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At Brunning: People & Technology--At the Only Edge that Means Anything/How We Understand What We Do

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In the Knowledge Factory — My Shift at IBM Watson

Well, to be honest, half a shift. And not so much a factory floor but four hours of grueling seat time, display, talking heads, watching *Watson* triumph over man and men, and other stuff of a tight training day.

It's been about five years since that eventful day in cold, cold Poughkeepsie, New York, when **IBM** engineers built a makeshift television studio in an **IBM** lab. On January 11th, 2011 *Big Blue* hosted **Merv Griffith's** Jeopardy. It was not just any taping session; two of the long running game show's big winners, **Ken Jennings** and **Brad Rutter**, joined *Big Blue's* heir, *Watson*, to contest *Watson* in three televised episodes. *Watson*, although stumped by the non-fiction category and unable to bet well in daily doubles, won handily by over \$50,000.

Watson was **IBM's** self-challenge, to build a machine that could outthink humans. In 2005 *Deep Blue*, an early version of *Watson*, handily check-mated the world chess champion, **Garry Kasparov**. This chess playing mainframe had been fed the text data of thousands of chess matches and all the documented strategies. *Deep Blue* was **Bobby Fischer** without the attitude.

Jeopardy was a no brainer for the ultimate brain off between man and machine. For over 20 seasons, three contestants had battled each other in a fast-paced, quick-witted buzz, bet-your-money TV version of trivial pursuit. Who better to prove a point that computers can think but to challenge the best thinkers in television broadcasting game show history?

But the pounding in Poughkeepsie was years ago. Those of us gathered at Phoenix's **IBM** Training Center early in 2015 were there spurred on not only by our own appreciation of *Watson's* triumph over us mere humans but also by curiosity: how was *Watson* at making everyday money?

What did we learn **IBM Watson** ROI for the enterprise?

First our hosts surveyed us about what motivated our attendance. Why were we there? Over 90 percent of the thirty or so trainees thought and felt that *Watson* had great relevance to their jobs and companies. Seven percent were moderately interested, and a mere three percent didn't know why they were there. Their bosses said go.

The **IBM Watson** people were direct and clear about the Jeopardy challenge. The challenge was a proof of concept, whether a computer could beat humans in the real world.

They pointed out, though, that Jeopardy *Watson* was specifically built for Jeopardy. The huge database, sourced with libraries full of reference works, all Wikipedia, and immense slices of the factual Web and more, were dumped into memory to compete with two humans each with three pounds of brains. The **IBM** folks even sheepishly admitted that *Watson* had trained in over 100 matches with **IBM** personnel with questions and answers mined from all episodes of the longest running game show in American television broadcasting.

Questions? Was this, well, sort of a setup? The Jeopardy match? Yes. Would many of us have the same resources as *Jeopardy Watson*? No. Or maybe. Probably no.

What then, would we have and what would we get?

Our training centered on the real world 2015 business application of *Watson*. We learned of the *Watson* Knowledgebase which included a rich array of business reference and data sources. We learned about its natural language processor that would work with leading voice recognition systems to parse regular queries into terms *Watson* could recognize and manipulate. We learned about *Watson's* ability to emulate decision making, its algorithms that emulated the best practices thinking of world class enterprises.

All this would not let you take *Watson* home or even dial it up and play chess or engage in intellectual discussion. What you'd have would be a smart interface between you, your data, and *Watson's* analysis of the data.

Our trainers used a *Watson* investment firm application. On our screen was a dashboard. Imagine your investment adviser, the person in charge of your retirement. He or she must handle streams of real time data, a profile of what you want, what you have, and where this puts you twenty years out. The investment world has this but as they say living in data silos.

Watson can help organize this for your investment adviser, alert when actions need be taken on yours or similar accounts, all the while suggesting to you, with the help of algorithms drawn from all the data, new customers whose money and data could add to the *Watson's* knowledge. More the merrier...

Nifty right? We trainees thought so. Remarkably, too, **IBM** has nicely priced options — even free ones — that help introduce us and our organizations to *Watson's* advantages. There are development kits and Websites where we can play with running our data against *Watson* and build our own dashboards. We can add *Watson* to our payroll as a librarian/researcher and consultant/know-it-all.

Surprisingly, our exit survey revealed only about 60% of us are convinced now that we should

or needed to be at *Watson* training. I think we were curious about just registering with *Watson* and starting to roll out a form of *Watson* in our workplaces.

At break some of us dissed on a common problem with the *Watson* outlook. There was a little of that engineering hubris that demands a built solution to life's problems. Then there was also what we joked was *Watsonhausen Syndrome* by Proxy. *Watson's* exaggerated claims for recognition as a huge step forward for the machine mind when its use would be more like teachable full-time assistant.

Although it's astonishing technology, we were less enthusiastic leaving than entering. The knee-jerk response, especially among public sector employees, is that we could not afford this. Even if we fired everyone, we'd be a day late and a dollar short. And with everyone laid off, how would *Watson* easily learn what it needed to learn to replace us?

We're rounding the fourth turn at the 2015 race and **IBM** has stepped up marketing for what *Watson* can presumably do. *Watson* beating the Jeopardy twins was a billion dollar proof of concept exercise, a reverse loss leader to get the conversation going. The training session was just that — to learn to think another way, the *Watson* way.

As we shuffled out, our mutual looks spoke to a larger realization. *Watson* represented a truth and reality bright on our human horizons that signaled the transformative moment of machines off-loading rote decision making and factual drudgery to their CPUs and allowing us humans to do something else. We left, equally light and heavyhearted. *Watson* knew us better than we knew ourselves. As **Jennings's** joked in Final Jeopardy, "I for one welcome our new computer overlords."

Fixing Holes

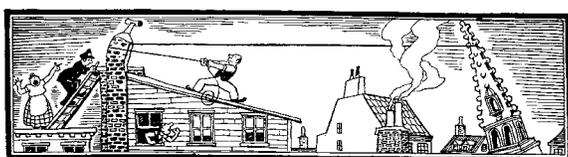
*And it really doesn't matter if
I'm wrong I'm right
Where I belong I'm right
Where I belong
See the people standing there
Who disagree and never win
And wonder why they don't get in my door*

— **Paul McCartney**

My wife **Cathy** knows I've got an **Amazon** habit. We buy everything from **Amazon** because it is so easy. For my own good and our retirement money she's wise to ask about any uptick in **Amazon** boxes piling up daily at our front door.

Cathy orders from **Amazon** too as well as **Kohl's**, **Etsy**, **Target** — it's a long list. She's retired and home though, and gets her packages

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Blurring Lines — Innovation in Open Access Publishing

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stowed away before I get back from the office. If I'm lucky, she'll neatly stack my boxes in my little office off the front door. If unlucky, boxes will be strewn around the porch or stacked like a Leaning Tower of Pisa next to a planter where we grow dead plants.

It's unlucky for me because it's an iconic statement of my excess. All those **Amazon** boxes, each one of them charged to our overheated Amex card. Every one of them, no doubt, a conspicuous consumption. Not in **Veblen's** sense of keeping up with the Joneses' type behavioral economics. No, more precisely, **Dennis'** obsession with easily ordered and purchased **Amazon** books.

Yes, I confess my wife is right and so are you, dear reader, if you sense how wrong this may or could be.

There is method in my madness. It's obsessive, yes, to **Amazon One-Click** for books. But how can I, a mere librarian, resist buying the library books that were on my reading as a kid?

Yes, I've discovered as perhaps some of you have that our library books are going for as little as one cent a book. Of course, shipping, handling, and taxes add another three or four dollars. And some used bookstores don't figure into **Amazon Prime** which in the **Amazon** used trade business doesn't save you shipping but does speed up shipping.

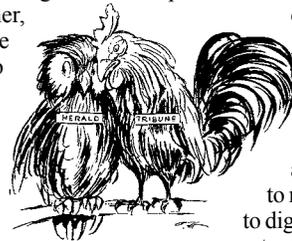
So I'm buying back a library, my library, from your libraries, book by book. The books show library wear and my shelves now seem, to the noticing eye, as lifted from a public library here, a school library there, a defunct school of higher education.

I just received a great library rebound copy of **John Cheever's** exquisite short story collection, *Some People, Places, and Things that Will not Appear in My Next Novel*. This is not one of **Cheever's** best or remunerative books. Yet it is memorable to me and as it has been overlooked by its publisher as a reissue; at three bucks, it's a steal. In my home, it's shelved alongside the **Library of America's** edition of **Cheever's** well-known novels — the **Wapshot** novels and **Falconer**. I love it as the library that tossed it didn't. Love the penny price. Like a penny stock it has its own cheap charm.

Why? I won't make fun of how we are dumping our intellectual property probably not even at fire sale prices. Besides the dumpers seem to be public libraries and school libraries — so read the leftover markings of ownership, call number, and date stamps. My penny book stocks from **Amazon** are faded, blurred, oddly marked as if weeded in haste or tossed because a well-worn book, is well...

My library suppliers are probably strapped for space and they've found space in the jettisoning of the **Cheever's**, **Bellow's**, and **Udpike's**. We'll let **Nicholson Baker** find the humor and irony in this — although even **Nick** has moved on from libraries, librarians, and our shred, shrink-wrap, shirk, and high-density shelving behavior. Our loss is my gain. Sort of. 🐦

Open access publishing is a frontier, but it is a frontier that is too often constrained by discussions based in activist or anti-market views about information distribution and the role of government. I prefer to view open access as a laboratory for innovation. I agree government-funded research should be widely and easily accessible, but I don't believe there is one simple way forward. Instead I embrace those entities and people that are innovating new open access models. Further, the models need to move more rapidly beyond journals and into monographs, archives and other digital items. I believe open access should be engaged as a business model; the end result being more and better types of content freely available to students and researchers as a result of entrepreneurialism, innovation and the very best of governmental and private sector thinking coming to bear on the opportunity. In this column I will describe a recent initiative to bring open access to a new **Alexander Street** anthropology archive and then introduce recent efforts in open access monograph and journal publishing from the **University of California Press** and **Ubiquity Press**.



Open Access Archives

At **Alexander Street** we have long seen making silent voices heard a central component of our mission. In the field of anthropology we know that the seminal ethnographies of the twentieth century that defined the discipline are underpinned by an enormous volume of un-published and un-digitized field notes, photos and other forms of ephemera. Our standard business practice has been to select such un-digitized content and then to digitize, index and make salable; but the sheer volume of content in the corpus of twentieth century ethnography makes this nearly impossible, thus our exploration into open access alternatives. When we scanned the landscape of open access offerings in archives we found the vast majority to be government or institution-funded; the stand-out exception being the offerings of **Reveal Digital**, such as the Student Non-Violent Coordinating Committee Digital Archive, 1960-1969. **Reveal Digital** uses a sales threshold approach that is based on establishing a revenue target after which the archive becomes open to all. This, of course, relies on the largesse and goodwill of the well-funded and/or philanthropic to bring important archives open to the world.

At **Alexander Street**, we are bringing forth a new open access model for archive publication. Our new collection, Anthropolog-

ical Fieldwork Online, will bring open access archival content to the world by merging “for fee” and “for free” content into a single offering. Based on the preference of the many archives we are working with to digitize their field notes of anthropologists such as **Victor Turner**, **Margaret Mead**, and **Bronislaw Malinowski**, we will present three alternatives side-by-side in one offering: for fee (traditional purchase or subscription), hybrid (for fee for a period of three to seven years and then freely open) and sponsored open access on publication. We will return 10% of the “for fee” revenue we generate to digitizing and delivering content open access, and we are encouraging the archives delivering content for fee to return a percentage of their royalty to digitizing and delivering open access content. From this pool of monies we will prioritize and digitize the archival content that the trustees want open access on publication and never salable. Our open access model builds on the fundamental proposition that content owners and trustees of archives have different objectives, and some have varying levels of need to generate revenues to sustain their operations. Anthropological Fieldwork Online will represent these great previously unpublished ethnographic works in a single platform with some content freely available on launch (and this will be ever growing), some content perpetually behind a paywall and some content that will begin behind a paywall but migrate to freely available in five and seven years.

Open Access Monographs

The **University of California Press** is bringing new thinking to the publishing of open access scholarly monographs. The Article Processing Charge (APC model), while the standard for STEM journal publishing, has not yet taken deep roots in the scholarly monograph space; this is particularly true in the humanities and social sciences. And monograph publishing, in general, struggles in maintaining its prestige and legitimacy when it veers from its standard print format. **Luminos**, the **UC Press** OA initiative for monograph publishing, seeks to address these many concerns by focusing on quality assurance through the use of the same review process in place for their print monographs and by launching with several high-profile authors among the first published. But the real innovation in the **Luminos** model is the community-funding approach to bringing born-digital, open access monographs to life. By sharing the costs of publication across the publisher, the many contributing and sponsoring libraries and minor APCs (in the range of a typical STEM

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