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Coach House Press in the 'Early Digital' Period: A Celebration

John Maxwell, Publishing@SFU

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The Coach House is in the public eye this year, as publisher Stan Bevington and his colleagues celebrate the Gold anniversary of the press. Fifty years on, the Coach House is still pushing the edge of Canadian literature; this fall they have a Giller contender in Andre Alexis' *Fifteen Dogs*; they will publish superstar poet Christian Bok's *Xenotext*, spun out of a poem encoded into bacterial DNA; and they are a key part of a major celebration of Canadian type designers Carl Dair and Rod McDonald. The Coach House has for fifty years been known as a central crossroads of avant garde literature and the printing arts.

The Coach House is also known – by a much smaller number of people – as a crucible of digital technology innovation in publishing since the early 1970s. This story is a crucial part of Coach House's history, but it is a story that largely lies outside the standard narratives of computerization – in industry or the arts. It is a story that, notably, does not begin with Steve Jobs, nor any other Silicon Valley celebrity. Rather, it binds together threads in technology, art, literature, and a very particular cultural milieu in the Toronto of the day.

How did this enigmatic literary press manage to be at the forefront of nearly every significant event in publishing technology since the 1960s, integrating digital technology decades before anyone else in the trade – neither their literary press peers nor big multinational houses? How did the people at the Coach House think about the possibilities of digital media in ways that ignored or defied the so-called “two cultures” that, popularly, set the computer and the arts at odds?

I began the process of recovering this story eight years ago, when I first visited the Coach House. I had read about early SGML-based production at the Coach House in the 80s,¹ and I asked Stan Bevington to tell me about that time. Rather than answering my specific question, Stan told a story that began in the late 1960s, in the darkroom. The way Stan told the story, computers appear as something of an offshoot from the photographic and darkroom wizardry that already propelled the Press.²

¹ Liora Alschuler. 1995. *ABCD... SGML: A User's Guide to Structured Information*. Boston: ITP.

² This article is based on many hours of interviews with the people involved. I would like to thank for their time and generosity, Stan Bevington, David Slocombe, Steve Izma, Ron Baecker, Ed Hale, Holley Rubinsky, Nelson Adams, Rick/Simon, Ian Darwin, and Peter Sharpe.

BEGINNINGS

Stan Bevington came from Alberta. He learned screen printing while in high school in Edmonton, and worked at a newspaper in Edson, Alberta in the early 1960s. Before long, he left Alberta for Toronto and the Ontario College of Art. In the summer of 1964, in the midst of Canada's "Great Flag Debate," Stan sold screen-printed flags on Bloor St. – the various contenders for our new National flag – and made a bundle of money. Someone happened to offer to sell him a Challenge Gordon platen press for a hundred dollars – the same press whose silhouette became the Coach House's logo, and which is still the first thing that greets visitors as they enter the front door.

Stan took his screen printing gear and the Gordon press and set up in an actual coach house at Bathurst and Dundas in Toronto. With an established home, further acquisition included 1917-era Linotype machine, an AB Dick offset press, and a NuArc 14x18" camera – the large format camera could be easily reversed and turned into an enlarger, offering a universe of graphic possibilities to a clever printer. One could, for instance, set type in cold metal, photograph it, enlarge or manipulate it in the darkroom, and gain considerable control over typography. Through the late 60s, Stan grew his operation, gathered a lot of friends, and did a lot of job printing. He started to print books early; Wayne Clifford's *Man in the Window* was released in 1965.

Dennis Lee saved us from slum clearance at Dundas and Bathurst and invited us to Rochdale
- Stan Bevington

Toronto in the late 1960s was a 'dynamic' environment. Stan and his printing operation were drawn into the Rochdale College student-run alternative education project (and skyscraper), and were to have been the resident printer/publisher for Rochdale. But for logistical reasons this never came to pass.³ At some point in 1968 the Press moved instead into its current location just south of Bloor St. on what is now bpNichol Lane – as Stan put it, "in the shadow of Rochdale" (though technically, the sun shines the other way).

At the new location, they gathered more equipment: a film processor, a plate-making machine, and a pair of KORD Heidelberg presses. Stan and colleague Rick/Simon got very good at darkroom technique: compositing, enlarging & reducing, manipulation, colour separations and halftones. They went to industry conferences and at one point were guests at a Kodak workshop in Rochester, part of a group of people working on the "integrated random dot" screenless halftoning technique. What made the Press successful, Stan suggests, is a relentless pursuit of technique. They were, like great printers throughout history, *tinkers*. They got better – and richer – by being clever, by figuring out how to do more with the

³ The Rochdale College story is vast and complex. For those unfamiliar with the story, Ron Mann's 1994 film, *Dream Tower* is an accessible overview.

tools they had around them. In the spirit of that tinkering tradition – born in the darkroom – the introduction of computers expanded the range of tools available.

The Coach House’s first exposure to computers came by way of Dr Ron Baecker, who was then a new computer science professor at the University of Toronto. Baecker had an impressive pedigree; he’d been at MIT and at Xerox PARC, and he was setting up a lab called the “Dynamic Graphics Project” at Toronto in 1972, a time when the world of computer graphics was still new. Baecker and a grad student, David Tilbrook, were interested in newspaper layout and the thorny problem of how to automate layout design. They cast about for people who knew about typography and layout, and brought together a little group to discuss the problem. The group included Stan, and an ex-CBC producer and *Globe and Mail* employee David Slocombe, who was a self-taught programmer. The group also included Ed Hale, who was an engineering student at Waterloo and a member of the Dumont Press Collective, a group formed to handle the production needs of alternative presses in Ontario.

Baecker provided the catalyst, and while nothing directly came out of Baecker’s group as a result, David Slocombe and Ed Hale fell into orbit around the Coach House, as so many others have done over the years.

THE WATERSHED

The exact chronology of what happened next is somewhat murky, but things happened fast. Early in 1974, Stan pulled together a remarkable \$40,000 and bought a *minicomputer* – a Datapoint 2200 – and a *phototypesetter* – a Mergenthaler V-I-P. This was an incredible leap of faith, an investment hard to compare with anything else in the Canadian small-press world of the time. It was also controversial; Victor Coleman, who had effectively been Coach House’s editor-in-chief, left abruptly, and rumours circulated that grant funds that should have gone to writers were used instead for hardware. The Coach House survived the episode and Victor Coleman ultimately made peace with Stan,⁴ but in terms of digital technology this was a watershed moment – not just for the Coach House, but also for the evolution of computing technology.

The Datapoint 2200, while not quite on the level of the Apple II or the IBM PC, occupies a particularly important place in the history of computing. It is the first ever computer designed around the Intel 8008 microprocessor – the direct ancestor of the line of Intel chips that PCs are still made of today. It was effectively the first mass-market microprocessor, a desktop computer with a keyboard and tiny green-on-black screen. One still adorns the coffee room at the Coach House today.

⁴ See Roy MacSkimming’s interview, “The Perilous Trade Conversations: Six: Stan Bevington, Rick/Simon, Victor Coleman”. *Canadian Notes & Queries*. issue 77.

The other component, the Mergenthaler V-I-P, was a ‘small’ photo-mechanical typesetter, one of the first really successful such machines on the market.⁵ It was the size of a desk, and cost about \$20,000 brand new. It stored fonts as a piece of film negative, and by way of a strobe light and a set of stepping motors that moved lenses into place, it exposed letter-forms onto a roll of photographic paper. One would take the results into the darkroom, and come out with typeset galleys.

The V-I-P was designed to be driven by punched paper tape – compositors typed at special tape-punch keyboards, and the resulting tape was fed into the machine. Controlling typesetting machines by paper tape was nothing new, but by the early 1970s it had become clear that the insertion of a computer into this process could allow the text to be reviewed and corrected before it went to the typesetter while also allowing some control over line-breaks and hyphenation.

The Datapoint 2200 minicomputer had a tape-punch unit, and so the two machines together made a tidy production workflow: one could edit the text on the computer, make the tape, and then feed the tape into the typesetter.

But why stop there? The Coach House staff were darkroom photographic wizards, and they had ideas about how to tinker with this process. Could they make their own fonts? Of course they could; they had been photographically manipulating type for years. Could they alter font metrics and kerning and hyphenation and do better than the VIP’s default behaviour?

More crucially, Ed Hale, the engineer, saw that one could hard-wire the two machines together and get rid of the cumbersome paper tape altogether. Armed with an oscilloscope, Hale reverse-engineered the input/outputs from the V-I-P’s tape reader and constructed a circuit board that would provide an interface between the computer and the typesetter. This all came to pass before the end of 1974.

SOFTWARE

The Coach House in the early 1970s employed two typesetting specialists: Glenn Goluska, a designer who went on to become a type designer of some note; [^Goluska] and Nelson Adams, a classicist who would go on to a career in digital publishing. Goluska and Adams were well versed in hand-set type and the Linotype machine, and now encountered computer-based typesetting. David Slocombe, who by 1975 was employed as the in-house programmer at the Coach House, set about creating the software that would make their little computer system usable by the typesetters – and indeed editors – directly.

Through the mid-1970s, Slocombe immersed himself in the computer science literature, hanging out in the journals section of the U of T library and teaching himself how to write programming languages and parsers. Slocombe wrote a key piece of software called a

⁵ The electronic publishing trade magazine *Seybold Report* reported in vol. 2, no 8. (Dec 25, 1972) that Mergenthaler shipped about 500 V-I-P’s that year.

recursive macro processor. This allowed him to gradually develop a system that looks like a very simple *markup language* on one end, allowing the members of the Coach House's editorial board to prepare manuscripts directly onscreen. At the other end of the system, it produced detailed instructions for the Mergenthaler V-I-P with the kind of sophistication that Goluska and Adams were looking for. This arrangement evolved steadily, month by month. By the end of the 1970s, there were three Datapoint 2200s in use at Coach House, plus a network that tied all the local machines together, as well as a line out to Baecker's lab at the U of T.

But wait, there's more... – Yuri Rubinsky

The network link to Baecker's lab (just a few blocks away) was a connection to a much larger current in computing. Ron Baecker's Dynamic Graphic Project had one of the first installations of the UNIX operating system from AT&T Bell Labs. Developed as an in-house project⁶ at Bell Labs in the early 1970s, AT&T were legally prevented from bringing software to market; as a result, UNIX sort of *leaked* out, along the trails made by its small team of developers. Brian Kernighan, for instance, was a Waterloo alumnus, and he brought the system with him to conferences and talks on big reels of tape. UNIX spread this way to a large number of computer science departments around the world. By virtue of UNIX's modular design and the fact that it was readily shared among a community of academic users, it was widely adopted and became, by the end of the 1970s, the dominant paradigm in operating system design.⁷

By the early 1980s, the Coach House became the first Unix-based, network-connected publisher, possibly in the world. Beginning with terminal access to U of T's UNIX systems, they set about computerizing most of the company, from manuscript editing and typesetting to accounting and inventory management. By 1982, Stan had begun to bring UNIX workstations in-house, and David Slocombe began to work with UNIX-based typesetting software. A magisterial 1983 proposal to the Canadian Department of Communications⁸ outlined the establishment of a UNIX-based internetworking project to share resources between Coach House, Porcupine's Quill, and Penumbra Press – this at very moment that the modern Internet protocol standards were first implemented (in UNIX) at UC Berkeley.⁹

⁶ The birth of UNIX has the character of an origin myth on the Internet. According to several sources, Dennis Ritchie and Ken Thomson created it originally in order to play a videogame. In any case, its development has never been claimed as a corporate priority at AT&T.

⁷ UNIX did take over the world; it remains the dominant paradigm in operating systems today. Major parts of it are in Apple's operating systems – and iPhones. UNIX's descendant is the free Linux operating system, which powers much of the Internet and many of the largest companies in the world.

⁸ D. Slocombe. 1983. "A Proposal for Publishers Computer Systems," Proposal to the Canadian Book Publishing Development Program, Department of Communications, April 30. The proposal was successful, and more than \$100,000 was granted for hardware and software systems to be developed at the three presses.

⁹ See Ronda Hauben. 1998. "From ARPANET to the Internet." http://www.columbia.edu/~rh120/other/tcpdi-gest_paper.txt

In 1984, Stan and David Slocombe, along with a newer member of the Coach House family, Yuri Rubinsky, decided to set up a software spin-off company with the idea of cornering the market on UNIX typesetting software. The new company, SoftQuad, bought a license to *troff*, the core UNIX typesetting program, and released an enhanced version (aimed at professional printing operations) called *SQtroff*.

Then, in the classic tech-startup move (except decades ahead of startup culture), SoftQuad “pivoted” in 1986 to realign the company around a brand new international text-processing standard: Standard Generalized Markup Language, or SGML.¹⁰ The direct precursor to today’s XML, SGML was the formalization of a decade-and-a-half long development – partly at IBM, and partly within the printing industry – to drive typesetting and document-processing applications from “generic markup,” an abstracted, descriptive system for marking up text for processing. David Slocombe’s earlier work on the recursive macro processor was part of this larger current. Stan Bevington was heard evangelizing generic markup to students at the Banff Publishing Workshop in 1983.

Yuri Rubinsky had befriended Charles Goldfarb at IBM, and edited and typeset Goldfarb’s monumental *The SGML Handbook* for Oxford University Press in 1990, using SoftQuad Publishing Software. And while SoftQuad’s SGML software was successful within its small market niche, the advent of the World-Wide Web in the early 1990s changed the company’s fortunes; SoftQuad’s HotMeTaL web editing software sold like hotcakes.¹¹

The SGML software was certainly used in-house at Coach House Press. A case study in Liora Alschuler’s 1995 book, *ABCD... SGML*, documents Nelson Adams and Kate Hamilton’s system for bridging SGML to the new QuarkXPress Desktop-Publishing software. Stan Bevington had brought Macintosh computers and an Apple LaserWriter printer into the Coach House as early as 1985, but rather than using them on their own, the Macs were integrated into the larger UNIX-based network.

The late 1980s may have been the apogee of this period of technical innovation at Coach House Press. The 1988 death of poet bpNichol, who had been a central personality at the Coach House, seems to mark the start of a difficult decade: the Coach House’s printing and publishing operations were formally separated in the early 1990s. Yuri Rubinsky too, passed away suddenly in 1996, and afterward SoftQuad ran into trouble, with bad corporate management and stock market scandal. In 1997, the Coach House Press publishing operation went bankrupt under Margaret McClintock.

Stan Bevington and Victor Coleman quickly resurrected the company – as Coach House Books – late in 1997. Darren Wershler-Henry’s bpNichol-inspired *Nicholodeon* was the first title released in 1998. Wershler-Henry would become the editor of the new house, putting

10 SGML became ISO 8879:1986. See http://www.iso.org/iso/catalogue_detail.htm?csnumber=16387

11 Liam Quin at SoftQuad adapted the company’s Author/Editor SGML software for the Web’s HTML in 1994.

the Coach House's entire frontlist on the Web, for free, which proved a scandalous idea for the time.¹²

Coach House Books has now spent the past decade and an half under the editorial direction of Alana Wilcox, and has thrived, at least by Canadian independent press standards. The Coach House hasn't been a software innovator lately, but it was notably the first Canadian publisher to make significant use of social media; under publicist Evan Munday, Coach House had more than 1000 Facebook friends in 2007 – again, years ahead of most trade publishers. The company continues to embrace the Internet, selling ebooks directly from its website as well as maintaining the archive of 1997-2002 online editions.¹³

In the early days, the Coach House Press colophon included the line “Printed in Canada by mindless acid freaks.” The idea that a tiny avant garde poetry press was also such a crucible of digital innovation in publishing, decades before most of its peers, is surprising to many people upon first hearing the story. Narratives of digital innovation are perhaps more typically framed by C.P. Snow's “two cultures,” by which we might expect technological advances from scientists or engineering firms, while artists are expected to languish in a slower, ‘humanist’ mode.

The antidote to this thinking comes with attending to the tradition of *bricolage* that I believe has always been a part of printing. If we remember the examples of Gutenberg, of Aldus Manutius, of Joseph Moxon, the spirit of tinkering was part of what animated the literate world. Printers are tinkerers. Printers are hackers. In a ‘printing office’ like the Coach House, there are no “two cultures” – there need be no divide between the sciences and the humanities.

Parts of this story celebrate the achievements of individuals, such as Ed Hale's circuit board, David Slocombe's macro processor, Yuri Rubinsky's championing of SGML, and Stan Bevington's ability to keep his eyes on the horizon. But the more interesting aspect of the story is about the interplay of these and dozens of other fascinating people; indeed, Stan Bevington's supreme achievement has been to build and maintain the Coach House as the kind of place that attracts fascinating people. The story is never about him alone, but he is there in every scene. Cheers, Stan, and Happy Anniversary!

¹² “An Open Letter to the Literary Press Group” published on the chbooks.com website in September 200 documents the new publisher's struggles to be accepted by the Literary Press Group in the wake of the new online strategy.

¹³ The archive can be found at <https://www.chbooks.com/online>