CONVERGENCES and COLLISIONS:
Literature, Technology, Publishing, Visions, Inventions, by One Author

Dana W. Paxson
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The Abstract Expressionist artist Franz Kline is often quoted as having said that he wanted to be "part of the noise", in contrast to being a listener to the noise. I've chosen to be part of the noise. That choice separates me to some degree from those who prefer to observe, listen to, and comment on the noise. I'm an experimenter. Here you get the noise and smoke coming from the slab in my lab.

Starting in 1993, the world and stories of the literary work I now call Descending Road took initial shape as the text of a novel. Over a decade, this work was shaped by rejection, critique, rewrite, and restructure into a bundle of intertwined narratives that worked in certain ways like the novels of The Alexandria Quartet of Lawrence Durrell[1], layering different points of view concerning the same sequences of events. But writing Descending Road became utterly unmanageable. So did reading it.

"All right," I muttered in about 2002, "I'll make a spreadsheet to keep track of all the scenes and the different story reading orders. And the invented vocabulary. And the background appendices. And…"

The spreadsheet birthed and grew, getting so big and complex that my software experience with Microsoft Excel Visual Basic for Applications (VBA) kicked in. If you've done much scripting software, you'll see where this was headed. VBA needed help from a bunch of Unix tools, the original WordPerfect files received some Corel Perfect Script treatment to do some preliminary markup, and it all got quite complicated, finally requiring a good deal of JavaScript programming at the browser end of things.

Eventually I could feed in all the story scenes, glossary entries, notes, and story sequences, and get back a complete bundle of everything, with different stories for readers to choose. And it really worked. The software generated tightly-linked Web pages that displayed on all kinds of browsers on all kinds of devices. I had become a self-publisher.

But how does an author protect ownership of a creature like this? I had filed for copyright, but much of this work was inventions, so in mid-2005 I began the lengthy and expensive patent process,

cashing in on my experience with drafting patent applications to save some of the associated costs. Not a penny of expenses was rolling in my direction at this point, and that is still true today.

By 2007 the software was a tangled mess, so I translated it into the scripting language called Python. Along the way I'd finished a master's degree in mathematics that I'd started at undergrad level in 2000. I'd also decided that Descending Road was no longer just text. It had become something I called an "electronic literary macramé", or "ELM"[2]: a knotted work of narratives and links for which I could invent no better name. It also had a counterpart for educational applications, which I named a "knowledge transfer tool", or KTT. Now I had to communicate what I'd done.

Marketing and selling are not my strong suits. Worse yet, other writers and inventors disdained such pursuits, either leaving them to agents, publicists, and publishers or else grinding their ways exhaustedly through bookstore visits, signings, fan gatherings, and genre conventions. I had neither money for the first alternative nor stamina and health for the second. Still, it was pointless to build the stadium and have no one come to play ball. I started brainstorming and hoping for a cortical tornado.

Descending Road is a work of speculative fiction. By taking a promotional trip to a convention for authors and fans in this broad genre, I thought I could start getting sufficient attention and feedback to pursue some market presence. I was wrong. Book conventions are for those who already have a familiar framework for writing, publishing, and reading. I'd thrown away the whole framework. Books? Gone. Publishers? Circumvented. Authors? Technically challenged. I received all the public attention that a leper might expect.

Finding anyone with good ideas about where to publish and sell what I'd done turned into a fruitless search, yielding little except people who wanted to charge me a lot for giving me back nothing but attempts to enter a market that didn't really exist yet. That's when the word 'avatar' first appeared in my log. I had no funds to hire help, and here's a bit from my log[3] for May 6, 2007:

"I'm one guy. A whimsical notion presents itself to me: why not create a team of fictional avatars who function as the members of my 'firm' in different roles, and let them contact different markets with different personalities suited to the people and fields they reach? Why hire employees, if I can just create them?"

Avatars were present in the fiction itself, but here the idea emerged into real-life potentiality. The idea started to take shape a bit later in the log entry:

"To a fiction author, the avatar would appear as a marketer with my fiction writing experience. To a university mathematics department, the avatar would appear with my mathematics and software credentials. To a literature department, the avatar would appear with my online Lord of the Rings teaching experience and my fiction writing credentials. To a technical or legal publisher, the avatar would appear with my publishing inventions and my experience as a professional writer. Other markets might have other avatars."

None of this happened, because by this time I had discovered Second Life[4], and avatars took on an altogether new meaning.
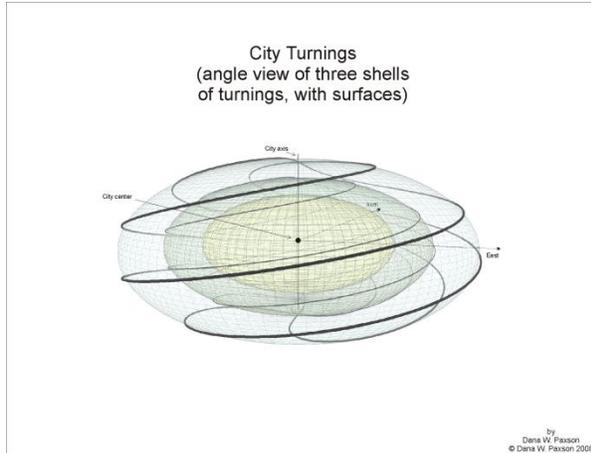
Second Life is a virtual reality setting developed by Linden Labs that has undergone many morphings and rebrandings, but in 2007 academics and artists could use its capabilities for reduced rates. Second Life had a strong and vibrant community of authors, publishers, and readers at that time. I signed up and began building my own place from which I felt I could market my work. There I became an avatar named Jeddin Laval. Jeddin opened a store featuring signs promoting my writing and inventions, and Jeddin and I discovered Linden Scripting Language (LSL). LSL let me link directly from the Second Life world to my Web pages where a copy of Descending Road was stored for readers[5]. Any avatar in Second Life now had access directly to the fiction and the invention presenting it.

That guy on the left is my avatar.

- Jeddin

You might be noting the apparent confusion of pronouns and possessives in the preceding paragraph with respect to Jeddin and me. Anyone who remembers Alfred Bester's short story "Fondly Fahrenheit"[6] may have thoughts of a murderous android with a dual personality, but I assure you that my personality has much more in common with the characterization of personality by Marvin Minsky in his book "Society of Mind"[7]. At least I hope that's the case, and Jeddin is nodding agreement.
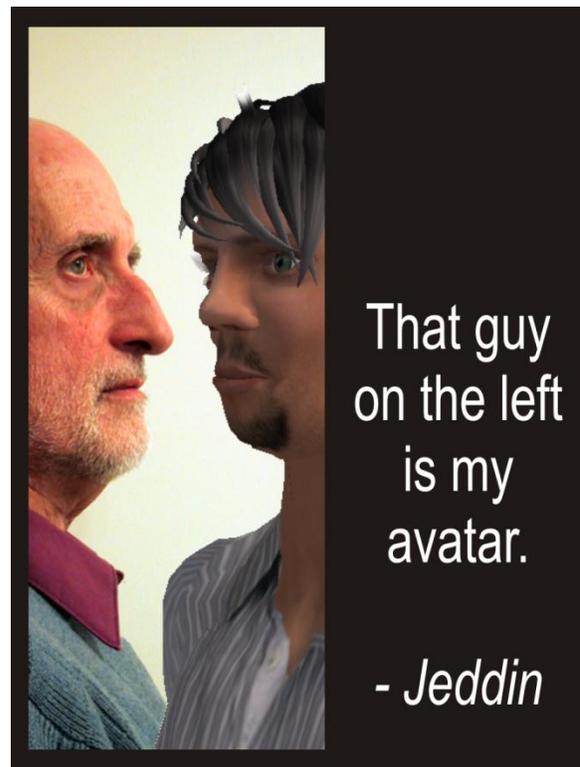
Because it was easy to build places and things in Second Life, I decided to build a model of a bit of the main setting of Descending Road: a monstrous underground city. Such settings abound in literature and life, from Dante (city of Dis in The Inferno), William Hope Hodgson (The Last Redoubt of

The Night Land), Isaac Asimov (Caves of Steel), and others, to George Lucas' THX1138, Zion of The Matrix, Ember of The City of Ember, the real-life arcologies[8] of Paolo Soleri, the Montréal and Toronto underground mazes, and many more.

City Turnings
(angle view of three shells of turnings, with surfaces)

by
Dana W. Paxson
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As the phrase goes, I had to curb my enthusiasm. My invented city was an oblate spheroid shape 70 kilometers across and 9 kilometers deep in planetary rock: about 900 levels spaced 10 meters apart. In Second Life I had to be content with six tightly-packed levels in a slice of a few blocks. I went to work. By the end of 2008, I had a good first pass at the stone halls of the city sector, where avatars could wander and touch objects to get information and links concerning the fiction and inventions of Descending Road. My city build started getting attention from others in Second Life, but no nibbles from publishers, again partly because the technology was unfamiliar to them. It's easy to get into Second Life using its software viewer, but it takes some learning to be able to navigate and interact easily, and that has proved an obstacle to greater recognition for works promoted there[9].

As the Second Life building progressed further, it began to flow back into the literature that inspired and generated it. The Descending Road invention, or ELM, lacked bookmarking capability of its own. This would not be a problem if all that were needed was a browser link, but linking back to the ELM required both a link location and the story thread context being followed by the reader. I found this during some Second Life work, so I built it into the ELM. Another piece of the city in Second Life was supposed to illustrate the identifying symbols used by the familial groupings, called 'colls', of the fiction, but I had no art. I designed the art, displayed it in the city build, and then decided to add it back into the fiction itself, along with a whole series of architectural diagrams showing different aspects of the city's structure.

Then other initiatives started getting sucked into Descending Road. I'd written a separate paper[10] on how to provide large-scale sea-water desalination to help solve real-world water-supply problems, and the city in Second Life gained a set of exhibits sketching the technology. This led to

some rewriting of Descending Road to incorporate the new material into the fictional setting.

In effect, my trajectory as an author zigs and zags all over, as if I were browsing the Web, not designing linearly, to produce my creations. In a similar vein, I open the same kind of trajectories to readers in providing them with the ability to switch from story thread to story thread at the start and end of each scene in a story. I've reflected on this journey at some length elsewhere[11][12].

The Descending Road ELM now can be read online by starting with a random scene and story thread, and following that thread (or switching to another one) as the reader wishes[13].

Our writing and reading habits are changing in ways that expand and enrich our engagement with a work. We've seen plenty of this already with tie-in works that bridge the media: films, games, card collections, texts, images, and more. Until now the creation of many such works is marketing-driven; I submit that it has developed a robust life apart from marketing. We are all changing in the ways we assimilate and disseminate information, so quickly that we are transforming our world and ourselves too fast and too profoundly to comprehend.

Electronic literary experiments abound[14], and much has been written and published about them. My experiment continues. In 2010 I started creating exhibits of the art of Jeddin's Second Life city, including in 2011 a video created for Youtube with the help of Anne Perorazio, a videographer (called a machinimatographer in virtual settings) walking her camera through the city build[15]. It was shown at the University of Michigan Art & Design School's 5th Annual Alumni Art Show that year, and at SUNY Empire State College's Alumni Art Show later that same year.

By 2011 four ELM patents[16] had issued, constituting a portfolio, with four more applications in process. I now had something to sell along with the writing, graphics, and publishing software. I've continue to look for possible buyers. This year I've added epub-standard outputs, and I've gone to other VR grids to see if I can create an expanded city segment at lower cost.

To summarize all this work of nearly two decades, I've learned that doing all of it for oneself as I've done has both a huge cost and a huge benefit. The costs: 1) it can't happen fast, and 2) sometimes one gets outrun and outperformed by others with more and better resources. The benefits: 1) you get what you want a lot faster, and 2) when you create something altogether new, you can own it.

To summarize the relevant changes of that same period, I've seen that authors, editors, and publishers have all been forced by the onset of digital realities to confront fundamental changes in their

ways of working, and all too many of them do not like that. Just to keep up with the great digital shift and create reasonably-original works, I've had to do everything: writing, design, art, software, marketing, selling, logistics, and more. My frequent jest is that I know how to do everything, but doing anything well has proved itself a huge challenge.

How is any originator of fiction or art or software or music[17] going to succeed recognizably in a world where one's originality becomes seamlessly consumed and subsumed in a work of collective effort? I think of the craftings and art of artists and musicians in contemporary media; the "Elvish" art of the films set in Tolkien's Middle-earth is an example. The exploration of what is our own and what is to be shared in this connected realm continues with mounting intensity[18].

To return to Minsky's society of mind, I'm now aware of how all the skillsets required, the avatars and points of view involved, and the virtual and real settings traversed all contribute to a deep sense of both inner fragmentation and exuberant overgrowth of both mind and feeling. Any creator in this physical/digital reality must be prepared for a personally-transformative experience; the main alternative is to remain lodged in an increasingly-static, parochial, and moribund framework as others vigorously and enthusiastically explore literary dimensions unimagined a few decades ago[19].

Being part of all the noise is exciting, vital. Here I've shown you my ongoing work as an independent author, builder, scripter, publisher, and futurist. I come to this point in the work from writing and publishing fiction, studying literature, writing as a patent clerk, creating works of modern art, designing and developing software and virtual-world structures, creating e-publishing and other inventions, and publishing my own writing, over a period of nineteen wild years. When do I get paid? I'm working on that too.

It is all so new, and quickly getting newer. We stand now on the shores of an endless and depthless digital sea of possibility, a chaotic, cobalt, cyber sea, recalling Isaac Newton's words:

"I do not know what I may appear to the world, but to myself I seem to have been only like a boy playing on the sea-shore, and diverting myself in now and then finding a smoother pebble or a prettier shell than ordinary, whilst the great ocean of truth lay all undiscovered before me."

Thank you.

Questions, comments?

APPENDIX – GETTING STRAIGHT TO THE WORK USING QR CODES

The advent of QR codes to provide direct Web access for Apple and Android pads and handheld devices gave Descending Road and the ELM a new and exciting conduit for readers to explore. Here are some of the connections available for you concerning Descending Road and the underground city as modeled in Second Life.

The first is a poster (at right) that connects you, the reader, directly to a random scene in Descending Road. From that scene you can follow the To Next or To Previous links to read the story from that point. The page for each scene also offers dropdowns to change to other story threads leading to and from the scene you're reading.

If you're more inclined to want a tour through the underground city in Second Life, the video tour can be accessed at Youtube using another QR code, assuming that you can run the video stream on your device. The code is at the top of the next page.

Fiction Wants to be Free

Sample a Random Scene from the World of **Descending Road**, Direct to Your Browser

Mature Fiction by Dana W. Paxson

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To see the city tour, scan the code at right and follow the link. It should start the Youtube video and sound. The display is wide, so orient your device accordingly.

Other codes, when scanned, take you to informational pages in the Descending Road ELM that link to specific story scenes related to the topic of the informational page. The series of codes below take you to pages explaining the significance of the adjacent symbols, and from there you can link to a story page in which one or more of the symbol's associations are highlighted.

The series of symbols that follows below, each with its associated code, shows you a few of the emblems of the familial clans of the world of Descending Road. These clans are called 'colls' in the stories. Each character belongs to a coll, and coll allegiances and differences are key factors in the work.

Above is the symbol for Astran Terxil Coll.

Just above is the symbol for Darko Hejj Coll.

The symbol just above signifies the Fandarinn Coll.

Above is the symbol for the Kai Ren Hau Coll.

Each of the above codes gives you access to information and story content. Since linking into any story and following any story thread is easy, added connections can be made as needed.

Such technology supports a wide range of learning frameworks based on associational processes, letting readers investigate topics in any pattern they find most conducive to their learning processes.

Notes

[1]   http://en.wikipedia.org/wiki/The_Alexandria_Quartet

[2]   http://www.danapaxsonstudio.com/What%20an%20ELM%20Is.htm – an outline

[3]   ELM-KTT Working Notes, unpublished log by author for period 9/12/2003 to present

[4]   http://secondlife.com/ – starting point for Second Life beginners

[5]   http://www.danapaxsonstudio.com/DR%20Latest/Website/Demo.htm – the ELM e-book

[6]   http://en.wikipedia.org/wiki/Fondly_Fahrenheit

[7]   Minsky, Marvin. *The Society of Mind*. Simon and Schuster, New York. March 15, 1988. ISBN 0-671-65713-5

[8]   http://en.wikipedia.org/wiki/Arcology

[9]   http://tinyurl.com/9jkov59 – entering Second Life at Jeddin Laval's place

[10]   http://www.danapaxsonstudio.com/Desalination.pdf– a real-life proposal

[11]   http://innermostcrossings.blogspot.com/2011/12/layers-of-art-creating-works-in-digital.html – an extended essay

[12]   http://innermostcrossings.blogspot.com/2011/05/memory-city-of-jeddin-laval.html – a short essay

[13]   http://www.danapaxsonstudio.com/DR%20Latest/Website/RandDemo.htm – the ELM read at random

[14]   Hayles, N. Katherine. *Electronic Literature: New Horizons for the Literary*. University of Notre Dame, Notre Dame, Indiana. 2008. ISBN-10 0-268-03085-5

[15]   http://www.youtube.com/watch?v=YnBHoBrAGpw – a video tour of Jeddin Laval's city

[16]   http://www.danapaxsonstudio.com/ELM-KTT%20IP%20Intro.htm – a list of patent materials

[17]   http://tinyurl.com/949cytl – a four-minute music loop created for Jeddin's city

[18]   Lessig, Lawrence. *The Future of Ideas: The Fate of the Commons in a Connected World.* Vintage. 2002. ISBN-10: 0-375-72644-6

[19]   Hayles, N. Katherine. *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics*. University of Chicago Press, Chicago. 1999. ISBN-10 0-226-32146-0

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3. *City of Ember.* Dir. Gil Keenan. Playtone. October 2008. Film.

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6. Flanagan, David. *JavaScript: The Definitive Guide.* O'Reilly Media, Sebastopol, CA, 4th Ed. December 15. 2001. ISBN-10: 0-596-00048-0

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14. Paxson, Dana W. *ELM-KTT Working Notes*, unpublished development log by author for period 9/12/2003 to present.

15. Paxson, Dana W. *Global Desalination Project*. Self-published on Website at http://www.danapaxsonstudio.com/Desalination.pdf. 2008.

16. Paxson, Dana W. *Layers of Art: Creating Works in the Digital Universe*. Self-published on blog at http://innermostcrossings.blogspot.com/2011/12/layers-of-art-creating-works-in-digital.html. 2011.

17. Paxson, Dana W. *The Memory City of Jeddin Laval: A Short Riff on "The Memory Palace of Matteo Ricci"*. Self-published on blog at http://innermostcrossings.blogspot.com/2011/05/memory-city-of-jeddin-laval.html. 2011.

18. Rymaszewski, Michael et al. *second life: the official guide*. Wiley Publishing Inc. Indianapolis, IN, second edition. January 22, 2008. ISBN-10: 0-470-22775-3

19. *The Matrix.* Dirs. Andy and Larry (Lana) Wachowski. Warner Bros., Village Roadshow Pictures. 1999. Film.

20. *THX1138.* Dir. George Lucas. Warner Bros. 1971. Film.