

Generating Books: Paradoxical Print
Snapshots of Digital Literary Processes

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This paper examines the paradoxical operation of the print book as a snapshot of digital literary process through a discussion of the iterative processes by which I generated one portion of a print book called *GENERATION[S]*, which was published by Vienna-based small press TRAUMAWIEN in 2010.

Since the advent of the internet, advocates and critics alike have heralded the end of the book. And yet – despite the worst efforts of the publishing industry – the physical book has proven to be a particularly elastic form, adept at adapting to remarkable changes in the way we read, write and interpolate narrative. For centuries the printed book operated as a closed system, invested in concealing the structural processes of writing from the reader. In 1992, in his now infamous *New York Times* article, “The End of Books,” Robert Coover observed, “much of the novel's alleged power is embedded in the line, that compulsory author-directed movement from the beginning of a sentence to its period, from the top of the page to the bottom, from the first page to the last” (Coover 1992). And yet, as Vannevar Bush had so astutely observed in his essay “As We May Think,” written nearly 50 years earlier, “the human mind does not work that way. It operates by association. With one item in its grasp, it snaps instantly to the next ... in accordance with some intricate web of trails carried by the cells of the brain” (Bush 1945).

As early as 1895 Belgian lawyer and librarian Paul Otlet dreamed of a “mechanical, collective brain” Laaff (2011). He began building a gigantic paper search machine called the Mundaneum, comprising millions of index cards cross-referencing the content of books by theme, region, and key words. The Mundaneum received up to 1,500 requests for information per year, sent in by letter or telegram. The manual search for answers could take weeks. In a 1926 interview, Nikola Tesla evoked the notion of a networked brain: “When wireless is perfectly applied the

whole earth will be converted into a huge brain... all things being particles of a real and rhythmic whole.” Tesla’s contemporary El Lissitzky wrote that after the Russian revolution the book itself was revolutionized, “torn in separate pages, enlarged a hundred-fold, colored for greater intensity, and brought into the street as a poster... meant for people who would stand up quite close and read it over and make sense of it” (Murray 1991).

And thus, gradually, the closed system of the book is slowly prised open. By the time Robert Coover introduced the notion of hypertextuality to a nation, a collective longing for an “intricate web of trails,” a “mechanical, collective brain,” a “huge brain... of a real and rhythmic whole,” “enlarged a hundred-fold” had been eroding the authority of the interiority of the authorial voice for nearly one hundred years.

In 1994 George P. Landow suggested, in his ironically massively influential book *Hyper/Text/Theory*, “the very idea of hypertextuality seems to have taken form at approximately the same time that poststructuralism developed... both grow out of a dissatisfaction with the related phenomena of the printed book and hierarchical thought.” For three decades Jacques Derrida insisted that, “only in the book ... could we indefinitely designate the writing beyond the book” (1978: 294). By the time of his last book *Paper Machine*, Derrida was writing of the World Wide Web as the ubiquitous book finally reconstituted, as “electronic writing, traveling at top speed from one spot on the globe to another, and linking together, beyond frontiers” (2005: 15).

Consider, then, the paradoxical position of Vienna-based print publisher TRAUMAWIEN. This small press was founded in 2009 by a group of young new media art students, in response to what they perceived to be a new kind of

analphabeticism produced by computer-generated text. Protocols, listings, logs, algorithms, temp files, source codes – the vast majority of the text produced by computer systems is not written by humans, let alone seen or read by humans. And yet the writing and reading of this text is internal to our daily thoughts and actions. As such, TRAUMAWIEN concluded, these new structures must be literary and the best way to represent them must be books. TRAUMAWIEN have since published books of networked texts, algorithmic texts, interfictions, chatlogs, codeworks, software art and visual mashup prose, as well as hybrid books, which use augmented reality to blur boundaries between the physical object of the book and virtual space.

For TRAUMAWIEN, for me, and for Deleuze and Guattari, “there is no difference between what a book talks about and how it is made” (1987: 4). In 2009-2010 through an iterative process which I will now describe, I generated the text of a print book called *GENERATION[S]*, which was published by TRAUMAWIEN in 2010. At no point in this process was I writing a book. I was writing sentences. The book wrote itself. The book talks about generation and that is how it was made.

In June 2009 I lived for a time with a hermit crab named Pookie. Pookie is a biological, digital, quasi-fictional manifestation of Montreal-based artist Ingrid Bachmann’s imagination. Pookie featured prominently in Bachmann’s work *Digital Crustaceans v.0.2: Homesteading on the Web*, which I had written about in 2004. I had never lived with a hermit crab before. A blackboard covers the entirety of one wall of Bachmann’s apartment, an artefact of her site-specific installation series *Speaking Sites, Dialogue: Ingrid and Plato* (Bachmann 1994). This giant input device, this wide, waiting, blank screen dominating the domestic space Pookie & I were cohabitating compelled me – on the first night – to write:

Day 1: Pookie and JR keep to their corners.

Day by day a dialogue between Pookie and JR emerged. Some sentences made their way from the chalkboard into my Twitter feed @jr_carpenter, often in slightly different form, and were then pulled into my Facebook feed. Friends commented on them. My responses to these comments led me to generate new sentences, which I then entered into Twitter, thus creating a dialogic network, a feedback loop.

During this iterative process, Nick Montfort came to town. In an ancient form of dialogic exchange, known informally as a conversation in a café bar, Montfort showed me some 1k story generators he'd written in Python (2008). In Story1.py, an unspoken dialogue is played out between a "girl" and a "man".

Here's the story:

A wolf whistle greets the girl.
The two exchange a knowing glance.
There is laughter.
The man's breathing quickens.
The girl moves faster.
Things are forgotten in carelessness.
The end.

Here's the story:

The man makes a fist behind his back.
A lamp in the park fails to come on.
The girl moves faster.
Pigeons scatter.
The man is there first.
The end.

This generator uses a sequence of ordered sentences; all but 5-9 sentences are removed, and the remaining text is presented as the story. Each time the Enter key is pressed, a new version of the story is generated. I re-purposed the source code of Story1.py, replacing Montfort's sentences with much-edited versions of the chalkboard/Twitter/Facebook sentences about my adventures with Pookie.

Excerpts from the Chronicles of Pookie & JR:

For the first few nights, Pookie and JR keep to their corners.

Pookie only plays in his water dish when he has an audience.
Pookie has many shells to choose from.
JR has been wearing the same shirt for days now.
The contents of JR's suitcase spill across the polished floor.
To be continued...

Excerpts from the *Chronicles of Pookie & JR*:
Previously, Pookie and JR had only ever met at parties.
So far, Pookie has refused to be engaged in conversation.
Pookie watches, but what does he see?
Pookie slowly comes out of his shell, so to speak.
Pookie is actually pretty social, for a hermit crab.
Live and let live, Pookie's nonchalant attitude seems to suggest.
Pookie has turned JR off of shellfish for life.
To be continued...

When *Excerpts from the Chronicles of Pookie & JR* was complete I uploaded the file to my website and wrote a blog post about it, most of which I have just pillaged for the purposes of this paper (Carpenter 2009). A link to the blog post appeared in my Facebook feed, where Ingrid Bachmann saw it, prompting this email:

At 10:23 AM 25/06/2009, Ingrid Bachmann wrote:

Hi J.R.,

What a lovely message on Facebook. I am glad that Pookie is providing stimulation. I am glad you are there. Your intellect will stimulate him as well. What a good writer you are – I always think that anew after reading your work – no surprise really, but it is such a pleasant surprise.

Take care and thanks again for looking after things.

All the best,

Ingrid

Okay, I know what you're thinking. This is a hermit crab we're talking about here. It was a difficult time. I was living out of one small suitcase. Pookie had many shells to choose from in his terrarium. We developed a certain affinity, which I believe, the narrative of *Pookie & JR* reveals.

11 July 2009, in a blog post about my remix of his generator, Nick Montfort astutely noted, “Sometimes the reader is left to wonder who the hermit is.” 16 July 2009, NYC-based artist/programmer Ravi Rajakumar ported my remix of Montfort’s Python script into JavaScript, enabling me to create a web browser friendly version of *Excerpts from the Chronicles of Pookie & JR* (Carpenter 2009). 18 August 2009, I moved to England. A new series of sentences ensued, which I fed into Montfort’s Story1.py structure to create a new generator called *I’ve Died and Gone to Devon*, which I eventually ported to JavaScript using Rajakumar’s code base in 2012. This re-mixing of remixes, this re-purposing one story structure to tell another – this I would call a hermit crab approach. The story already exists. It finds a shell that fits.

In May 2010 TRAUMAWIEN contacted me via Twitter. They had been following the generation of these story generators on Twitter; noticed I had plans to be in Vienna that summer, and invited me to make a book with them. I set only one rule for myself in creating the book iteration of *GENERATION[S]*: No new texts. All the texts in the book have been previously published in some way. The texts the generators produce are intertwined with the generators’ source code, and these two types of texts are in turn interrupted by screenshots from Facebook, excerpts from emails and blog posts, and other fragments of meta narrative which went into the individual sentences’ creation.

By maintaining a focus on the sentence as a narrative unit, *Pookie & JR* retains something of what Coover described as “that compulsory author-directed movement from the beginning of a sentence to its period,” but rather than concealing the structural processes of writing from the reader, the print iteration of *Pookie & JR* reveals the process by which it’s author-directed sentences were created. Many of these sentences reflect audio input.

Late one night, Pookie and JR listen to a chained dog's howls.
Do you hear that? JR asks Pookie.
Pookie keeps his thoughts to himself.

These sentences emerge from an interconnected yet discontinuous processes of speaking, listening, understanding and translating working together to transform transient exchanges of conversation into a kind of writing that Derrida has described as already separated from life and community, a writing “displaced on the broken line between lost and promised speech” (1978: 68).

TRAUMAWIEN embraces this displacement, re-inserting the transient exchanges of digital textual processes back into the community by launching each new *Schema* of books with a night of live performances intended to challenge the digital as the sole locus of these born-digital texts. For example, during the first launch event, passages from *Shocking Blue Demon Lover* – “a real-time, web-written, literary, visual, dada mashup micro prose project... bilingual fictional digital fluxus poetry love story, role-played by the photographer, writer, filmmaker and journalist Margit Hinke (aka @nobabe) – were read aloud by a Zurich/Basel-based Shakespearean stage actor (Hinke 2010).

During the Vienna launch event for *GENERATION[S]*, stories generated by *Excerpts From the Chronicles of Pookie & JR* were read aloud in a round by a Hermit Crab Reading Choir composed of two Canadians, two Norwegians, two Viennese men, and two random Viennese women volunteers recruited from Viennese cafes. We were not quite the “rhythmic whole” Tesla dreamed of, but I believe Derrida would concede we were a book reconstituted, “linking together, beyond frontiers.”

Contrary to Derrida’s assertion that “the book is both the apparatus and the expiration date that makes us have to *cut off* the computer process” (2005: 28),

TRAUMAWIEN conceive of the print books they publish as narrative snapshots of computer generated literary processes which are already disappearing as soon as they are written. Since it's publication, the physical book *GENERATION[S]* has been used as a script, an image, an object, a subject, a pedagogical tool, a commodity and a site of exchange. The codes it contains have continued to multiply, morph and change.

In 2011 University College Falmouth Performance Writing MA student Jess Rotas remixed *Pookie & JR*, creating each new sentence using only words generated by playing the game Boggle:

Message in a Boggle:

'Ok.' Said Ted. 'Go.'

High above terra atop a tor Hera and Thor practiced their rare art.

'Hi.' They called down into the pit.

Roy and Ted trod on with care.

Live and let live, Thor's nonchalant attitude seems to suggest.

'Ho!' said Thor from the sofa.

They quivered like an ailing leaf.

As the gods teed off once more.

The end.

In advance of *Congrés Internacional Mapping e-lit: Lectura i anàlisi de la literatura digital* Universitat de Barcelona, Barcelona, Spain, 24-25 November 2011 Laura Borràs Castanyer translated the text of *Pookie & JR* into both Spanish and Catalan. I then adapted the web-based JavaScript iteration of *Pookie & JR* created by Rajakumar to incorporate these translations.

Excerpts from the Chronicles of Pookie & JR:

Anteriorment, Pookie i JR només havien coincidit en festes.

JR és pacient, Pookie ha de gatejar abans de poder caminar.

JR es disculpa amb Pookie per parlar per telèfon durant tant de temps.

La recollida d'escombraries és els dilluns i els dijous.

Viu i deixa viure, l'actitud indiferent de Pookie sembla suggerir.

JR cuina lentament, rebuscant en aquesta cuina estranya.

JR es troba entre llars.

Continuarà ...

This is not the end of books, though it may be the end of the publishing industry as we once knew it. We may be in the late age of print, as Bolter and others have asserted, or we may be early in an age where print is situated within a continuum of forms. An age where hermit crabs have websites and Plato writes write on chalkboard walls and Facebook walls alike.

Muchas gracias a Hermineia, y en especial a Laura y Sandra. Y Pookie.

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Digital Literacy (as an Ability): Ability to use digital technologies appropriately for learning, working, and functioning in a modern society. Participatory Culture: A culture in which artistic expression and civic engagement are valued and are oriented towards creating and sharing one's creations. Visual Literacy: Ability to see, discriminate, and interpret the visible natural or artificial objects and symbols in the environment. Information Literacy: A concept that emphasizes the need for careful retrieval and selection of information available in the workplace, at school, and in all aspects of personal decision-making, especially in the areas of citizenship and health. Media Literacy: Ability to decode, evaluate, analyze, and produce both print and electronic media. Complete Chapter List. DIGITAL LITERACY. Teresa Dobson and John Willinsky. What is literally digital about literacy today is how much of what is read and written has been electronically conveyed as binary strings of one and zeros, before appearing as letters, words, numbers, symbols, and images on the screens and pages of our literate lives. This digital aspect of literacy, invisible to the naked eye, is the very currency that drives the global information economy. The term word processing may have first found its way into print in 1970, according to the Oxford English Dictionary, when it was used in the journal *Administrative Management*, suggesting how word processing was originally a secretarial device for the efficient management of other people's texts. This book was set in Bembo by Graphic Composition, Inc. Printed and bound in the United States of America. Library of Congress Cataloging-in-Publication Data. Foster, Hal. return, that evoked for me the paradoxical figure in time described by the avant-garde. For even as the avant-garde recedes into the past, it also returns from the future, repositioned by innovative art in the present. This strange temporality, lost in stories of twentieth-century art, is a principal subject of this book. as a process of condensation and displacement, a rebus of metaphor and metonymy) but impossible for him to think as such (given the epistemological limits. focus on 'the constructive omni-;-,,-,---;cial to each discourse.4 The motives.