fact, the more bells and whistles are added, the less these e-books are the equivalent of what we know and understand to be "books" and the more they become something other—something which is no longer really a book. One commentator notes, "As with many of the audio formats that have gone before—records, 8-track tapes, cassettes, and now even CDs—our traditional concept of content consumption is changing because of technology, which will ultimately have a profound impact on the concept of a book as new generations of readers mature and gravitate to new technologies" (Nelson, 2008). Just as vinyl records have little in common with mp3 files other than that they both contain music, the print text and the e-book may come to seem as remote from one another.

The platforms for these e-books, as noted above, have much to do with the vast difference between the print and electronic version of a book. So far as a print book is concerned, patrons can pick it up in any library and use it much the same way as they would use the book next to it and all the other books in the library. Variations, when they occur will be minor. This is certainly not true of the platforms on which e-books run. Each platform has its own unique look, layout on the screen, command buttons, search functionality, etc. Libraries are tasked with making *access* to the variety of platforms through the catalogue seamless for the patron, but they cannot make *the platforms themselves* uniform across the system. As a result, librarians wrestle with the challenges of the various technologies behind the scenes and spend time sorting out the problems or issues patrons might encounter when attempting to use the various platforms.

As already stated: these problems generally involve technological features intended to prevent copyright infringement and piracy. For example, digital locks, firewalls and other software issues may limit accessibility. In some libraries, limits may be placed on the number of concurrent users of an e-book. Likewise,

the ability to print or to copy and paste may be restricted or forbidden. This is a source of stress both for patrons who are unfamiliar with the sometimes unforgiving nature of digital works, and for librarians who are all too aware of the problems.

Finally, e-books whether accessed from a library computer or a portable device suffer from a host of the more mundane problems with which all computer users are familiar. Pages, for example, can take a long time to load electronically (Hernon, 2007). Moving from page to page can seem like an eternity to the researcher in a hurry. Computers and reading devices can also freeze; the batteries in e-book readers can run out, and the device itself can break down. When an e-reader can finally no longer fill its purpose, it ends up in a landfill--a quite environmentally unfriendly fate.

E-books, in summation, offer features not possible with physical books, such as 24-hour access, key-word search capabilities and "added value" content, but also pose a number of problems in terms of their functionality which physical books do not. Mechanics aside, though, there are surely very important questions which libraries need to consider: In terms of reading and research, are e-books qualitatively the same as print? Is the new medium really up to the task?

## 2. Reading and Research

Ranganathan's first law of library science, librarian Karen Coyle reminds us, is that "Books are for use" (Coyle, 2008). If we take this seriously, she notes, then librarians have an obligation to inquire how or even if e-books will be read. She clearly has her doubts that the profession has been doing all it can in this regard. "We are collecting materials in electronic format and digitizing books without having a clear idea of how they will be used," she claims (Coyle, 2008).

Studies about how patrons actually use e-books are beginning to trickle in; their findings, however, seem to have had little or no effect on library collection policies. In 2008, for example, ebrary's Global Student E-Book Survey revealed that 49% of students had never used e-books in their university library. That number was only down by 2% (to 47%) three years later even though electronic collections had grown substantially in libraries of all types. The main reason students gave for not using e-books was that they did not know where to find them. The second major reason, however, was that students preferred print books (46% in 2008 and 44% in 2011).

Other studies too have confirmed that, when given the choice, a surprising number of students prefer print. At the University of Washington, for example, researchers recently monitored graduate students who were given Kindles. By the end of the school year, it was noted that "nearly two thirds of the students had abandoned the Kindle or were using it only infrequently. Of those who continued to use the e-reader regularly, many had "switched to a different and usually less desirable reading technique" (Carr, 2011). Similar patterns were observed at the University of California where 500 undergraduates were asked to compare the usability of physical versus virtual books. A majority of the students noted that they preferred the printed books and a number commented on the difficulty they were having "learning, retaining and concentrating" when looking at a computer screen. In a typical complaint, one of the students said, "E-books divide my attention" (Carr, 2011).

What the students in the University of California appear to have understood instinctively is that electronic sources are not always conducive to learning, study and memory. Studies have shown, for example, that older students who view text-only presentations are able to recall correctly more information than presentations which incorporate text and video (Rockwell, 2007). Similar studies involving elementary-age students confirmed these results—students were found to be less likely to remember information from a source that has text as well as pictures and animations (Eastin, Yang, & Nathanson, 2006).

Visuals, links and hypertext all serve to interrupt and distract; they seize "attention only

to scramble it" (Carr, 2010) and all of this in turn affects understanding and the ability to remember. To grasp why this is the case, one must consider for a moment the differences between working memory and long term memory, and how the brain functions when online sources are used.

## 3. Memory and the Brain

Theories about how and why we remember things are almost as old as man himself; however, it is only since the mid-twentieth century that researchers have come to a better understanding of how and why we remember certain things, and what the differences are between working memory and long-term memory. Working memory (not to be confused with short-term memory) is the amount of information a brain can use and manipulate at any one time. Working memory holds information briefly and then loses it; long-term memory is the filing cabinet from which we draw things we know and in which the things we know stay put (more or less) over time. Transferring information from working memory into long-term memory requires concentration and the ability to control cognitive load—the information and interactions one processes while engaged in learning. A break in concentration can flush information from our working memory before it has a chance to be stored. Similarly, too much information encountered at once can overload working memory and also lead to difficulty in learning (Carr, 2010).

The effect of online usage on the workings of the brain, along with memory has been the focus of research UCLA professor of psychiatry Gary Small. In 2007, Small conducted an experiment in which he had volunteers use the internet while inside a Magnetic Resonance Imaging (MRI) machine. The MRI recorded and measured the activity inside volunteers' neural circuitry. Small discovered that the dorsolateral prefrontal cortex ("thought to control our mental process of integrating sensations and thoughts, as well as working memory," Small, 2008) was the part of the brain engaged during Internet use.

Small wanted to know what the differences in brain activity were between veteran internet users and those who were complete novices. He compared the brain activity of both types and made a startling discovery. The novices initially showed little activity in the dorsolateral prefrontal cortex when searching the internet. Within days, however, the novices had completely shifted their brain activity during internet use to that region—so much so, in fact, that there was virtually no difference between their brains and that of longer term internet users. In other words, in a matter of days, the novices had rewired their brains (Small, 2008).

Small is not the only researcher to discover that being online changes the neural circuitry of the brain. A recent study on the brains of adolescents with excessive online usage, for example, revealed observable changes to their structure (Yuan, 2011). But computers are not the only medium capable of changing the brain's wiring. There are also real and observable differences in the brains of "expert and non-expert readers, with the affected cells in the readers' brains much more thickly branched and intricately interconnected than the same cells in non-reading brains" (Barber, 2011). There are also observable differences in the brains of different types of readers. Chinese readers, for example, draw more heavily on the visual parts of their brains because of the large number of characters (Wolf, 2011). What researchers don't know yet is to what extent the brains of young readers, raised primarily online, will differ from the generations before. As cognitive neuroscientist, Maryanne Wolf of Tufts University notes, the medium does make a difference in terms of its effects on the reading circuits in the brain (Barber, 2011).

Nonetheless, even if the brain does rewire itself as the result of online use, Small believes these changes are not all bad—in measured doses, online use and some multitasking can sharpen cognitive abilities. Where that escalates to the point where users only pay "continuous partial attention" to what is going on around them, however, the strain can lead to "techno-brain burnout." When stressed, Small explains,

*our brains instinctively signal the adrenal gland to secrete cortisol and adrenaline. In the short run, these stress hormones boost energy levels and augment memory, but over time they actually impair cognition, lead to depression, and alter the neural circuitry in the hippocampus, amygdala and prefrontal cortex—the brain regions that control mood and thought. Chronic and prolonged techno-brain burnout can even reshape the underlying brain structure.* (Small, 2008)

But it's not only brain researchers who have sounded the alarm about the potential harmful effects of online usage. Eric Schmidt, chief executive of Google, for example, has commented that the sheer amount of information which individuals are exposed to when they use electronic sources is a barrier to deep thinking and understanding. Task-switching (particularly where the tasks are not routine such as learning and research), he notes, "impedes the formation of memories and makes learning more difficult…When we take in too much data too quickly, as we do skipping between links, our working memory gets swamped. We suffer from what brain scientists call cognitive overload" (Collins, 2010). Switching between tasks, as in the process of jumping from one hyperlink to another, impedes memory and learning, as studies have shown (Macedo-Rouet, 2003).

Those who understand the perils of distraction online are, understandably, dismayed when they hear that it is only a matter of time before e-books are linked to social media networks such as Facebook, Twitter and other related sites. They are disturbed to hear Anthony Antolino, senior vice president of e-reader company Copia, posit that a social focus is the next great wave in e-book use. He comments,

*How powerful is it if you're reading whatever textbook you're reading and you're on chapter 12, and it's late at night and we're all studying from our own locations, to know where each other is at exactly, what page we're at? …You can say, 'Did you capture that? I think that's going to be real important.' Or, 'Let's talk about this for a minute because this is an insightful passage,' and be able to socialize that in real time.* (Baumann, 2010)

Most students, on the other hand, appear to know instinctively that this type of interaction is not conducive to study. In the fall of 2009, for example, the Kaplan Test Prep and Admissions visited a number of campus libraries, coffee shops and other campus study areas to analyze what students do when they study. They were surprised to discover that when the time came to buckle down, students voluntarily put away their electronic devices, including computers, cellphones and e-book readers. As Jeff Olson, vice president of research for Kaplan Test Prep and Admissions, whose team conducted observational studies, noted, "'In today's ADD society, textbooks are pleasantly single- dimensional and finite....When I asked study participants why they didn't use their laptops to look something up, I heard some version of 'because that's my distraction.' " (Marklein, 2010).

## 4. Skimming, Viewing, and Difficulty of Use

In addition to the problem of task switching and distraction, researchers are also worried that the online environment is creating a generation of "viewers" rather than readers. In 2007, for example, JISC Collections, a British academic consortium which provides digital content for education and research, conducted a national e-books observatory project in order to understand how users interact with e-books. The findings indicated that most users were interested in speed of use rather than depth of learning. Specifically,

*85% of users spend less than 1 minute on a page when reading an e-book, and only 5.5% of students read the entire book. Convenient as it may be to chalk up the results to students not completing their required reading, the numbers belie that assumption—only 7.1% of professors reported reading entire e-books. These numbers*

*could be the result of students only reading certain chapters of books for class, or they could indicate a pattern of searching for specific facts rather than poring over scholarly texts wholesale. Either way, the emphasis seems to be on efficiency rather than detail (Baumann, 2010).*

The report also noted that readers were not reading digital material in the way in which one would expect print to be read. Instead, researchers reported observing new forms of "reading." Users were "'power browsing' horizontally through titles, contents pages and abstracts going for quick wins." The report continued, "It almost seems that they go online to avoid reading in the traditional sense" (Rowlands, 2008). David Nicholas, professor of library and information studies at University College London (UCL), has referred to this activity as "viewing" rather than reading. While the reasons for this behaviour are not entirely clear, studies in which eye-movement has been tracked confirm that individuals don't read as thoroughly when online (Carr, 2010). As Clive Thompson of the *New York Times* observed, "Information is no longer a scarce resource—attention is."

While most librarians seem to have assumed that e-books would be used in much the same way as electronic journals, Nicholas, who has written on the national e-books observatory project, found that this was not the case. He observed very different patterns of behaviour when users accessed these two types of resources. The preliminary findings, derived from a study of the impact of e-books and their use by University College London faculty and students, identified startling data. "No one is doing any serious reading at all online," Nicholas explained. "'Users are engaging in 'power browsing,' he continued, 'with sessions lasting only three and a half minutes on average, with a relatively short time spent on any single site. Users spent as much time searching as viewing the content'" (Wilkie, 2008). As one observer has commented, the "irony of the information age is that books have become a luxury. Not because of their price, but because of the time it takes to read them" (Off Message, 2010).

Nicholas' study concluded that when faculty and students use online materials, the use is "cursory in nature." Most users, he explained, were "viewing only bite size chunks of e-books. It shows that most (55 per cent) seem to dip in and out of e-books rather than reading them sequentially" (Nicholas, 2008). When further reading was taking place, then, according to the study, it appeared to take place offline.

OCLC Online Computer Library Center, Inc., the not-for-profit computer library and research organization also noticed similar behaviour patterns on its platform. According to OCLC's Scott Wasinger, the average amount of time that an e-book is used by a user was 8.5 minutes. "'This tells us that users go in, use the platform to perform a very specific search, find exactly the book and section that they need, copy and paste it or take notes then get out" Wasinger commented (Wilkie, 2008). Overwhelmingly, readers appear not to be doing reading of any sustained length when dealing with e-books.

Research involving humanists and their print versus electronic reading preferences at the University of Denver uncovered an aversion to electronic books particularly when more than cursory reading was required. The Denver study revealed that more than half the individuals surveyed used e-books only because they could not get a copy of the title in print. Approximately 68% said that they preferred a print to an electronic version. As the authors of the study concluded, humanists "do not generally see the ease of searching the text as a benefit [which] suggest[s] that they prefer print for reading of longer passages, especially those the length of the entire book, and only use the electronic version as a backup when the print is not available" (Levine-Clark, 2007).

What all of this research reveals is that deep reading of longer passages is generally done away from the computer. Again, at least one reason for this has to do with the distractions inherent in online sources. University of Toronto professor Keith Stanovich who studies reading and children, notes that the multi-tasking and "simultaneous things to do on the screen will ensure that no deep reading takes place…"That's

why book reading is best for deep reading. The idea that children looking at screens are taking in, at a deep level, information from many different streams is a falsehood" (Barber 2011).

Another reason to account for the short bursts of reading online, however, might have to do with difficulty of use. One Canadian study involving information retrieval from print and e-books sources, for example, found that students had more difficulty finding facts in e-books. The study, which required volunteers to answer questions or find specific facts in both types of sources, found that students had difficulty navigating electronic sources and dealing with the differences in e-book platforms.

In contrast, students had no difficulty using indexes and tables of contents in print books to locate information. Researchers concluded that the print was more successful because it was searched in a linear fashion versus the non-linear attempts to search e-books. Students were unsuccessful in transferring useful finding strategies (i.e., using an index) from print to online sources. Also, the participants expected the e-book platforms to function much like Google and ran into problems when they did not (Hernon, Hopper, Leach, Saunders, & Zhang, 2007; Berg, 2010). The linear nature of printed text, and the non-linear nature of electronic books play, as the Canadian study revealed, a significant role in the reading, understanding and general "usability" of books.

## CONCLUSION

So, are e-books making us stupid? Certainly there is enough evidence to conclude that libraries and their patrons are not any smarter since their arrival. In fact, librarians and their associations have yet to sound the alarm that books in digital format might eventually lead to the day when libraries are unable to lend books and patrons who desire to read e-books are able to bypass libraries entirely. The 2011 the Education Advisory Board report seems to sum it up with the headline, "Writing our Own Obituary" (University Leadership Council, 2011). The underlying message should be reassuring: that libraries will be just fine if they only get with the program.

But what exactly is the program? It is difficult to tell from the report, given the number of contradictions in it. We are told that the "move among students and faculty to [adopt] e-books has been slower than many anticipated" (University Leadership Council, 2011, p. ix), which is very good news for a lot of people. But then we're also informed that the "new consumer utopia [is] instantly available digital books." So, apparently we're being scolded for not adopting this utopia as quickly as we ought. No rationale is given for why users are so slow to adopt it. The message simply is this: that those libraries which do not see the importance of adopting e-books are destined to become "a relic of a bygone age when users were not self-sufficient and when the information or book a user wanted was not simply a click away" (University Leadership Council, 2011, p. 10).

The report is, to put it mildly, ambivalent in its approach to e-books: it notes the draconian digital rights management restrictions in place for e-books; the inability to move a file to a different computer or to download more than a certain number of times; and the prohibitions on selling, lending, copying, pasting or annotating text (University Leadership Council, 2011, p. 24). The report quite rightly notes, "Ironically, it is now easier to share physical books than electronic copies. Until licensed or 'fair use' access to the mass-digitized corpus is resolved, colleges and universities will be unable to begin replacing physical collections with digital access to scanned material." (University Leadership Council, 2011, p. ix).

It is somewhat surprising for the reader, then, that the report clearly favours the movement from print to digital collections and devotes part of the discussion to "overcoming faculty resistance" to the removal of print. One suggestion for "overcoming" the resisters is to make faculty members go through a time-consuming bureaucratic process of appealing not just the removal of an entire print collection, but of each individual item removed from the collection;

they would also have to provide justification for why that particular item be kept. Of course, even in such cases, the library itself would insist on having the last word (University Leadership Council, 2011, p. 61). Surely the end of print is near if faculty members must champion each item one by one, to a library administration which is determined to dump print and has retained the final say.

While the report touches briefly on the usability problems inherent in e-books, it does so in a sunny tone: "Format incompatibility, missing functionalities, and hard-to-read displays are likely to give way to better, less expensive reading technologies as publishing continues its digital migration." (University Leadership Council, 2011, p.ix). There is no meaningful discussion of the difficulty of reading long passages online, or the inherent distractions. Nothing is said to acknowledge that patrons are being driven to a medium in which they are "more and more inclined to winnow and skim, extracting only what [they] need or what [they] have predetermined might be of interest to [them]" (Off Message, 2010). Finally, there is no indication of the slightest concern over the latest findings on how we think, how the brain operates in an electronic versus a print environment and deep reading.

Clearly, many organizations believe that the die has been cast. But just as clearly, more than enough very disturbing questions have been raised about the rush to utopia. Libraries and their associations surely ought, for a moment, to stop their knee-jerk cheerleading and start questioning whether the path they are on really is the best one for themselves and their patrons. After all, wouldn't it be stupid not to ask?

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