Time for a digital detox? From information obesity to digital dieting

Tara Brabazon

Where is the wisdom we have lost in knowledge? Where is the knowledge we have lost in information?[1]
- T.S. Eliot

Like Superman, this article commences its transition with a telephone box.

The 3 Network in the United Kingdom is advertising its services, but both the message and the platform for that message is unusual and – indeed – ironic. Digital access is sold through the language of a buffet. Instead of unlimited food, unlimited data can be ‘eaten.’ Yet the platform on which this connection between food and information is made is a rare object in an era of private, mobile telephony. A public telephone box becomes a banner and backdrop to sell a gluttony of private access (and excess) of data.

Such an irony – or wilful blindness to injustice – was predicted by the intellectually courageous Neil Postman, in his 1993 book Technopoly,[2] argued that celebration of technological change blinds enthusiasts with the belief that – inevitably – benefits will spread throughout the world.[3] That has not happened. The speed and scale of information architecture in some European and North American regions and nations encourages binge searching, media gluttony and information obesity. There is a cost of this excess for the rest of the world,[4] creating assumptions that more media creates greater meaning and that information availability is synonymous with knowledge creation.

Postman did not doubt the efficiency of the computer in education. He remained worried about how the computer “is altering our conception of learning.”[5] Nearly twenty years have passed from the publication of Technopoly, but the outcomes of Postman’s assumptions are unfolding. Unless information literacy scaffolds learning, consumers will shop online but ignore, displace and forget the costs and losses to learning and citizenship. Peter Morville is right: “Information literacy helps individuals succeed.”[6] But it also enables dynamic questioning of collective injustice and inequality. Put another way, the gap between ‘all you can eat data’ and the digital dieting required to manage it, requires attention.

To show how a consumerist anaesthetic is masking the pain of crumbling public education, health and libraries, it is necessary to intervene in the narratives of hyper-individualism, personal choice and the digital divide. By aligning postcolonialism, internet studies and media studies, I probe the consequences of the information glut and the fetishization of the new rather than the useful. This is an article of advocacy and argument, exploring how our language, models and metaphors for the online environment have become descriptive rather than innovative and interventionist.

Information Obesity

We are living in the middle of the largest increase in expressive capability in the history of the human race. More people can communicate more things to more people than has ever been possible in the past.[7]
A new menace is threatening to overwhelm our cities and towns. It is not the percentage of women wearing a dress larger than size fourteen. It is not the beer gut protruding over the belt of contemporary masculinity. It is not the loss of fitness in young people through playing on a Wii rather than with a football. Instead, the problem – so clearly revealed by Kate Moss – is that our culture ridicules extra flesh but not excessive ignorance. If “nothing tastes as good as skinny feels,”[9] then why does ignorance taste better than thinking before she speaks? To put it another way, why is eating more important than reading?

Answering this question requires thinking about the consequences of information obesity. I am interested in two concurrent, yet oppositional movements: the proliferation of information for the digitally literate at the same time as information literacy is more difficult to attain because of a decline in funding for schools, universities, libraries and educational infrastructure. To understand this starvation of information literacy in an environment of information glut, I summon and reconfigure an unusual model to understand and manage this paradox.

One of the causes for obesity is the proliferation of food around us. A study of eating habits from Brian Wansink’s Food and Brand Lab at Cornell revealed that his subjects made over two hundred choices about food each day.[10] We could be thinking about climate change or the pile of dishes in the sink. Instead, Wansink shows that our thoughts are filled with food. Do we pop into Subway for a sandwich? Do we march into the corner deli for a healthy three bean salad wrap or – what the hell – order a home delivery of an extra large pepperoni pizza with a stuffed crust and garlic bread? And, why not open a cheeky chardonnay to accompany the calorific blowout?

The energy and time spent making these food choices is enormous.[11] Even when not eating, we are thinking about eating. Only the truly determined and disciplined can avoid being overweight in such an environment. We eat because there is food around us. This is “mindless eating.”[12] We eat more than we think. We think about food more than we consciously know. Wansink argues that most are on ‘see food’ diet. When we see it, we eat it. He suggests if foods are removed from the environment, then choices are reduced and there is a greater chance to lose weight.[13] One factor is common to all successful diet plans. They restrict the number of choices that the person makes about food during the day. While nutritionists criticize the Atkins Diet, the South Beach Diet or the Cabbage Soup Diet, these eating plans are successful, at least in the short term. Success is not only created by restricting the amount of calories, but also by reducing the number of choices made about food.

I am arguing that Wansink’s ideas can be applied more widely. It is a powerful metaphor and model. We not only live in an environment of abundant food but an excess of information. Hundreds of choices are made each day about which book to select from the shelf, website to visit, magazine to buy in the supermarket aisle or podcast to download for a train trip. The scale of these choices explains Google’s success. Google is the Atkins Diet of search engines. Through the application of the PageRank algorithm, websites are ranked, organized and delivered.[14] Choices – and thinking about those choices – decrease. A word or phrase is typed into a friendly box. Even if it is spelt incorrectly, the algorithms will return information to the user. It is not quality data, but is the informational equivalent of a Big Mac, Fries and a Coke.

Here is an example of this process. I want to find some source material about postcolonialism. I type “postcolonialism” into Google.[15] The first return is Wikipedia, a generalized, collectively written and edited, unreferenced presentation on the topic.[16] This type of source is adequate if the searcher requires a quick definition for personal interest, but it is not the specialist knowledge required for formal education. Intriguingly, a small amount of knowledge and information literacy can make a great difference. This time, in entering the Google search box, I not only type “postcolonialism,” but also nominate three of the major theorists in the field: “Bhabha,” “Balibar” and “Spivak.”[17] The list is completely different. Suddenly the universities appear in the rankings, along with the specialist writers. Wikipedia disappears.

This very simple experiment with keywords confirms that the consequences of information obesity are not sourced from Google but from a searcher’s lack of expertise. One structural way for educators to ensure that students are aware of the limitations in their knowledge and learn how to analyse and judge the type of materials they are receiving is to create assessment and curriculum that blocks easy data mining. Removing the reliance on Wikipedia, widening search terms and increasing specialist knowledge in academic disciplines means that students do not rely on shortcuts (and scholarly satiation) from simple sources.

Andrew Whitworth’s investigation of information obesity confirmed that all forms of obesity – with food or media – require more than a culture of blame on individuals to shift patterns of behaviour.[18] It is necessary to organize information and production. To enact change, there
must be a movement beyond personal guilt and into collective and corporate responsibility. If a fast food restaurant did not exist, then it could not be visited. If Wikipedia did not exist, then it could not be used in schools and universities. More practically, if high quality food was both accessible and reasonably priced – or online and offline books and articles were freely available for students to use – then the temptation to snack on the cheap, quick and easy would be less compelling. Instead of blaming individuals for bad behaviour, an alternative is to open public recreation centres or parks rather than another fast food restaurant, or improve public libraries, rather than perpetuating the ideology that ‘everything’ is online and ‘we’ are born with the skills to interpret, analyse and rank.

The strength and the weakness of Google is that it is relative intuitive to find a small amount of information, using already existing knowledge. It creates a culture of satisfaction. We are hungry for an answer. Google provides it, just like when we are hungry for food and a McDonald’s drive through offers an easy option for calories. We do not think about the other choices we could have made. We are satisfied. However the point of education, the point of learning, is to move from what we know to what we do not know. The goal of education is not to satisfy, but to challenge, confuse, irritate and unsettle, to agitate truths we have accepted in our lives. The problem with Google is that a searcher can only enter vocabulary and terms they already understand. If a student does not know who Etienne Balibar is, then he or she cannot add his name to a search for postcolonialism. Therefore, Google will always make the searcher comfortable, finding what is already known, in a basic language. For teachers, such a realization presents profound consequences. It is necessary to understand what brings students to learning, including their motivation and previous experiences of education. This is a challenging process, as Diana Laurillard confirms, “it is not easy to penetrate the private world of someone coming to an understanding of an idea.”[19] Similarly, it is difficult to pierce and research the space between a searcher and a search engine.

We cannot put words into a search engine that we do not know. Therefore attention is required on the entirety of the educational context, experience and history that leads into that moment of entering words into a search engine. Because information literacy, vocabulary and knowledge is lacking, Google restricts, reduces and limits the source material that is found and we are not even aware that it does so. Therefore intervention is required. Teachers and librarians must slice and probe the intimate and hyper-personal space between Google and the Googler. One way to defamiliarize this encounter is through carefully configured assessment.

As an example, I asked my MA students to complete an annotated bibliography on a research method. They can choose oral history, ethnography, practice-led research, photographic-led research, semiotics or unobtrusive research methods. I asked that they find me twenty sources for their annotated bibliography, but with emphasis on particular categories. They must find conventional scholarly monographs, but locating other types of sources is more difficult. The pattern has been the same in the last few years. They arrive in my office: “Tara how do I find refereed articles? There are no refereed articles for oral history.” I ask them to repeat the method of their search on my office computer. Yes, they typed “oral history” into Google and did not have the patience to sift the results.

I suggested typing two additional words into Google: “Oral history refereed articles.” The results improved. I then proposed they move to Google Scholar. The results again improved. I suggested they move to the Directory of Open Access Journals or Open J-Gate. The results improved. Source after source, the pattern continued. They could not find any podcasts. I added the word “podcasts” into their search terms. Podcasts appeared in the list. But I also suggested that they may consider going to iTunes or Libsyn. Again the results improved when moving to more specialist sites.

Karin de Jager and Mary Nassimbeni, in their evaluation of information literacy programmes in South Africa, confirmed that they are best delivered when integrated into the subject curricula.[20] They showed that the generic models for information literacy through stand-alone training are seen by librarians to be less satisfactory. However their research also confirmed what I had discovered in my teaching:

There seems to be a measurable discrepancy between students’ perceptions about their own information literacy skills, and abilities acquired after interventions, and their actual skills as measured by answers to practical questions.[21]

The crucial recognition logged by de Jager and Nassimbeni was that not only were students deficient in information literacy skills, but they were lacking consciousness about their inadequate information literacy skills. Their study confirmed the cliché that we do not know what we do not know. An integrated and expansive scholarly intervention is required to activate both consciousness and increased skill in information management. In addition, they argue that it must be reinforced through concrete applications in a disciplinary area.

Google has not caused this gap between confidence and ability – consciousness and capacity – to apply logical and dynamic tools to the management of an information environment. What Google has facilitated is the ability to deploy simple vocabulary to return some results. When...
receiving these links, the novice searcher does not hold the competence to recognize the gaps and absences, nor evaluate the quality of the materials. They do not know what they do not know, lacking information literacy in an age of information obesity. That is why an unthinking deployment of Google or any hardware or software must be questioned. Commitment without consciousness encourages sloppy thinking. It facilitates a culture of equivalence. Food is just food. Information is just food. Actually that is not the case. There is better food. There is better information.

Algorithms like Google’s PageRank are bathed in ideologies of logic and rigour. The decision to validate an algorithm to automate and simplify information literacy choices has social consequences. Information systems that start in (and are justified by) empiricism and positivism build structures of social exclusion and differentiation based on ‘fact.’ An example of this pattern and problem emerged on November 25, 2009 as a series of blogs (re)presented photographs of Michelle Obama with the face of an ape. A well-educated woman was reconstructed through physiognomic categories that would have made Lombroso blush. Because many bloggers linked to the site with horror or racism, the image rose to be the top-ranked return in Google Images for Obama as supplied by PageRank. The Corporation received indignant requests for the week prior to November 25, to remove the disturbingly doctored photograph. Google Public Relations staff deflected criticism, describing themselves as a search engine and not responsible for content. They contended that it was not the Corporation’s fault when someone racially abuses the first lady. They simply delivered search results on the basis of (supposedly) neutral algorithms. Inevitably, by the end of the day, the image was removed with an attendant apology.

From one perspective, the Corporation was right to blame ‘us’ – web users – for either blatant racism or rubbernecking at blatant racism. ‘We’ searched for the image. ‘We’ linked to it. ‘We’ viewed it. ‘We’ are to blame. If ‘we’ did not look for it, link to it and bounce it around the blogosphere, then it would never have appeared in Google Images. On closer assessment though, this justification is like blaming a child who accidentally wanders into an adult entertainment centre and does not close their eyes when confronted by pornography.

Such a moment shows the cost of information obesity. Google did not create the racism. Their algorithmic calculations simply confirmed how popular racism can be. But Google is not banal or benevolent. Search engines are not the end of the rainbow of human progress. Instead, the area of my interest is the willingness of (re)searchers to allow an algorithm to replace personal and collective responsibility to gain sufficient media and information literacies to enable independent, conscious choices. This is intellectual laziness and flabbiness. Google is the start of an information journey. It is not the end. The key is to critique and question a series of damaging assumptions.

Information obesity: The assumptions

- If something is new, then it is useful.
- If something is faster, then it is better.
- If something is easy, then it useful.
- Portals, platforms and media used for leisure are intrinsically beneficial in education and the workplace.
- Searching is the same as researching. Clicking is the same as thinking.
- Information is the same as knowledge.
- Cutting and pasting is the same as note-taking.
- Using a search engine is a replacement for expertise in information literacy.
- More media are better media.
- ‘Progress’ in the United States or the United Kingdom will ‘inevitably’ trickle down to the rest of the world.

To find better information necessitates movement between search engines, widening vocabulary and recognizing the innovative writers in a discipline or subject. It is also crucial to locate and recognize the gaps in digital migration. For example, there is one E.P. Thompson book available to download to a Kindle and – through an application – onto an iPad. There is nothing in the iBookstore to purchase from Thompson. Conversely, there are many texts from Richard Florida. Such access does not convey educational relevance or excellence, but simply refers to availability.

The pivotal lesson in transforming environments of information obesity is that a few key decisions from the user/researcher can make such a difference. To justify such decisions is similar to trying to convince a friend about the convenience of eating an apple or yoghurt, rather than a home delivered pizza. The pizza tastes better than fruit. The information from Google satisfies the inexperienced searcher because they lack expertise in finding and interpreting anything more complex. Therefore to question and probe not only information obesity but the assumptions used to mask its consequences, it is time to enter a phase of digital dieting.

Digital Dieting
There is now an almost total disconnection between the validity of a story and its media success.[27]
- Brian Eno

Ponder the metaphors used to describe the engagement with the web: scrolling, surfing and linking. Each describes superficial movement through material. The question is how to stop snacking on the crust of knowledge and to develop advanced interpretative skills. Using the Directory of Open Access Journals (DOAJ) is like eating organic chicken. Google Scholar is the fruit and vegetable section of the information environment. Google is an international information smorgasbord. We could choose to eat salad. However, it is easier and tastier to keep returning to the dessert table for another piece of chocolate cake. It is easier to read blogs than an academic article. It is simpler to watch a YouTube video of another drunken bride falling over at a wedding than viewing an important lecture recorded with a static camera. It is more difficult and requires concentration and effort. It is easier to suck in the equivalent of an information sugar rush, than the slow release of profound ideas, carefully constituted.[28] As Linda Behan confirmed in her discussion of the role of the school librarian, “students want instant gratification, and there are not enough hours in the day to teach them otherwise.”[29] Yet one way to circumvent or challenge the desire for immediate and automated results is to put intellectual obstacles in the way, to defamiliarize their encounter with ideas.[30] One strategy I have used is to restrict Wikipedia and Google use from first year students. I am not against Wikipedia for gener(alized) information, although it has structural limitations.[31] This is not a stance against wiki-enabled media. In earlier years, I had also blocked Encyclopaedia Britannica and Encarta as academic references. The problem is not (only) the anonymity of wiki-enabled collective authorship. Instead, all encyclopaedias are too generalized for the specialist knowledge required at university. By removing simple and introductory sources, including textbooks, from students, the crutch is gone. By blocking default intellectual options, consciousness develops in differentiating between general and scholarly information. My imperative to ‘ban’ Google is simply to challenge students to find better information in different ways. When they know the key authors in the field and have widened their vocabulary, Google becomes much more useful.

To enact this intervention, I supply a detailed study guide and a free collection of readings. While this has been a common practice in many universities in the last twenty years, these supplied materials from academic staff are now even more important. The retraction of library budgets for monographs and journals, along with commercial publishers buying and aggregating journals into expensive packages beyond the reach of many universities means that academic staff must purchase and supply the overwhelming majority of course materials used in their courses. Extracts are then photocopied within copyright parameters and distributed to students. The changes to publishing, with a retraction of scholarly monographs and an increase in textbooks, have further reduced the quality of available material for students. Therefore, academics – to guarantee the quality of student readings from any socio-economic background – are assuming personal responsibility as public institutions and university libraries that used to fulfill this function have been bled of funding. Either academics supply this high quality scholarship to their students, or it is not available for them to read.

When students use these specially prepared materials, rather than wandering through Google, Wikipedia or textbooks, they learn about the subject and gain security and expectations in a new environment. It is digital dieting. Less searching creates more learning. Students arrive at university with little specialist knowledge, uncertain of the level of reading and writing required of them. They are often frightened, away from home for the first time and – understandably – will revert to prior habits and patterns.[32] My decision to excise Wikipedia and Google from their information seeking patterns is not an act of a luddite. Indeed, my goal is to show the value of reducing information seeking patterns is not an act of a luddite. Indeed, my goal is to show the value of

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<td>Dogpile</td>
<td><a href="http://www.dogpile.com">http://www.dogpile.com</a></td>
<td>Aggregates Google, Yahoo!, Bing and Ask through a metasearch.</td>
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<tr>
<td>Ask Jeeves</td>
<td><a href="http://uk.ask.com/">http://uk.ask.com/</a></td>
<td>Maintains a question and answer function, but also a capacity to return precise requests for video and images. It is also possible to view other users’ answers to a question.</td>
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<td>MP3realm</td>
<td><a href="http://mp3realm.org/">http://mp3realm.org/</a></td>
<td>A specialist search engine for MP3s, with additional functions to search for lyrics.</td>
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<td>Files Tube</td>
<td><a href="http://www.filestube.com">www.filestube.com</a></td>
<td>Searches filesharing and uploading sites.</td>
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<td>Scirus</td>
<td><a href="http://www.scirus.com/">http://www.scirus.com/</a></td>
<td>A specialist science search engine</td>
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<td>Njouba</td>
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<td>Searches FTP, Torrent and RapidShare</td>
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<td><a href="http://www.sweetsearch.com/">http://www.sweetsearch.com/</a></td>
<td>A specialist search engine for both students and librarians, with mechanisms for human review.</td>
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<td>Ms Freckles</td>
<td><a href="http://www.msfreckles.com/">http://www.msfreckles.com/</a></td>
<td>Separates searches by media and type of information.</td>
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<td>Mamma</td>
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<td>Metasearch engine, with the capacity to select by the category of results.</td>
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<td>Intute</td>
<td><a href="http://www.intute.ac.uk/">http://www.intute.ac.uk/</a></td>
<td>Searches for academic research by subject.</td>
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<td>Google Code University</td>
<td><a href="http://code.google.com/edu/curriculumsearch/">http://code.google.com/edu/curriculumsearch/</a></td>
<td>Searches curriculum materials from international computer science departments</td>
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<td>Open Library</td>
<td><a href="http://www.openlibrary.org">www.openlibrary.org</a></td>
<td>A wiki-enabled search engine that aims to record every book and author.</td>
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<td>Quotiki</td>
<td><a href="http://www.quotiki.com/">http://www.quotiki.com/</a></td>
<td>Searches for significant statements and quotations.</td>
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<tr>
<td>Lazarum.com</td>
<td><a href="http://www.lazarum.com/2/en/">http://www.lazarum.com/2/en/</a></td>
<td>Search for specialist information on disabilities. It is also tailored to be read with screen readers.</td>
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<tr>
<td>Infomine</td>
<td><a href="http://infomine.ucr.edu/">http://infomine.ucr.edu/</a></td>
<td>Built by librarians, it searches some of the deep web.</td>
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<td>Zhift</td>
<td><a href="http://www.zhift.com/">http://www.zhift.com/</a></td>
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<td>Wink</td>
<td><a href="http://wink.com/">http://wink.com/</a></td>
<td>Specialist search engine for people, with emerging focus on social networking.</td>
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All search engines automate the search process, but the database of materials from which the selection is made is configured differently for more specific tasks. For example, Bing describes itself, not as a search engine, but as a “decision engine.” The ‘improvement’ beyond Google is to further automate the searcher’s results. The one advantage of Google Scholar is that students can maintain familiarity with a brand that they know, but the algorithm connects users to higher...
Quality refereed materials. The removal of Google as a default is like removing ice cream from the home freezer. If it is not readily available, then it will not be eaten. Alternatives may be considered.

My goal as a teacher, particularly as a teacher of first year students, is to slow them down. I block data mining and cutting and pasting through careful construction of assessments. To achieve this goal, it is necessary to create an awareness of the different types and modes of information and provide a scaffold to information literacy. I also assemble a checklist for them. Every source they use in University requires asking ten key questions.

- Who authored the information?
- What expertise does the writer have to comment?
- What evidence is used? Are there citations in the piece?
- What genre is the document: journalism, academic paper, blog, polemic?
- Is the site/document/report funded by an institution?
- What argument is being made?
- When was the text produced?
- Why did this information emerge at this point in history?
- Who is the audience for this information?
- What is not being discussed and what are the political consequences of that absence?

This is the list I give my first year students on the day they commence class. Such questions ask that they stop and think before they cut and paste. If I allow the students to use Google and Wikipedia without thinking, snacking on low-quality information because it is available, cheap and easy to find, then they never make the realization of how little they know. They never reach the moment of consciousness that they have little idea how to find information.

The issue is not only a lack of reading or a replacement of reading for clicking. Another problem is a dearth of note taking. Students are not taking notes from what they read. Instead, they highlight text. I bring students into my office for a personal meeting to talk about their assignments, rather than simply return papers in class. In 2010, I asked how often they draft. The predictable answer was that they did not draft. They ran a spelling checker through it and submitted it. That process can be improved. However, I probed them further, asking how they constructed an argument. It became clear that they did not plan the arc of an analysis. Most of the first year students produced highly fragmented papers, with each paragraph offering a different perspective or argument. There was no subtlety or care in building a transition between disparate ideas. I asked them to show me their notes to diagnose the problem. They showed me their notebooks from lectures and seminars. I asked, where were their notes from the readings? Pause. There were no notes from the readings.

There are a few problems emerging from these first year students. They can be taught to draft and edit their prose. They can be taught how to gain information literacy and find quality research materials rather than mush. I am however left to ponder how a generation of students has entered university unable to take notes from what they read. It means that they endlessly return to the original source, choosing over and over again what may be relevant. Taking notes is a moment of decision making, selecting important information that is appropriate to a discipline, level of education or assessment. After locating and selecting quality materials from the information glut, note taking is an important second stage in information dieting.

Without notes, these students are locked into information obesity. They do not read a book or article, make a choice about what is important, take notes and put away the original text, being able to use the notes for assignments. They are not in control of the information environment. This problem can begin to be solved by working on how students select information in the first place. The wonderment I see in students faces when they discover Google Scholar or seeing how adding a few authors’ names in a search engine can improve the quality of a source is remarkable. Another key strategy that helps students determine the quality of materials is to start reading books and articles from the back. It is empowering for students to evaluate the sources that the writer has used to configure the analysis and judge the calibre of the argument from the sources.

Education – learning – is slow, gradual and incremental. Google is fast. That is why Google’s algorithm seems to have more value than librarians or teachers: not because the Corporation is benevolent or correct, but because it simplifies choices and appears to reduce the cost to staff working in information management. Instead of working hard(er) to find complex references and emerging scholarship, it is easier to follow the crowd, follow the algorithm and access the links on the first page of Google. Food choices are similar. At the end of a long day, we can either prepare a vegetarian risotto or dial up for a pizza. But simply because an action or behaviour is easy does not mean that it is beneficial. Those of us interested in education and libraries, information and knowledge, need to start with simple interventions and tactics for digital dieting and then instigate more complex information scaffolding. In my case, I supply quality materials to students and a long further reading list, cutting away the reliance on Google and Wikipedia, while configuring assessment that embeds information literacy.
These thoughts on information obesity and the necessity for digital dieting crystallized during an MA seminar for Media Literacies at the University of Brighton. In the last seminar of the module, one of my students described her intellectual paralysis when confronted by information choices every day. Each morning when waking up, she is frozen with the scale of choices. Will she read her course guide? Will she search online? Will she go to the library? Instead, she checks her telephone for messages, answers emails and returns to her Facebook profile, which she ‘accidentally’ leaves open most of her working day.

After working through her patterns, we realized that she makes choices by not making choices, living in Brian Wansink’s “mindless margin.” She worries about the hours spent messaging, commenting and updating and asks me to help her with time management. Actually, time management is not her problem. Information management is her challenge. If she closed Facebook after a designated thirty minutes a day, constructed daily learning goals and followed the recommendations of teachers and librarians while monitoring citations of important authors via Google Scholar, then her information environment becomes less threatening and chaotic. There would be no metaphoric Mars Bar calling her name. By not checking Facebook updates every five minutes, forcing herself not to leave one task until it is completed and checking for information that she does not need, she is making choices not to make choices. She develops experience in planning and organizing her intellectual environment, understanding the consequences of refereeing and learning about quality assurance models in education, differentiating between leisure and learning, time passing and time management. This is a pivotal realization for schools and universities. Google is a great way to find products to purchase. We have now reached a layer of maturity in the web environment where one size search engine does not fit all. The information literacy skills used to find shoes may not be appropriate to find scholarly resources.

Strategies to move from Information Obesity to Digital Dieting

- Reduce the media involved in achieving a learning outcome. Use fewer media to create more meaning.
- Reduce the dependency on learning materials (like PowerPoint slides) that can move through time and space. Make information choices in real time and space. Do not delay decision making.
- Increase thinking. Reduce cutting and pasting.
- Use scaffolding assessment such as research plans and annotative bibliographies.
- Introduce a few significant assessments, rather than multiple small assessments.
- Ensure that the key readings are international, current and model excellence for the students.
- Demand interpretation of important scholars, rather than paraphrasing of key ideas.
- Update assessment each year, ensuring student feedback on assessment from previous years is embedded into current practice.
- If a mode of teaching and learning is not working, then change it by reducing the number of assessments or alter the media of delivery.
- Develop a community of learners who care about each other’s progress. Reduce competition, increase community. Use social media to build social relationships.

The imperative is teaching students the differences between scholarly and general information and naturalizing information literacy processes for evaluating sources. This encourages students to stretch and try new strategies, new search engines and new methods. It involves all of us – as learners and readers – to extend ourselves to seek out new ideas and intellectual opportunities. The implementation of digital dieting enables the skills required to handle the proliferaton of information. But this intervention in personal search practices of students is not enough. Besides moderating information obesity and initiating digital dieting, it is necessary to activate social skills to not only shape information into knowledge, but to see the other side of the argument and position all truths into the context from which they emerge.[35]

Digital Justice

Although there is a real threat that the computerization of society will intensify the current inequalities in relations of class, race, and gender power, there is also the possibility that a democratized and computerized public sphere might provide opportunities to overcome these injustices.[36]

- Douglas Kellner

Changing our minds is our hope for the future.[37]

- Brian Eno

It is completely understandable that students (and citizens) are confronting difficulty in their searching and learning processes. The digitization that we are witnessing is arguably of a scale of the movement from scroll to codex. By increasing the opportunities to read refereed scholarship and write evocative assignments from it, students improve their marks and decrease stress. By reducing dependency on social networking, higher quality information becomes the foundation of the intellectual diet. Deciding to avoid the information equivalent of chocolate cake and ice cream ensures that space is available for the fruits of scholarship.
Reducing the information choices being made reorients the focus to the quality, rather than the speed and scale, of returns. Less is more. Such a principle can also apply to the configuration of the sensory experience for learning. As the Open University has shown through their history, sound-only teaching resources defamiliarize the way in which students think about ideas. Instead of recognizing this specificity and value – using fewer senses to initiate greater learning – podcasts became vodcasts. Show notes accompanied the sound. Supposedly the addition of visual and print-based resources increased the potential of sonic media. But what if we gain more meaning from fewer media? Could there be positive consequences in using our senses in different ways to create unusual environments for listening, learning and thinking that are distinct from the patterns and processes of our daily lives? Even if there is doubt about my assumption that fewer media creates more meaning, there is no doubt that fewer media – less sensory information – creates different types of learning. Even more importantly, by reducing the senses and media in operation, a consciousness develops about platform selection and the building of knowledge.

Searching for information is a quest for meaning and understanding. Much of the history of education is based on the selection of ideas, research and media to create a curriculum for students that extends and tests them, rather than leaving them satiated, satisfied and compliant. Media platform selection is the crucial moment in learning. A powerful and important consequence of distance education – that is enhanced through media platforms that shift content temporally and geographically – is that it removes students from the campus and slots learning into personal and professional responsibilities. There are many more citizens who have a chance to participate in education who could never commit to classes in a conventional university environment. There are social and economic costs when physically separating teacher and learner, library and learning. But media proxies can build relationships and manage the loss of face to face teaching and learning. To ensure that the proxies are successful requires planning, deep understanding of available educational options and opportunities, curricula expertise and a powerful feedback mechanism to ensure the careful alignment between learner, curriculum and community. Media choices and literacies should be determined by the environment of the student, not the staff.

Distance education, through its history, has been mediated by the dominant popular cultural platform of its time.

- Correspondence courses (paper and post).
- Radio and television (schools of the air).
- Open Universities (integrated print, radio, television and summer school packages).
- Video and teleconferencing (synchronous media elements added to asynchronous education).
- Internet and web (integrating portal, delivery system, information and communication hub)

Media transformations have been woven through the history of schools and universities, widening participation in higher education. The paradox with such a media-led model for building social justice in education is that the very groups who were excluded from higher education are often the groups without the disposable income for the hardware and software to overcome this injustice. Therefore, the best of distance and online education is able to carry forward elements of old media into new education. Such a strategy not only ensures that a larger number of potential students holds the literacies to commence study and be welcomed into the online environment, but that the best media are chosen for a learning moment, rather than simply assuming that the newest media will be appropriate.

The great gift of social media, like Facebook, YouTube, Flickr and Twitter, to education is that it is social, forming networks of communication and connection between students and staff. Distance education – in its paper-led mode where readers and study guides were sent to student by post – was individualized learning, with occasional weekends or summer schools where scholars would travel to a venue for intensive lecture and seminar sessions. Through social media, distance education is enhanced, allowing students to create much more natural relationships throughout the academic year. They are friends on Facebook, meet in asynchronous virtual learning environments and connect through Google Wave or Ning. Such platforms and portals may not enhance the attainment of learning outcomes, but they do enable learning to be a part of living.

The challenge is to ensure that such strategies are implemented globally. While globalization (and globalism) remains a contentious term, often aligned with westernization and free trade, it carries hope for diversity, modernity and innovative trans-local relationships. Amartya Sen
confirmed that,

We cannot reverse the economic predicament of the poor across the world by withholding from them the great advantages of contemporary technology, the well-established efficiency of international trade and exchange, and the social as well as economic merits of living in an open society.\(^{[47]}\)

The central issue of contention is not globalization itself, nor is it the use of the market as an institution, but the inequity in the overall balance of institutional arrangements – which produces very unequal sharing of the benefits of globalization.\(^{[48]}\)

Globalization is a statement of interdependency that has particular applicability to international teaching and learning. There is a gap in higher education provision between developed and developing nations.\(^{[49]}\) But information architecture and information literacy can be improved. Digital justice must be a priority. One of the great problems emerging from the phrase the ‘digital divide’ is that it is a passive description, encouraging complacency. It conveys an inevitability to inequality, whether discussing the disparity between nations, regions, urban and rural environments, races, classes, genders or age. It encourages descriptions of difference, rather than initiating action to listen, understand and intervene. The digital divide was tethered to phrases like the information society and the information revolution. Mobile media and mobile telephony agitated such categories.\(^{[50]}\) However the digital divide is based on the assumption that access to technology is a proxy for learning how to use it.

An example of this slippage is the One Laptop per Child (OLPC) Australia project,\(^{[51]}\) which is part of the laudable philanthropic goal that every child in the world should have access to the XO laptop. However it is based on the assumption that access to a computer will inevitably develop information literacy. The OLPC confirmed this misunderstanding between access and literacy: “we do not focus on computer literacy, as that is a by-product of the fluency children will gain through use of the laptop for learning.”\(^{[52]}\) There is confusion between access and information, technology and learning, worsened through the complex contemporary colonial relationships. Or, as Python language author Guido van Rossum stated, “I’ve thought for a while that sending laptops to developing countries is simply the 21\(^{st}\) century equivalent of sending bibles to the colonies.”\(^{[53]}\) Access is the preliminary stage in the project of learning. Intervention does not end at this point, with attention required on far less fashionable topics such as professional development for staff, careful configurations of curriculum, lifelong learning and shaping source material that is both internationally relevant and locally appropriate.

The challenge for policy makers and educators during the next moment in internet history is no longer about tracking early adopters but universal access intertwined with universal programmes for information literacy. Finland has taken the first step. On July 1, 2010, Finland became the first nation in the world to transform broadband access into a right of citizenship. The reason for such a decision is that broadband is no longer only an enabler of entertainment and leisure, but the basis of social justice and equality. The aspiration is to provide the entire population with a 100 megabit per second connection by 2015. Such a decision means that telecommunications companies must ensure all residents have access to broadband connections with a legally enforceable minimum speed. Suvi Linden, Finland’s communication minister, confirmed to the BBC that, “We consider the role of the internet in Finns’ everyday life. Internet services are no longer just for entertainment.”\(^{[54]}\) It is neither special nor an option extra. It is a public service.\(^{[55]}\) Computers are simply terminals. Their usefulness is determined not only by the network into which it is connected, but the information literacy of the user. This decision by the Finnish government is one way to guarantee regional equality. In Finland’s case, the great benefits are to both education and small to medium-sized businesses in regional areas.\(^{[56]}\) It is also facilitates more isolated areas participating in trans-local and trans-national trade.

For large nations such as South Africa, Canada and Australia, such a universal service obligation must be the goal. It will require persistence and commitment. Australia has instigated waves of political strategies and visions for broadband rollouts by governmental organizations, nongovernmental organizations, businesses and charities. None has met expectations. At its most basic, these schemes have failed because it is not economically viable to connect many remote and regional areas of the nation. Simply because it is not economically viable, does that mean that the investment in infrastructure is not important? In Australia, the broadband blackspots are really broadband blackouts in northern and central Australia. While the regional differentiation in African nations is more difficult to determine because of the proliferation of mobile telephony,\(^{[57]}\) Khodari Tlabela, Joan Roodt and Andrew Paterson’s important Mapping ICT Access in South Africa demonstrates the value of this developmental objective in implementing national ICT infrastructure. This is the goal of the Universal Service and Access Agency of South Africa.\(^{[58]}\) The USAASA recognizes the necessity, both socially and economically, of this scheme and has instigated a suite of indicators to and for access that offer a global template. Their indicators of ICT access and rollout are configured in four tiers.

Access to telecommunications, computers and the internet in a household.
Access to public telecommunication service centres
Access to telecommunications services in areas seen as under-serviced
Support for under-serviced areas with regard to telecommunications[59]

Most significantly, Tiabelia, Roodt and Paterson created an integrated modeling for information management, stating that,

many of the information-management skills that are particularly necessary in a digital environment can be learned using books and other sources of printed matter.[60]

This is a crucial and far-reaching realization. As explored in the first part of this article, attention to vocabulary disciplinary knowledge and understanding the impact of refereeing are skills to be learnt in printed and analogue environments and can be transferred online. This argument is verified by Bill Cope and Mary Kalantzis's discussion of the movement through on and offline texts.

The idea that books are linear and the Internet is multilateral is based on the assumption that readers of books necessarily read in a linear way. In fact, the devices of contents, indexing and referencing were designed precisely for alternative lateral readings – hypertextual readings, if you like. And the idea that the book is a text with a neat beginning and a neat end – unlike the Internet, which is an endless, seamless web of cross-linkages – is to judge the book by its covers. A book does not begin and end at its covers, despite the deceptive appearances of its physical manifestation. It sits in a precise place in the world of other books, literally when shelved in a library, located in multiple ways by sophisticated subject cataloguing systems, and intertextual positioned by the apparatuses of attribution (referencing) and subject definition (contents and indexes).[61]

There is money to be made in celebrating and selling new media. However the costs of occasionally bizarre obsolescence practices have created a culture of waste. I call this 'the iPad effect.' Apple created an artificial wedge between the smartphone and the laptop, opening a market. The process is working so well that the purchasers of a product like the iPad then created a series of articles,[62]books,[63] blogs,[64] podcasts[65] and vodcasts[66] where consumers try to discover reasons why they bought it. This is information obesity. Instead, digital dieting commences by asking what do I want to achieve, rather than how I can use this hardware or software. Old media is not obsolescent, but provides the scaffolding into the current media environment. Put another way:

Old media + New Media = Now Media.

Recognizing the benefits of digital dieting, spending more time in planning and developing information literacy and less money on software and hardware with no clear purpose will not only create efficiency and consciousness but a greater chance of addressing inequality.

Digital justice requires reflection, intervention, commitment and respect, asking how already existing media can be used to activate information literacy and media literacy. These are overlapping fields and literatures in the management of 'new media,' but the key distinction is that media literacy is particularly focused on platform selection, or the relationship between form and content, signifier and signified. Information literacy is propelled by not only the search for data, but by ensuring a scaffold is in place for evaluation and assessment. Digital justice necessitates the deployment of both subjects and strategies, adding the variable of understanding exactly who is – and could be – using media and information to improve their learning and lives.

To build digital justice necessitates clarity about the type of information to be expressed, which can then be shaped for the required audience. Only when specifying the information and audience can the best media platform be selected. Such a process activates a sociology of the web. There is a match between the audience for a particular platform, in terms of age, region and gender, and the target for the information. One study from Pingdom.com aggregated Google Ad Planner data to reveal the mean age of social networking users.

<table>
<thead>
<tr>
<th>Name of site</th>
<th>Average age of users</th>
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<tbody>
<tr>
<td></td>
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<tr>
<td>Social Networking Site</td>
<td>User Age (%)</td>
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<tr>
<td>------------------------</td>
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</tr>
<tr>
<td>Classmates.com</td>
<td>44.9</td>
</tr>
<tr>
<td>LinkedIn</td>
<td>44.3</td>
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<tr>
<td>Delicious</td>
<td>41.3</td>
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<tr>
<td>Slashdot</td>
<td>40.4</td>
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<tr>
<td>Twitter</td>
<td>39.1</td>
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<tr>
<td>Digg</td>
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<tr>
<td>Stumbled Upon</td>
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<td>Facebook</td>
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<td>FriendFeed</td>
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<tr>
<td>Ning</td>
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<tr>
<td>Reddit</td>
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<tr>
<td>LastFM</td>
<td>35.8</td>
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<tr>
<td>LiveJournal</td>
<td>35.2</td>
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<tr>
<td>Tagged</td>
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<tr>
<td>Hi5</td>
<td>33.5</td>
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<tr>
<td>Friendster</td>
<td>33.4</td>
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<tr>
<td>Xanga</td>
<td>32.3</td>
</tr>
<tr>
<td>MySpace</td>
<td>31.8</td>
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<tr>
<td>Bebo</td>
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Further, the average age of Second Life users is 32. Assuming that 'the young people' are populating social networking sites is incorrect. Therefore the reason for schools and universities buying an island for the purposes of teaching and learning must be questioned, unless attracting older students is the goal.

The imperative is therefore not the celebration of user generated content, but understanding a user’s generative context.

Put another way, policy makers, librarians and teachers must configure a careful relationship between audience, context and goal. This goal can be selling a product or developing a learning outcome. However the greater clarity that can be deployed in determining detail, the more effective and trackable the results will be.

If such relationships become the first step in developing education, consumption, production and citizenship, then waste is reduced. If the investment continues to be in a platform rather than the literacy required to use it, then confusion will continue between tools and applications, information and knowledge. All technological decisions are tempered by the issue of relevance. The focus is on what can be used or produced, rather than the new or ‘the next big thing.’ Such a process requires the acknowledgement and recognition of information obesity/obsolescence and applying strategies for digital dieting. Together, these two moments of consciousness and intervention enable strategies for digital justice.
This process requires planning and commitment, rather than allowing a search engine or any hardware or software development to automate media choices. Without this intervention, the consequences of information obesity will be waste for some and starvation for others. Both states will be normalized as inevitable. The responsibility remains on teachers and librarians to claim a position of leadership in challenging inequalities and normalizing assumptions about progress, technology, learning and living.\[89\]

For example, these photographs were taken by one of my students during an autumnal day in Brighton. They feature books – or more precisely journals – in a skip outside the university library. I do not know what was more disturbing or interesting: that a university was binning books or that so many of my students stopped, pulled out their mobile phone or camera and took a photograph. They were aware of the dissonance, the wrongness of this image. They knew there were alternatives in this digital age to analogue waste. The jarring of an institution of knowledge – a place of learning – throwing publications in a bin stayed with many of my students and haunted them through their study.

From these photographs, I offer an argument to consider. The digital divide has been present through the internet, the web, e-commerce and the migration of public services online. The digital divide surfs other inequalities created through colonialism, ageism, class, regionality, gender and education. But in a Web 2.0 age, the consequences of the digital divide are greater than in the earlier moment of digital history. When libraries are threatened, information obesity must increase. To extend the metaphor, Gary Thompson stated that “the campus library should be the ‘gymnasium for the mind.’”[70] Without a library, googling literacies become flabby. When scholars and citizens are intellectually extended by specialist search engines,[71] Open Access environments,[72] the Public Knowledge project[73] and experienced librarians,[74] then intellectual fitness is sustained.

The strength of the read-write web means that some communities and individuals have never had more platforms, media, opportunities to communicate and express themselves. Pippa Norris noted at the start of the 2000s, before the proliferation of the read-write web, that gains in productivity through the leaps in information technology increased the inequality between affluent nations and those still developing infrastructure, skills and literacies.[75] The most obvious examples of this productivity gap in the last ten years is not only the penetration of internet and broadband,[76] but plug in and play hardware[77] and Word Press, Drupal and simple content management systems to enable website building for those with little knowledge of html coding.[78]

For those who were excluded from web 1.0, the costs of being excluded from the read-write web are even greater. Not only because new devices are being created,[79] but because these new devices are being accompanied by a programme of destruction of analogue books, journals, sounds and visions.[80] There is a sleight of hand – a social amnesia – that ensures those heavily connected in the online environment simply forget about those without the technology, desire or capacity to participate in this participatory culture. This is not a question of access. This is not a question of broadband black spots, but literacy black spots. For example, Clay
Shirky’s book title is instructive: Here comes every-body: the power of organizing without organizations. The issue is: who is part of Shirky’s ‘every-body’?[81] Starting the book with the ‘movement’ that emerged to return a stolen mobile phone that had been lost in the back of a New York City cab,[82] the argument focuses on the ‘sharing’ rather than the doing. Absent in his critique of “traditional managerial oversight”[83] is traditional colonial relationships. While focusing on how information flows through hierarchies, the presence of colonialism as a powerful present hierarchy remains invisible in his analysis.

Even for those empowered by colonial history, Shirky’s ladder of sharing, cooperation and collective action does not explain the concurrent hyper personal consumption, credit card debt and the credit crunch. If ‘every-body’ is a socially anarchist communitarian, why is so much of identity, work and leisure meshed with personal spending?

We live in a culture where we are encouraged to shop, shop, and buy, buy, buy. Why, when we’re in boom times, we flaunt our conspicuous consumption, free of guilt. When the economy is in the doldrums, we are still encouraged to keep the economy – and our credit cards – ‘stimulated.’ Every day I get at least 10 emails from online stores and boutiques announcing, ‘SALE! SALE! SALE!’ ... I was a kind of Shopping Borg, filling up any spare time I had with browsing and buying, until it began to constitute my major social activity.[84]

Not only is leisure facilitated and extended online, but it is also merged with consumerism. The assumptions about ‘every-body’ being online or everyone shopping are a misreading of social networks. The analogue blinkers – the blinkers to poverty – are damaging. By celebrating the online sharers, communities and networks, the difficult questions about the (mis)alignment of social communitarianism and individual consumerism remain unasked.

I remain inspired by students, citizens and scholars who – on a daily basis – do not choose the easy, automated and default option, but select the difficult, challenging and complex. Information obesity allows us to wallow in online gluttony. It is necessary to take action and be active in addressing digital justice. This is a living and exciting process. I have the privilege of teaching students from all over the world, including from many formerly colonized nations. These scholars are courageous, leaving what they know to become what they can be. One of my former MA students, Maggie Wouapi, in her dissertation, offered a corrective to the past and a pathway to the future.

Through the history of feminism, too many white women have spoken on the behalf of women of colour. Podcasting provides an opportunity to change these power relations and tell a different story. Enough. The time has come for Cameroonian women to hold a microphone. The time has come for Cameroonian women to speak into it. The time has come for Cameroonian women to be incorporated into iTunes.[85]

In finding research to assist and scaffold the next generation of the academy through their teaching and learning, I returned to one of the most inspirational researchers it has been my privilege to read. His words, views and writing are the foundation for my thoughts on identity, race, nation and media.

Eric Michaels is known for many research projects, but is best remembered for his studies of the Warlpiri community in central Australia.[86] In the 1980s, he investigated the role and function of television in Yuendumu, at the edge of the Tanami Desert. Michaels did not enact a conventional anthropological case study. Bringing forward the Canadian tradition of communications through Harold Innis and Marshall McLuhan, he created a fresh and bright strategy for thinking about difference and justice. He attacked readers for lazy and compliant thinking, demanding that they revise assumptions about race, modernity and information. At its most basic, Michaels’ scholarship questioned whether ‘we’ have a right to know. Decades before controversies about Facebook’s privacy settings, he warned that there is no right to photograph. There is no right to record. There is no right to broadcast. Instead, the Warlpiri, and the rest of us, have the entitlement to hide our images, voices, views and ideas. He validated information restriction, arguing that profound lessons must be learned not only from first peoples, but also from the first information economy. The point of postcolonialism is not to impose modes of information on others, but to listen, learn and create more just ways of thinking about knowledge, information and the economy.

In the long term, the outstanding analysis from Pippa Norris that digitized infrastructure and architecture increases inequalities between developed and developing nations may be incorrect. Certainly, there is a temporary spurt of productivity that emerges from significant software and hardware innovations. But actually, there is a huge amount of waste and failures in hardware and software development: the iPad effect. This pattern repeats the history of the industrial revolution,[87] Britain, as the first industrial nation,[88] fuelled an empire, proliferated a language and became an engine for economic development. But the second industrial revolution in the 1880s and 1890s saw France, Germany and many other nations catch up to Britain’s ascendancy.[89] They were able to select the processes that had proven to be successful. The first industrial nation had conducted research and development that subsequent manufacturers could apply.
Similarly, developing nations can use developed nations as a laboratory, to test the useful and disappointing technologies. The benefits of early adoption are reducing.[90] We are reaching an age, not of new media, but new media. Not of new technology, but useful technology. Not of access but literacy. Eric Michaels realized this pattern. The Walpiri waited until the urban white population tested out television, video and video cameras. They waited until the start up price for equipment reduced and the quality of domestic hardware improved. Then they commenced their media productions and television station without the burden of waste.

There is some colonial justice to be found in such a pattern. This is not an imposition of ideas, values and media from the empowered to disempowered. This is learning from the mistakes of the early adopters and ensuring an authentic alignment of community, culture, history and technology. In re-reading Michaels’ research amid an online environment where there is a ‘right’ to edit, a ‘right’ to upload, a ‘right’ to tag, a ‘right’ to comment and a ‘right’ to abuse, Michaels’ corrective that information should be controlled and restricted is powerful. In a Facebook age, such an argument is an intellectual car alarm reminding us to read rather than comment, listen rather than talk and think rather than upload. Michaels showed that difference should be respected, but it is also a font of learning for the colonizing, the lazy and the self-entitled. The strategy to manage information obesity is not only digital dieting, but recognizing that digital justice is no longer an aspirational dream for early adopters, but integral to economic development and high quality learning throughout the world.

The phrase ‘digital divide’ created the expectation that a group of haves who – with philanthropy – would ‘give’ technology to the have-nots. However the pattern of development for information and communication technologies in Africa is revealing different patterns, strategies and successes. Florence Ebam Etta and Sheila Parvyn-Warnaihu’s study of community telecentres[91] triggered Richard Fuch’s statement that “Africa is now creating its own Information Society.”[92] Schoolnet Africa South Africa[93] is a clear example of this tendency. The wider capacity of telecentres to integrate old and new media, with the goal of sharing information and communication, has created profound successes. This is not a question of developed and developing nations, or colonizers and colonized. As Michaels showed in the Walpiri use of television in the 1980s, there is no singular path to progress and development. There is no specific configuration of modernity. There are mobilities and modernities. There are also internets and webs. The set pieces about digital democracy, participatory culture, social media networking, the digital divide and citizen journalism are looking not only tired but naïve. As Jack Goldsmith and Tim Wu argue, “information does not, in fact, want to be free. It wants to be labeled, organized, and filtered so it can be discovered, cross-referenced, and consumed.”[94]

The goal is to create knowledge dissemination that enables new and specific examples, models and modalities from African nations to move beyond the continent. The emergence and proliferation of open access, online refereed journals based in Africa are increasing. South Africa is the home of many of these journals, but other nations both contribute and share editorial duties. Fine examples include African Nebula,[95] based in Osun State University in Osogbo, Nigeria, Global Media Journal African Edition[96] from Stellenbosch University, the International NGO Journal,[97] the Pan African Medical Journal from Uganda,[98] the South African Journal of Information Management[99] and the South African Journal of Education[100] all show both rich content and quality scholarship. More research and publishing is required, based in Africa but disseminated throughout the world.

Besides these scholarly journals are emerging, sonic media is an area where Africa can lead the world. Because of the proliferation of not only radio in Africa, but also of high level auditory literacies, the capacity of podcasts for education and business will be an area for expansion. Podcasts have not reached their full potential in Europe, the Americas, Oceania or South East Asia. Yet the capacity to time and space shift sonic media, produced on accessible hardware and software, ensures that voices and views can be moved around the world in a way that suits both the producer and consumer. Maggie Wouapi showed in her research how podcasting can be a carrier of information about the web, scaffolding the movement of citizens to other platforms.[101] Podcasts, because of the size of the sonic files, can operate in and through existing infrastructure in regional and remote areas.[102]

Social inequality matters. We are entering the environment end-game in the war over resources. Digitization has not and will not create a web-housed agora creating global democracy.[103] As Siva Vaidhyanathan asked, “how did we get from ‘liberty, equality, fraternity’ to ‘rip, mix, burn’?”[104] Digitization makes the hyper-connected feel like they are part of a democracy. Yet it also makes users politically deaf and blind, not aware of the voices and views that are not part of the conversation. The screen is a barrier, blocking consciousness of those who are not uploading and downloaded.[105] The disengaged remain disconnected and the disconnected disengaged. The digital divide creates a normalization of European and North American ‘development’ but such an ideology does not even function in Europe.[106] The infrastructural and information literacy gulf between Finland and Greece or Sweden and Spain shows the deception in this generalization.
By committing to digital justice rather than lamenting the digital divide, citizens of the world can avoid a global monoculture, celebrate, preserve and encourage local languages in and through ICTs and acknowledge how colonialism changed, shifted and warped the developmental structures of African nations. These legacies are linguistic, cultural, religious and educational. They are a reminder that the nineteenth and twentieth centuries are over. It is time to remove the electronic tags.

The commitments to move from the digital divide to digital justice

- All citizens hold the right to access high quality information.
- All citizens hold the right to be literate, including both information and media literacy.
- Open access materials are better materials.
- The postcolonial internet creates networks of dialogue, improvement, challenge and questioning about technological choices – rather than the imposition of media, ideas and attitudes – throughout the regions of the world.
- Educate do not discriminate.
- Ask do not answer.
- Listen do not talk.
- Think do not assume.
- What matters in San Francisco may not be of relevance to the rest of the world.
- Ensure that multiculturalism is a foundation of all research about the online environment.

A commitment to this checklist is a way to begin Gerard Goggin and Mark McLelland’s goal in, “rethinking the internet as international.”[107] They confirmed that it is important to recognize “a range of different histories and experiences,”[108] avoiding generalizations and studying difference rather than assume sameness.

This article commenced with a public phone box and Neil Postman’s *Technopoly*. It seems appropriate to return to his inspirational words. He knew that simplistic enthusiasm for technological change creates unfounded assumptions that the efficiencies and productivities of new media will ‘inevitably’ spread throughout the world. That has not happened and without intervention will not. Indeed, Postman recognized the confusion between the simplicity of moving information through space and being about to build knowledge from it.

The problem to be solved in the twenty-first century is not how to move information, not the engineering of information. We solved that problem long ago. The problem is how to transform information into knowledge, and how to transform knowledge into wisdom. If we can solve that problem, all the rest will take care of itself.[109]

Once we – as citizens of the world – can differentiate information on the basis of quality, value and relevance, then the enthusiasm for the new, shallow and banal will dissipate. The unproductive and simplistic confluence between online access and social justice means that those who are not online and ‘participating’ in Facebook updates, LinkedIn connections and uploading mobile phone footage to YouTube will remain invisible. The disengaged and disconnected are invisible. This is not democracy. This is colonialism with a hard drive.

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**End Notes**


[3] *ibid.*, p. 11


Wansink confirms that, “if the candy dish sits on your desk, you consistently have to make that heroic decision whether you will resist the chocolate that has been giving you the eye all day. The easy solution is to lose the dish, move the dish, or replace the candy with something you personally don’t like,” *ibid.*, p. 81


In this discussion of bodily—rather than information—obesity, I do not wish to contribute to the pressures and oppressions confronted by those with a weight beyond the currently configured norm. I am applying a model of food control to information management. I want to log however the powerful critique of the weight management ‘industry’ by Paul Campos of *The obesity myth*, (New York: Gotham Books, 2004)


“Postcolonialism,” http://www.google.co.uk/search?sourceid=naclient&ie=UTF-8&q=Postcolonialism

Jaron Lanier argued that, “Wikipedia provides search engines with a way to be lazy,” *You are not a gadget: a manifesto*, (London: Penguin, 2010), p. 143


ibid., p. 180

Crix, “Why is the first image result of First Lady Michelle Obama in a Google image search a horribly racist caricature?” *Google Web Search Help Forum*, November 12, 2009

http://www.google.com/support/forum/p/Web%20Search/thread?tid=348c3e78a5cd9e1&hl=en


“Richard Florida” search in the Kindle Shop, http://www.amazon.com/s/ref=nb_sb_noss?url=search-alias%3Ddigital-text&field-keywords=Richard+Florida&rh=11_4_0_0_0_0_0_0_0_149_190&fsc=-1

Another keyelement of this argument is that the focus is on content creation rather than content understanding. Nicholas Carr stated that, “as user-generated content continues to be commercialized, it seems likely that the largest threat posed by social production won’t be to big corporations but to individual professionals – to the journalists, editors, photographers, researchers, analysts, librarians, and other information workers who can be replaced by, as Horowitz put it, ‘people not on the payroll,’” *The Big Switch: rewiring the world, from Edison to Google*, (New York: W.W. Norton and Company, 2008), p. 142.

Eno, op. cit., p. xiii
It is important to log the consequences of the Amazon effect: the more ‘we’ click, the more the type of information, goods and services we see is limited. Similarly, by 2007, the personalized search became the default for those with a Gmail address and Google account. This personalization means that we keep finding people like ourselves and information that keeps us satisfied rather than challenged.


J. Lanier called this “contrarianism,” with the goal of constructing “an alternative mental environment,” You are not a gadget: a manifesto, (London: Penguin, 2010), p. 23


Behan confirmed that, “one unsuccessful research session breeds more Googling. When attempting new methods and slowing down to evaluate material results, students turn in frustration to what they know best and with what they are comfortable. Don’t we all?” ibid., p. 7

Please refer to their study in collaboration with Queensland University of Technology and Pennsylvania State University, Different Engines, Different Results Web Searchers Not Always Finding What They’re Looking for Online, April 2007, http://www.infospaceinc.com/onlineprod/Overlap-DifferentEnginesDifferentResults.pdf.

This site also includes free tutorials on information literacy.

The role of librarians in this process is crucial. As John Budd confirmed, “among the numerous concerns related to librarianship is the goal of informing people, of providing shape and form to their thoughts and questions,” Self-examination: the present and future of librarianship, (Westport: Beta Phi Mu Monographic Series, 2008), Kindle edition, locations 38-42


Eno, op. cit., p. xxi

A.W. Bates, in reviewing the successes of the Open University, showed the importance of media choice and selection in distance education, including the history of audio cassettes for OU courses. He stated that, “Audio cassettes are low costs; all students already have facilities at home; they are easy for academics to produce, and cheap and simple to distribute; students find them convenient to use; and, when designed properly, they encourage student activity. (UK OU audio-cassettes are rarely lectures),” Bates, Technology for distance education: A 10-year perspective,” in A. Tail, (ed.) Key issues in open learning – a reader: An anthology from the journal ‘Open learning’ 1986-1992, (Harlow: Longman, 1993), p. 242. The Open University chose audio cassettes because they were low cost, accessible, able to be produced by academics without intervention from technicians, and convenient to use. In terms of educational design, lectures were noted as inappropriate in developing effective sound-based OU educational strategies.


My valuing of sonic media in education here extends beyond Stephen Abram and Judy Luther who argued, “many of us in the information profession are great text-based learners. For most of the rest of the world, reading is not a primary learning behaviour,” from “Born with the chip,” Library Journal, May 1, 2004, p. 36

An example of this reflexive work is G. Kress, Literacy in the New Media Age, (London: Routledge, 2003). Kress asks how - in the era of multimodality - the forms and functions of writing transform. Will this multimodal screen culture transform -- and return - writing into a transcription of speech or become more iconographic?

This meta-function of the search was brilliantly explored in Sharon Markless (ed.), The innovative school librarian: thinking outside the box, (London: Facet, 2009)

Robin Mason and Frank Rennie stressed the importance of “selecting the media palette,” from E-learning

These five modes of education technology are based on D. Kember, Reconsidering open & distance learning in the developing world: meeting students’ learning needs, (London: Routledge, 2007), p. 124

I wanted to note some of the troubling anti-modern(ist) tendencies of writers about social media. For example, Clay Shirky stated that, “our social tools are not an improvement to modern society; they are a challenge to it,” op. cit., p. 107

I follow Kember’s determination of the difference between developed and developing nations, because it is dynamic: “I will interpret a developed country as one which has levels of participation in higher education close to half of an age-group and has therefore achieved mass higher education. Developing countries are those which have not,” op. cit., p. 61

I note Emlyn Hagen’s study. The digital divide in Africa: cross-sectional time series analysis of the African Digital Divide factors, (Saarbrucken: VDM Verlag, 2007). In this short book, he notes that “half of the world’s population has never made or received a phone call and (perhaps the same) half of the world’s population lives on less than $2 a day. If this is not just a statistical coincidence, there is causality between the lack of telecommunication and poverty.” p. ii. However through his study he realized that there are some statistical coincidences in such a statement with mobile telephony being the agent of change. However the slow transformation in the period from the early 1990s through to the early 2000s, the period of movement between web 1.0 and web 2.0, has had an impact in Sub Saharan Africa in particular. Although forming 11% of the world’s population, this group only held 0.9% of the global telephone lines in the early 1990s. By 2002, it had lifted to 1.5%, p. 5.

One Laptop Per Child Australia, www.olpc.org.au

“What’s OLPC,” www.olpc.org.au/vision/about


The ubiquity of information technology as a service or utility is the basis of arguments in Nicholas Carr, The Big Switch: rewiring the world, from Edison to Google, (New York: W.W. Norton and Company, 2008), pp. 2-17.

Suvi Linden referred to it as a “one of the governments most significant triumphs in regional policy,” in Tracie McDaniel, “Finland makes broadband a legal right for every citizen,” Daily Tech, July 1, 2010 http://www.dailymech.com/Finland+Makes+Broadband+a+Legal+Right+for+Every+Citizen/article18910.htm.

One proxy to track this differentiation is through the percentage of households with access to landlines, with the Western Cape being the highest and Limpopo being the lowest. Please refer to K. Tlabela, J. Roodt and A. Paterson (with G. Weir-Smith), Mapping ICT access in South Africa, (Cape Town: HSRC Press, 2007), p. 9.


ibid., p. 6.

Tlabela, Roodt and Paterson, op. cit., p. 124
Gretchen Schwarz deals with this professional development issue through media literacy. She states, “today’s teachers deal with diversity at every level. Many seem unprepared. Media literacy incorporated into teacher education and professional development may benefit teachers by helping them understand the ‘other,’ by helping them challenge media notions about gender, race, class, etc.; by introducing them to alternative pedagogies; and by offering them resources and techniques to empower their own students ... media literacy integrated into teacher education and development may specifically offer a means of improving teaching for diversity,” from Media literacy prepares teachers for diversity,” Academic Exchange, Spring 2004, p. 224
John Berry confirmed that there is never an easy transition between the old to new. There is a necessity to create a continuous learning environment. However, his question remained how to manage such a transition through an environment of budget cuts, from "Arizona's new model," Library Journal, November 1, 2002, pp. 40-42.


P. Christmass, "Confessions of a shopaholic," West Weekend, July 31, 2010, p. 21


Many of these studies are included in E. Michaels, Bad Aboriginal Art: Tradition, media and technological horizons, (Minneapolis: University of Minnesota Press, 1994)

Leslie Sklar stated that "the main difference between the First World of advanced industrial societies and the Third World of less developed societies commonly revolves around the issues of the level of industrialization and its consequences," from Globalization: Capitalism and its alternatives, (Oxford: Oxford University Press, 2002), p. 12


To listen to her sonic notes on this project, please refer to “Tara Brabazon talks to Maggie Wouapi about her MA Creative Media Dissertation,” http://www.uta.edu/huma/agger/fastcapitalism/9_1/brabazon9_1.html
“Tara Brabazon talks to Maggie Wouapi about the development of her Cameroon podcasting project,”
https://www.archive.org/details/TaraBrabazonTalksToMaggieWouapiAboutHerCameroonPodcastingProject

“Tara Brabazon talks to Maggie Wouapi about the strengths and weaknesses of podcasting in Cameroon,”
https://www.archive.org/details/TaraBrabazonDiscussesWithMaggieWouapiTheStrengthsAndWeaknessesOfPodcastingInCameroon

“What is the role of the artefact in practice-led research?”
https://www.archive.org/details/WhatIsTheRoleOfTheArtefactInPractice-ledResearch

“Tara Brabazon talks with Maggie Wouapi for her final MA Creative Media Podcast,”
https://www.archive.org/details/MaggieWouapiTheFinalMACreativeMediaDissertationPodcast


[103] Pippa Norris stated that, “the optimistic claims that the interactive capacities of digital technologies will facilitate a new era of direct democracy, characterized by widespread citizen deliberation in affairs of state, like a virtual Agora, while attractive as a normative ideal, is ultimately implausible in practice as soon as we understand who becomes involved in digital politics,” op. cit., p. 18


[106] Norris, op. cit., p. 73


[108] ibid., p. 10