Journal of Integrated Studies, Vol 1, No 3 (2012)

A Personal Evolution Towards "New Media"

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> *A record if it is to be useful to science, must be continuously extended, it must be stored, and above all it must be consulted. Today we make the record conventionally by writing and photography, followed by printing; but we also record on film, on wax disks, and on magnetic wires. Even if utterly new recording procedures do not appear, these present ones are certainly in the process of modification and extension.*
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> Dr Vannevar Bush, "As We May Think," July, 1945

The restaurant is busy and we're in the foyer until they find a table. The kids are looking at a typewriter arranged with other interesting artifacts as a kind of sculpture.

"What is this?" they ask.

It's a typewriter, it's the thing we used before computers.

They duck behind, and come ask, "How does it plug in?"

They didn't plug in, you just pressed down on the keys. It was from the days before electric typewriters.

"Where is the screen?"

There was no screen, the paper rolled in, and then the keys swung up to hit the ribbon against the paper and the impression left a letter. One presses down on a key.

"It's stuck!"

I demonstrate, amazed at how hard it is to work the key, but also at how my fingers crook into proper keyboard position after so many years. It's not stuck, this is how hard you needed to press.

"How did kids ever play games?"

They didn't. It wasn't a toy. It was serious.

They are staring in amazement. "Wow."

Wow, indeed. It was hard not to be awed at the time when I myself was that young and realizing for the first time in my life that somehow the muscles of my fingers had their own memory and knew where the keys were and could translate what was in my mind into

sentences I could see, that could become an article, a story, a chapter of a book. Tap. Tap. Tap. Tap. It was power, to see the marks on the page….

> *Two centuries ago Leibnitz invented a calculating machine which embodied most of the essential features of recent keyboard devices, but it could not then come into use…it could not have been depended upon; for at that time and long after, complexity and unreliability were synonymous.*

My mother was the first person in my large farming family to learn how to type, at a career college. Then I learned. No one could quite figure out why a boy would want to…there weren't any boys in typing class at school, only girls who wanted to be secretaries. I typed in secret. After the ancient Olivetti, bought at auction for a dollar, we bought a new electric Brother so expensive we made payments for a year. The store was like a car showroom, full of shiny machines.

In college, the first in my family to go, I traded typing for editing. I could edit three papers in the time it took me to type my own perfect copy. The kids have moved on to a conversation about a new video game, and I am still thinking of typewriters. I interrupt to explain "white out" – correcting fluid which came in a little bottle and you painted out the parts that were wrong, or where there were typos, and tried to line up the typewriter carriage to replace those parts or wrote them in by hand. They have gone from interested to merely patient. They wonder why I didn't just correct and reprint the document. I sigh. They return to a discussion of levels of engagement in their new game, which I cannot follow.

Later, at university, when computers arrived professors talked about how students were suddenly unable to consider more than a screen of information at a time. What about critical thinking? How would student minds grasp philosophical ideas and contextualize them? I continued to type – refusing to get involved in the fad that we thought home computers might be. I was not alone in this. Ken Olson, president of Digital Equipment Corporation, said in 1977 "[t]here is no reason anyone would want a computer in their home."

In a curriculum development education course we were paired to test curricula we developed. My partner created a class to teach third graders to make a ball bounce from edge to edge of the screen.

"They love computers," he said.

Well, yes, I thought, but was it good to give into the distraction?

I taught him how to turn letters into an alphabet of images in a curriculum about art and literacy and he taught me how to start up the computer, log on, and enter code to make balls bounce. I was charmed. What else might I do with this? He showed me the word processor program. We no longer call it word processing, but it gives a sense of what we thought was happening just three decades ago. I was smitten. The next morning I emptied my bank account, signed up for extra shifts at my tutoring job, planned a semester of peanut butter sandwiches, maxed out my credit card and bought my first computer. It took three trips to the car to lug in all the components. I set it up, turned it on – it whirred like a huge fan and a light blinked at me. Bliss.

I had a huge essay due, something about utopianism and medieval literature. Ideas flew out of my brain and onto the page and transformed, expanded, constricted, rendered…I could insert and delete and correct. I could pay attention to the text in a whole new way. Things that had been oblique were now transparent and I was unconcerned by how much work it might take to

rethink, and thus retype, an idea. I re-read what I'd written. It was the most brilliant thing ever. I hadn't quite been able to set up the new pinpoint printer yet, but I'd do that the next day and print it out. It was a week before it was due in any case. I reached over and turned the computer off. The light faded and the fan slowed and then stopped with a sigh. There was a kind of magical pregnancy to the moment and I felt I'd entered some new universe. Science was in the house, on a deeper level than anything I'd experienced. I could turn on the computer again and there it would be…um…where would it be? I looked over at the unopened box of floppy discs. I'd forgotten to put one into the computer. I turned it on again and the screen was blank. There was nothing there, nothing remembered, nothing saved. It was all gone.

I tell the kids this story and my son asks, "Why didn't you turn on the auto-save?"

There was no internal memory.

He stares at me, this child who, at four, received his first time-out after refusing to stop indiscriminately downloading anything he came across.

In that moment of loss, though grievous at the time, a kind of bridge that had begun with my first manual typewriter was crossed, and I'd become finally connected to what was on the screen. That moment of confusion and loss – where was this essay that was a collaboration of my mind and this machine? Gone – was mythologized for my generation in Hollywood by the 1982 movie "TRON" a year or two later. People like me would watch it and remember moments like these and say, "Ah, yes."

My first degrees were full of driving to campuses, parking, rushing to classes in all kinds of weather, with little time for socializing given that I was also working to pay for it all. The truth is it's hard to find a place of study that's not full of politicking, sniping people wanting to climb ladders of their peers and people taking positions on things they love. And it's hard to fit in a job and studies while also trying to figure out all the personalities and alignments. The job is one thing, and the studies are another – they may lead to a job, but the work that sustains us in our studies is not the work our studies lead us to dream of doing.

Now, halfway through an online MA-IS (Master of Arts - Integrated Studies) degree, there's no driving, no parking, no sniping or backbiting or alignments to figure out…I chat with colleagues in the forums, and sometimes on Facebook, and they send me messages on LinkedIn and retweet my tweets and on Foursquare we alert each other about our lives outside the online classroom. And the career I have complements and informs my studies, and vice versa. Things I learn about in the readings of an evening might make their way into the agenda of a meeting tomorrow; what happens in the meeting might make its way into the forum of the course that evening.

> *When data of any sort are placed in storage, they are filed alphabetically or numerically, and information is found (when it is) by tracing it down from subclass to subclass. It can be in only one place, unless duplicates are used; one has to have rules as to which path will locate it, and the rules are cumbersome. Having found one item, moreover, one has to emerge from the system and re-enter on a new path.*
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> *The human mind does not work that way. It operates by association. With one item in its grasp, it snaps instantly to the next that is suggested by the association of thoughts, in accordance with some intricate web of trails carried by the cells of the brain. It has other characteristics, of course; trails that are not frequently followed are prone to fade, items are not fully permanent, memory is transitory. Yet the speed of action, the*

> *intricacy of trails, the detail of mental pictures, is awe-inspiring beyond all else in nature.* (Bush, 1945)

In a new class, someone logs in for the first time and sees a posting that I've written and says how glad she is we're in the same class again. I don't actually remember her.

"You always make me think," she says. "You up the ante."

How lovely. These are the things one wants to hear from one's peers.

I email a professor and late at night from a hotel in a different country that professor writes me pages of detailed thoughts and points out a number of directions I might go.

"I'm fascinated by your topic," the professor writes.

A professor, last year, challenged me in ways I've never been challenged, forcing me to rewrite and rewrite and rewrite, rethink and rethink. Such careful, caring brilliance. I can't even count how many classes I've been in over thirty years and in that class I understood what it was to be part of an academic tradition, to be mentored. To be lost, and found.

I log into Facebook, and a former classmate is sharing pictures of his family, while another is discussing Hannah Arendt. On Foursquare, where we check in with each other at the local Ikea or at the university bookstore, I get a message asking if the bookstore has a certain book that we've talked about, since I am there anyway. This colleague is a woman my age and her children have left home, and she's in a small town in Manitoba with a blizzard all around her. Yes, they have that book, I text her, but there's also an e-book version. I'll download it now, she says, before the power goes out.

Kietzmann & Angell (2010) identify seven "building blocks" that create a kind of honeycomb of social media: identity, conversations, sharing, presence, relationships, reputation, and groups. In each kind of social media, they suggest, different aspects of these building blocks are more or less important. It's interesting to think about the kinds of building blocks that an online education speaks to as we wend our ways through moodles and MOOCs and forums, working together and on our own. I think back to that first typewriter and then to a recent moment when I figured out in a Moodle course how to call up every conversation over a whole semester, all at once – seeing the expansion of ideas and relationships, conversations leading to realizations of self and culture and other and diversity.

> *Presumably man's spirit should be elevated if he can better review his shady past and analyze more completely and objectively his present problems. He has built a civilization so complex that he needs to mechanize his records more fully if he is to push his experiment to its logical conclusion and not merely become bogged down part way there by overtaxing his limited memory. His excursions may be more enjoyable if he can reacquire the privilege of forgetting the manifold things he does not need to have immediately at hand, with some assurance that he can find them again if they prove important.*

I am sitting by the fire, researching a paper through an online library of endless journals, and it's a dark, stormy night and I am grateful I don't have to go anywhere. My son asks if he can do his homework while I work on mine and stretches out beside me, at some point turning on the TV to catch up on a show, playing Minecraft, logging into Facebook and having a conversation, while telling me about his day and doing his homework at the same time, calling up images from ancient Egypt and writing about old gods and new implications – he imagines

Thoth, the god of writing and knowledge, with a laptop. I would stop him, and tell him to focus on his assignment, but, really, I want to see what will happen.

Note

Italicized passages are taken from Dr Vannevar Bush's post-war meditation on the direction peace-time science might take after thoroughly exploring extensions of the physical throughout the war.

References

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