For Authors For Readers

Text is always silent.
The words just sit there holding their meanings.
Cool as can be.

"Character" © Uemura

Contents

Boldly, the Ebook Way

President, Voyager Japan, Inc.

Junko Kamata

Books You Can Search

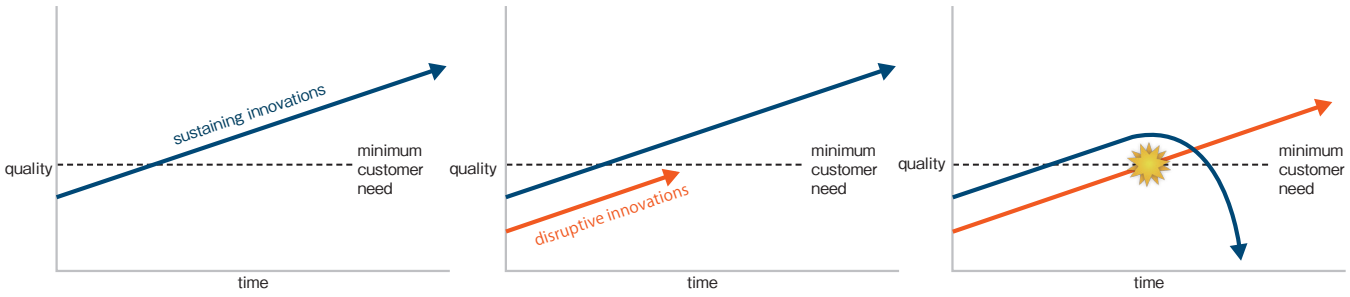
Will people read electronic books? What do the books need to look like, and how do they need to be packaged, for people to read them? What subjects and content are suited to the medium?

At Voyager Japan, we have been seeking answers to these questions ever since the company was first founded in 1992. We believed that people would indeed read electronic books. But this was long before the arrival of smartphones and tablets. We were urging people to read on the machines of many generations ago in computer terms. Conditions were challenging.

Naturally enough, people often compared the early ebooks to paper-based books. It's easy to pick up a paper book and flip through the pages, they said, and you can draw lines to highlight your favorite passages or write notes in the margins. That's not possible with ebooks. Plus you need a special machine that has a low resolution and looks cheap.

The complaints were endless and we wanted to cover our ears. They were right, of course: ebooks had plenty of shortcomings. But there were advantages, too. A single plastic disc weighing less than 20 grams could hold a library of a hundred titles. And its entire contents could be searched electronically.

It's worth remembering how people acquired books in those days of yore when the Internet was still mostly a place for IT specialists. They would drop into a bookstore to browse on their way to or from work or school, and buy something that happened to catch their attention. Or they might see a book mentioned in the paper and take the clipping to their neighborhood bookstore to order it, then have to wait ten days for it to arrive before they went to pick it up. Everything centered on bookstores. Compare that to today. We now have only 62% as many bookstores as we did in 1999 (http://www.1book.co.jp/001166.html). But has it become any less convenient to get hold of books? Far from it. You can order any book you want from an online bookstore and have it delivered to you the same day. You can order secondhand books as well. You can check an online catalog to see if your local library has a book. If the book is available in electronic form on the Internet, it can be in your hands within



Incumbents treat innovation as a series of incremental improvements. Their focus is on improving the quality of their current products.

Disruptors introduce new products, but do not initially appear to be a threat. Their products are cheaper, with poor quality—at first.

Disruptors improve their products with new technology. The flashpoint comes when their products become "good enough" for most customers.

seconds. The Internet has changed how we obtain and read books.

People all over the world use the Internet, and information flies back and forth over it instantaneously. It has become almost as indispensable to modern life as the water we drink and the air we breathe. Most particularly, it gives us access to more information more conveniently and more easily than ever before. People increasingly turn to the Internet to find out about anything they want to know, anytime, anywhere. Once you grow attuned to its virtually limitless bounty, it becomes difficult to use any other source of information.

Creative Disruption in the Digital Age

For example, let's consider the news. More and more people are getting their news on the Web instead of from newspapers, television, or radio.

In March 2014, a report titled "Innovation" produced for internal use by *The New York Times* was leaked on the Internet (http://www.scribd.com/doc/224608514/The-Full-New-York-Times-Innovation-Report). It said that for *The Times* to survive, both the company and its reporters would have to change. Readers now get breaking news by way of social media and their smartphones. *The Times* might publish excellent articles, but the size of its readership can't compare to that of the new digital media. Quicker and more convenient news sources are drawing people away from the paper.

The report observes that it is a classic case of "disruption," a pattern seen across many industries, which it describes as follows:

> Disruptors introduce new products that, at first, do not seem like a threat. Their products are cheaper, with poor quality—to begin with. . . . Over time, disruptors improve their product, usually by adapting a new technology. The flashpoint comes when their products become "good enough" for most customers.

To illustrate, the report traces how digital cameras disrupted the market for conventional film cameras. Indeed, it was probably when printed photos came out looking crisp and clear at about postcard size that most people decided digital cameras were "good enough." Early models had been mere toys, barely managing prints the size of a business card—hardly an adequate format for preserving cherished memories. But with progressive innovation and improvement, the digital camera achieved the postcard standard, and that became the flashpoint. You could check right there on the spot that you got the shot, and being able to print out your own pictures at home was so much more convenient.

The same pattern is occurring with ebooks. Smartphones with very high resolution screens are now in everybody's pockets and handbags, carried everywhere they go, and online bookstores can be accessed 24 hours a day. Advancing global standardization of file formats means EPUBs can now be produced not only in the alphabetic languages but in languages like Japanese as well. To read a book formatted in vertical text you open the cover to the right—just like a book printed on paper. Books formatted in horizontal text open in the opposite direction, to the left. The EPUB standard has made it possible for Japanese comics to display page spreads in the order the author intended as well.

The inferiority of ebooks compared to paper books used to be something we just had to accept. But when we look at the state of things today, it's clear that that time has passed. The technical shortcomings have been solved. We are on the cusp of "good enough" for readers.

A Package of Information

But how about for writers? Three key advantages of the ebook for writers are:

1. The ability to self-publish.
2. No inventory risk.
3. Fully computer-based production.

There are other merits, too, but these are the

characteristics that make ebooks a superior, more convenient medium in terms of distribution, cost, and production.

At Voyager, we have recently been thinking a great deal about the conventional roles books have filled. A book is essentially a package of information. Its author identifies something she wants to set down and bequeath to posterity, and she wraps it up in this package called a book. In the process of shaping that package, she creates something that will have a very different impact on the reader compared to webpages and blogs. The author pictures her ideal reader as she writes and creates the package. If she intends to write follow-up books, then ebooks with their minimal costs are all the more suited. If there are elements that can't be expressed to the best effect verbally, links can be provided to images or videos or other supplementary materials on the Web.

One of the most difficult aspects of producing your own book is knowing when it's done. When you work with a commercial publisher, the editor goes over the manuscript and gives the green light. But what if you're self-publishing?

In a word, trust your instincts and put your book out: just do it! When you write something with the intention of publishing, you will naturally feel a strong desire to get your ideas into readers' hands. It takes courage to make the call, but you have to remember that no one can read what you've written until you've packaged it as a finished book. Only editors read books in manuscript form.

An important thing to keep in mind when creating your book is copyright. If you quote another writer, you must give clear attribution, and you must handle the text in a way that distinguishes your own words from the other writer's words. As of 2015, thanks to an update in Japanese copyright laws, electronic publications have the same protections as paper publications. Also, ongoing negotiations for the Trans-Pacific Partnership (TPP) have raised the possibility that copyright terms will be extended.

With the copyright landscape changing in this way, a number of books have come out explaining the essentials of the law to creators of intellectual property. They are written in simple language that requires no prior legal background to understand. If you plan to self-publish, please be sure to consult at least one such book.

From MS Word to Ebook in 5 Minutes: "Romancer"

In 1996, Japanese publishing houses were riding high, with sales of over ¥2.6 trillion—more than ¥1 trillion higher than current figures. When publishers discuss the state of the market and the decline in the number of bookstores today, they refer to that era as "the good old days."

The process of bringing out a paper-based book involves typesetting and printing the prepared manuscript, binding the printed pages and packaging them as a commercial product, then transporting the physical books to retail stores by way of a distributor. It is a complex system that calls for a great deal of specialized expertise, and typically requires an investment of hundreds of thousands of yen—or higher—to bring a book to market. It is not something an individual can undertake on her own. With electronic publishing, that entire process is eliminated. Since the book can be created from start to finish on a personal computer, the finished package costs very little to produce. Such ease of publication was—and remains—unthinkable with paper books.

As noted above, one of the advantages of ebooks is the ability to self-publish. By using Kindle Direct Publishing from Amazon or iBooks from Apple, you can market your book throughout the entire world. But these online services require the files to be in the EPUB format. When you've decided it's time to release your book, you may wonder how to create the necessary EPUB files.

Voyager has developed a web service for producing electronic books called Romancer (https://romancer.voyager.co.jp). The service allows you to convert your MS Word files into EPUB files in three simple steps:

1. Finalize your manuscript file.
2. Upload the file.
3. Push the “Convert” button.

When members log in to Romancer, they see a menu giving access to the “Dashboard,” “My Books,” a “Production Guide,” and “Publication Support.” The page also offers Romancer news and sales rankings.

If you wish, you can also publish your ebook right there on the Romancer site. You will receive a URL, which you can make available to readers via email, your personal blog, Twitter, Facebook, and any other means you choose. All readers have to do is click on the URL, and the book will open on their screens. The system uses the BinB (pronounced “bee in bee”) e-reader that Voyager developed in 2011. BinB stands for “Books in Browsers,” and is a system that allows ebooks to be displayed in any standard web browser. No separate application is required.

Totan-yane no fūkei (Tin Roof Landscapes), by Chūichi Katō. An art collection originally published in PDF form was converted by Romancer into an EPUB that reflows for comfortable reading even on the smallest screens. *http://r.binb.jp/epm/e1_10743_09062015011658/*

New Publishing Communities

With people now definitely reading ebooks, authors have begun creating electronic archives of their own titles. At Natsuki Ikezawa’s “impala e-books” site (http://www.impala.jp), over 40 titles have already been digitized and made available in its first phase. When the archive was first launched in 2014, Ikezawa said, “I like to think of light and limber ebooks fluttering like angels in the air over shelffuls of heavy paper books. I think it’s a wonderful picture. It gives readers the freedom to choose (http://www.impala.jp/e-books/about.html).” In 2015, author Yoshio Kataoka began digitizing his complete works as well.

“Impala e-books” represents the birth of a platform for authors to connect directly with their readers over the Internet. We can see a new publishing community in the making.

A number of years ago, Takemaru Abiko, Yumehito Inoue, and a number of other authors got together to launch a website called “e-NOVELS.” The objective was to develop and maintain a platform for authors to edit one another’s work and self-publish. That particular site has since gone dark, but there are now any number of other places on the Web where like-minded individuals have joined forces to create a platform for publishing what they write.

Among Japanese literary communities on the Web, the one with the longest history is Aozora Bunko (literally “Blue Sky Library”; also known as “Open Air Library”: http://www.aozora.gr.jp). Launched in 1997 by the late Michio Tomita and others, it’s an Internet archive of works whose copyright terms have expired. After volunteers have entered and proofed the texts, they are made available for free download from the Web. The library originally opened with just five texts: *Sangetsuki* (The Moon Over the Mountain), by Atsushi Nakajima; *Yo ga genbun-itchi no yurai* (How I Got Started with *Genbun-itchi*), by Shimei Futabatei; *Takasebune* (The Boat on the River Takase), by Ōgai Mori; and *Midaregami*

(Tangled Hair), by Akiko Yosano—in two separate editions from 1901 and 1933. Now in its 18th year, the library has grown to over 13,000 titles.

More recently, in 2011, translator and Waseda University professor Minami Aoyama launched the Toyama Hon'yaku Nōjō ("Toyama Translation Farm"; http://www.ttfarm.org). Undergraduate and graduate students at Waseda are translating the complete works of American short story writer O. Henry for release on the site. Participating students read broadly for background on early 20th-century New York as they strive for deeper equivalence in their translations. Their activities came to the attention of editors at Chikuma Shobō, and a volume of student translations edited by Professor Aoyama was published in a pocket paperback (*bunko*) edition in May 2015 as *O Henrī Nyūyōku shōsetsu shū* (O. Henry's New York Stories).

The "impala e-books" page of Natsuki Ikezawa's Café Impala site. This ebook archive has also become the basis for a Web-based book review contest.

Your Legacy to Tomorrow

Ebooks do not stand in opposition to paper books. Things that were impossible 20 years ago can now be accomplished with ease. By 20 years from now, we are likely to have far more advanced artificial intelligence capabilities. Perhaps AI systems will be able to provide us with the information we need without us even having to look it up—in "think and you shall receive" fashion. In any case, whatever the future holds will surely be built on digital technologies that have reached a far higher sophistication than anything seen today.

I believe those technologies will be driven by the words each and every one of us spins into sentences and into books. The vast majority of ebooks available today are paper books that have been digitized, and as a result, many people scoff that they are merely "print under glass." Even so, they do have the advantage of being easily searchable.

And perhaps the greatest advantage of ebooks will be as a medium for publishing books that fail to pencil out as paper books. People who go to search engines in pursuit of information will have these ebooks pop up among the hits. At present, the negative aspects of DRM (digital rights management) continue to pose obstacles, and conditions cannot yet be considered ideal, but I have faith that this will see resolution over time. Meanwhile, we at Voyager will continue to pursue ways for electronic books to be all that they can be in terms of the qualities I have outlined before with the mnemonic of "EBOOKS":

Eternity (existing in an enduring format).
Borderless (available globally)
Open (using a non-proprietary standard)
Originality (fostering new and original content)
Knowledge (containing worthwhile information)
Social (connecting authors and readers)

Junko Kamata (1957–) worked at Pioneer LDC, where she was involved in bringing the LaserDisc to market as well as the production of multimedia content, before helping found Voyager Japan in 1992. She has produced CD-ROMs and web content, and has also been engaged in the development and sale of electronic publishing tools. She was named president of Voyager Japan in October, 2013.

From Software Engineer to Author

Author

Taiyō Fujii

"Maybe I'll Write a Novel . . ."

I was working for a developer of personal computer software when the idea came to me. It was during the sweltering hot summer of 2011, when we were being asked to limit air conditioning as a result of the Fukushima Daiichi nuclear plant disaster. With the word "radiation" being bandied about hair-raisingly in the press from one day to the next, I attended a science seminar on radioactivity in which a professor from the High Energy Accelerator Research Organization (KEK) spoke about the more than 100 years of radiation research that has been amassed, and a new understanding of the facts took shape in my head.

I had never studied science. Nor did I have any training as a journalist. But maybe I could express what I was thinking in the form of a story—in a work of fiction. And so I began writing my novel.

Book Experience

This was not my first book.

In 2003, I had written a book about Shade, a 3D computer graphics application, and thanks in part to that, I had landed a job with e-frontier, the company that developed Shade. I then went on to write two more books about the software as an employee, and I did a lot of other writing in my role at the company as well—from press releases about Shade, to promotional Web content, to the official users' guide that was included with the software package.

It was not my first time being involved in the production of a book either.

In my first full-time job out of college in 1996, I had worked as a DTP engineer at a platemaking company called Vanfu. Relatively few of our clients were set up for DTP yet at that point, so in much of my work the process began with handwritten manuscripts—which is to say, I had to learn the entire production process from start to finish. In 1999, the company was commissioned to produce graphics for displays at the Japan Air Self-Defense Force Air Park Museum at Hamamatsu Air Base, and I was assigned the task. It gave me an opportunity to experience a major project through all its components and phases: planning, reporting, writing, scheduling photo shoots, editing, designing layouts, producing illustrations, and delivering the final printed matter. Further, because e-frontier owned a publishing subsidiary, my time there had taught me a great deal about the book industry from the management perspective as well.

In other words, if I so chose, I had all the expertise I needed to lay out the pages of my finished manuscript in pocket paperback (*bunko*) form with my DTP program, produce my own cover art, have the book printed and bound with an ISBN code, and ship the book to retailers through one of the smaller distributors. But my previous work experience told me that if I were to produce a print book that way, it would be a one-shot deal. We live in an age when even the books brought out by seasoned professionals might sell only a few hundred copies. I needed a system that would let me try, try again.

I quite naturally began to contemplate publishing my book digitally instead. But this was at a time when the Kindle's arrival in Japan was still in the realm of speculation on the pages of *The Nikkei* newspaper.

I wasn't especially worried about whether the Amazon, Apple, or Adobe publishing engines would eventually be able to handle vertical text. Because I wrote HTML applications as a hobby, I already knew that the open source Webkit library Apple had developed for its Safari browser could produce vertical text in HTML.

On the other hand, the distribution options for electronic books left a great deal to be desired. Although Amazon had launched Kindle Direct Publishing (KDP) for books in its proprietary format in 2009, and Apple had subsequently made self-publishing of EPUBs possible through its iBooks Store for the iPhone and iPad, there was no telling how many years it would take for Japan's big publishers to come to terms with Amazon, Apple, or other self-publishing platforms overseas so they could open stores in Japan. Canada-based Kobo had not yet launched its self-publishing platform, Kobo Writing Life. I knew XMDF was being used in some quarters for Japanese digital books, but there was no mechanism in place for individuals to self-publish.

Still, I knew I would be able to distribute files in the Aozora Bunko ("Open Air Library") format for iOS users to read in the i-bunko app. And if I produced EPUB files, readers should be able to open and read them in iBooks—though for the time being only as horizontal text. This meant I could indeed self-publish my book digitally.

Both Aozora and EPUB are open formats. I wouldn't need any special proprietary software. And the Aozora format is easily converted to EPUB format.

That decided it.

In September 2011, I began looking for a plain text editor that supported Aozora markup.

Writing During My Commute

I had a full-time job, so I decided I would write during my daily commute on the train, and found an iOS app called iText Pad that I could use on my iPhone. I was pleased that it displayed the text vertically, and that it supported Aozora markup for *ruby* (kanji pronunciation guides) and emphasis dots placed next to characters, as well as for displaying alphabetic characters sidewise within vertical text.

By the time I had written about 4000 characters, I hit my first stumbling block. Writing an entire novel in a single plain text file was going to be difficult. Even though scrolling was easier on my iPhone than on a PC, it was becoming increasingly difficult to find where I wanted to move the insertion point in a file destined to grow many meters long.

I decided to see if I could find something more suitable to my purpose, and this led me to check out a number of novel-writing apps from overseas. As I tried out highly rated apps like Storyist and A Novel Idea, I realized they had a lot to teach me about the steps, techniques, and frame of mind necessary for writing of a novel, as well as about the whole culture of literary publishing.

In one case the app put up a screen that said:

My Masterpiece
by
Taiyō Fujii

It made me laugh, but I also realized that that's the spirit with which aspiring novelists all over the world approach their writing. That needed to be my frame of mind as well.

Next I was asked to write a pitch. Before outlining my chapters, before I wrote a single word of the story, the app wanted me to "sell" the novel I was preparing to write. It took me a bit off guard, but the app also helpfully explained that it should be something like the product descriptions I'd seen on Amazon.

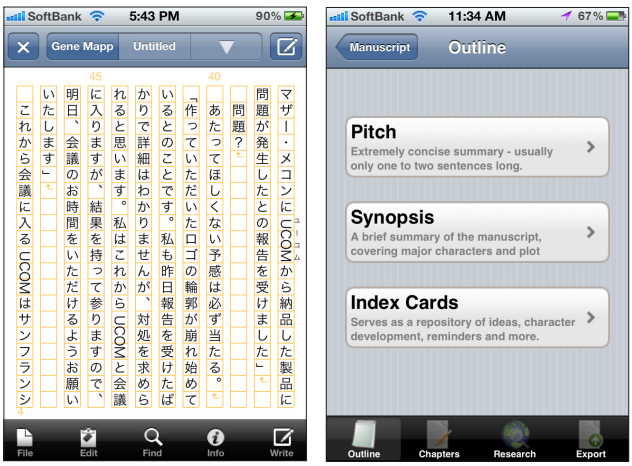
Given what had prompted my search, it was interesting to note that, without exception, the apps divided the manuscript not just into chapters but into separate files for smaller sections within the chapters. This was partly to enable easier rearrangement, but the basic idea was that each section should be able to stand on its own.

Of the many things I learned from exploring these apps, the directive to “clearly define your five W’s and one H at the pitch stage” is one that I continue to follow faithfully today. As an aside, I might note that, later, when an English translation of *Gene Mapper* was being prepared by Haikasoru, my editor remarked on how difficult it is to pitch the kind of linked short stories Japanese authors and publishers are so fond of: a short pitch simply can’t contain all the W’s and H’s of all the separate dramas.

Who, what, when, where, why, and *how* are the crucial elements of any drama, and it’s essential to have the central drama clearly mapped out in one’s mind before beginning to write. This was among the valuable lessons I learned more or less by happenstance as I looked over the various novel-writing apps.

At any rate, I continued tapping away on my iPhone during my commute, adding day by day to a growing collection of short sections, periodically exchanging one app for another. Although I’d actually thought my first effort would be a short story, I followed a friend’s advice and expanded *Gene Mapper* into a short novel. In March, 2012, about six months after I first began to write, my manuscript was complete.

My app told me that the story was the equivalent of 200 standard manuscript pages long.



Left: Draft of *Gene Mapper*, in manuscript-paper layout. Details such as the name of the company (“UCOM”) are different from the published version.
Right: The metadata access screen of the Manuscript app.

From Editing to EPUB

I gave my manuscript to a friend to read, and began preparations for the next step while I waited for him to get back to me.

With regard to when the Kindle might come to Japan, I still had only *The Nikkei*’s speculation. And since I had seen no other movement on a self-publishing platform in Japan, I figured I would simply have to go it alone.

My job at e-frontier had exposed me to the ins and outs of marketing digital content, so I already knew what I would need: the downloadable ebook files themselves, a payment system that could accept credit cards, and a website with a unique domain name.

For payments, I decided to use Gumroad, which had only recently launched. Gumroad said they would send the proceeds to my PayPal account, and that meant there would be a second fee to pay, but against the ¥500 I intended to charge for *Gene Mapper*, the total of the two tolls would still be no more than ¥100. Gumroad had the best rates of any payment platform in Japan, it was a breeze to use, and I was especially grateful that they did not force users to register in order to pay. This was a welcome new development.

The purchase screen on Gumroad. Users are not required to register in order to pay. Buyers frequently abort when asked unnecessarily to enter their name and address.

The environment for EPUBs had seen some significant advances during the six months I was writing *Gene Mapper*. In addition to iBooks being able to display Japanese EPUB text

horizontally, word was that Rakuten and Kinokuniya were both about to release iOS apps—Kobo and Kinoppy—that could display EPUBs in vertical text.

Excited at the prospect of my readers being able to enjoy my ebook in the traditional Japanese format they were used to, I began writing an EPUB conversion program.

I'd written my manuscript in Aozora markup, which was designed with conversion to XHTML in mind, so converting the tags to HTML was not a particularly difficult job. But I nevertheless spent about a month writing a program that would convert the entire book with a single command. For a manuscript of just 200 pages, I could have done the conversion manually in a matter of hours, but I knew that I would need to run the conversion any number of times as I made final corrections and adjustments—while also holding down a full-time job. It needed to be automated.

In other words, I toiled long and hard to save time. This approach, much embraced in hacker culture, continues to serve me well even today, after I quit my job to become a full-time professional author publishing in print as well. I continue to write in Aozora markup, which I then convert to tagged text in InDesign for importing into a template created by the publisher. The simplicity of the procedure has made swapping the manuscript back and forth with the publisher virtually stress free.

Even as I was developing my conversion program, welcome news came my way. Rakuten, which had bought Kobo, would begin selling ebooks in Japan. And in July they would also be launching the EPUB-based self-publishing program Kobo Writing Life.

I had always figured I would take up the challenge of cross-platform sales whenever such programs finally arrived in Japan, but I decided to make them the centerpiece of my sales effort immediately.

From First Publication to Kindle Store #1

In June 2012, I began the necessary steps to be able to sell my ebook via Amazon and iTunes in the United States. I obtained a US taxpayer identification number over the phone, and tried uploading an EPUB version of my manuscript to see how things would work. Neither site officially supported Japanese book sales yet, and in fact I was unable to upload my Japanese EPUB to iTunes at all. I had better luck at Amazon, where I consulted tips provided by others who had used KDP to publish in unsupported languages such as Polish, and successfully confirmed that I would be able to sell a horizontal text version of *Gene Mapper*.

Then Kobo Writing Life came on line in mid-July. Since I'd already tested the waters on Amazon and iTunes, I had no hesitation or difficulty in registering and putting my finished first edition of *Gene Mapper* up for sale.

When I went to check on my book in Rakuten's Kobo store, I experience an indescribable sensation of pressure. One well-known title after another leaped into my eye: *Terumae Romae* (Thermae Romae). *Hisame* (Freezing Rain). The sci-fi classic *Andoroido wa denki hitsuji no yume o miru ka* (translation of Philip K. Dick's *Do Androids Dream of Electric Sheep*). That was the kind of company *Gene Mapper* by this first-time author found itself among. I wasn't especially afraid of being exposed as a novice, but I couldn't help wondering how it might affect readers' attitudes toward a self-published work.

I suspected my book was the first effort at digital self-publishing by a Japanese writer. I expected a few of my friends to buy it, and I was convinced the story was solid. They would recommend it to others for me, and I could count on them to give it good reviews, too. But I didn't want the reviews to appear planted.

There wasn't very much that I could do.

I wanted to sell my book fair and square. That meant I had to get it noticed. So I decided to

"market" it. As my company did with the digital content it produced, I put an ad for *Gene Mapper* on the Web by designing a dedicated website (http://genemapper.info) and writing up some release notes. In some ways it seemed like an awful lot of trouble to go to for a single book, but each step I took made me feel a little better.

The book went on sale on July 25, and immediately became one of the bestsellers in the Kobo Store. It got a similar response when Amazon Japan opened its Kindle Store at the end of October: in spite of heavy competition from the major publishing houses, the Kindle edition of *Gene Mapper* became the #1 seller in the literary category for 2012.

Becoming a Full-Time Author

I quit my day job in March 2013, just as Apple's iBooks Store was preparing to open in Japan. More or less at the same time *Gene Mapper* began taking off in the Kobo and Kindle Stores, my responsibilities at e-frontier had grown dramatically, and my health had broken down from the increased workload.

As I recuperated at home, I spent a month on a revised and expanded version of my book, *Gene Mapper: Full Build*, which I had contracted with Hayakawa Shobō to publish as both an ebook and paperback. Feeling that I needed more rehabilitation time, I started in on my second book, *Ōbitaru kuraudo* (Orbital Cloud), and planned to look for another regular job once my health had fully recovered. A month went by, then two, and around the time I finished my fourth month I realized things had changed.

I had worked at quite a few different jobs since joining the working world—stage design, DTP, multimedia and Web production, designer, illustrator, and software engineer—and even at the job I'd had for nearly a decade, my major projects had changed at least yearly. In fact, I had been accustomed to constant, even dizzying change in my work from day to day. But now I sat at my desk plugging away on *Orbital Cloud*, doing exactly the same thing one day after another.

I still wasn't sure how long I'd be able to keep it up, but I decided I was already doing what I wanted to go on doing. Exactly one year had passed since I'd first put *Gene Mapper* on sale.

In that time, the world of ebooks had changed. It wasn't just Amazon, Rakuten-Kobo, and Apple anymore. Most of Japan's publishers and production companies had gotten aboard with ebooks. It had become routine for print and ebook editions of a book to be published simultaneously.

My own circumstances have changed since I first published as well. I'm fortunate enough to have multiple publishers asking to publish my works, so for the time being I have no plans for any further self-publishing projects.

But I still find myself thinking about how electronic books could be different.

Perhaps the number of ruby applied next to characters could change according to how fast the reader is turning pages. Perhaps if you pick up a book after a lengthy break, the narration can automatically expand to recap what has just happened and refresh your memory of earlier details. With books and computers traveling in tandem, there might be other ways to enhance the reading experience besides just video and music.

Whatever form the next rebirth of books may take, I want to be part of it—this time lending a hand from my position as an established author.

These are some of the things I think about as I continue with my writing.

Taiyō Fujii (1971–) became a publishing sensation in 2012 when he self-published the ebook *Gene Mapper*. An expanded *Gene Mapper: Full Build* came out the following year from Hayakawa Shobō in both print and electronic editions. His 2014 novel *Ōbitaru kuraudo* (Orbital Cloud) was awarded the 35th Japan SF Grand Prize. His latest work is *Biggu dēta konekuto* (Big Data Connect), a police novel that explores the growing crisis in personal information and privacy.

The Disappearing Divide between Analog and Digital

Independent Technology Writer

Kazutoshi Ōtani

Escape from Dualism

I'd like to offer some thoughts on the convergence between analog and digital that is already in progress.

People are often given to thinking dualistically, dividing things into two opposing ideas or phenomena. Doing so helps us make sense of the complex world we live in by letting us see it in somewhat simpler terms. And so we look at things in contrasting pairs: natural vs. artificial; the humanities and the sciences; the real and the virtual; analog vs. digital; atoms (the physical world) and bits (computer data). And to be sure, in situations where only one of the pair exists to begin with and then the other enters the picture as a new notion or way of perceiving things, trying to understand the new by setting it against the old makes perfect sense.

But once the two have coexisted for a while, you sometimes realize that treating them as being opposed to each other fails to capture certain truths about them. For example, I have certain questions about the way we use the terms "natural" and "artificial"—questions originally occasioned by thinking about beavers.

Beavers are of course famous for toppling waterside trees and combining them with sticks, bark, stones, mud, and such to build dams across streams and rivers—sometimes reaching considerable proportions. According to Wikipedia, the largest known beaver dam, located in a national park in Alberta, Canada, stretches across some 850 meters (2790 feet) of water. And there are signs that it may grow even longer in the future.

The fact that beavers build dams is not my issue. My issue is that when beavers build dams, we regard them as part of nature, but when we humans build dams, we think of them as artificial.

If the dams that beavers "invented" in the course of their evolution are "natural," then shouldn't the dams "invented" by another animal—the human animal—to fill its needs also be treated as "natural"? And shouldn't the same be said for the tools and materials humans use to build that dam, as well as the buildings and cities and cars and such that fill other human needs? It's worth noting that beaver dams, too, can cause environmental damage, yet they are never labeled as artificial or thought of as harming nature.

Even if this particular example is considered extreme, we have seen a blurring of the divide between traditional dualities on any number of other fronts. Interdisciplinary studies have brought down the fences that once separated the sciences and the humanities. Augmented reality (AR) technologies superimpose digitally generated virtual images on real-life images to convey desired information. Reality Computing software removes the wall between bits and atoms with the help of 3D printers. An "Internet of Things" (IoT) is taking shape in which all the different devices in our lives are connected over the Internet for automated control.

Are Paper Books Competing with eBooks?

To turn now to how this relates to books, many commentators have been saying for some time that the rise of digital (electronic) publishing would lead to the demise of analog (print on

paper) books—and print book sales have indeed been dropping as ebook sales grow. According to figures released by the Research Institute for Publications on January 26, 2015, estimated sales of books and magazines through retail channels (not including electronic publications) for 2014 showed a 4.5% drop over the previous year, at ¥1.6065 trillion. This was the steepest year-on-year decline since recordkeeping began in 1950.

But as a matter of fact, sales figures for print books have actually been on a downward trend for nearly two full decades already, from a peak in 1996. Compared to this peak, the 2014 figures represent a plunge of nearly 40%. Although 1996 was a time of considerable buzz about dictionaries and multimedia content being published on CD-ROMs, such electronic publications were a long way from becoming a major force in the market yet. In which case, the slump in print book sales that began in the mid-1990s cannot be attributed to the rise of electronic publishing, but rather to the reduced reading habits of the Japanese populace, or perhaps to the natural attrition of weaker players in an oversaturated market. What we have seen in 2000 and beyond is better thought of as an extension, or even acceleration, of those forces.

An ICT Research & Consulting study shows that the ebook market grew from ¥67.1 billion in 2011 to ¥96.3 billion in 2013, and it is projected to grow to ¥200 billion by 2017—roughly triple the size of the 2011 market. Although these figures speak to the growing promise of electronic publishing, they do not offset the drop in paper-based book sales—which helps confirm that ebooks sales are not directly cannibalizing paper publications.

To unpack the situation a little further, on the book side, there continue to be titles that do very well, such as the *Harry Potter* series that sold over a million copies of each new volume, or the explosively popular works of Haruki Murakami, and in some years the book portion of the gross sales figure has actually ticked up in spite of the larger overall decline when magazines are included. This suggests that the slump may have more to do with the kind of content being planned or discovered.

Magazines, on the other hand, with their dependency on advertising revenue, are clearly feeling the heat of competition from free newspapers and the Internet, which are siphoning away their content producers. In particular, as consumer tastes and needs continue to diversify, online magazines and news sites are able to serve more relevant ads.

At the same time, the "digital native" generation of young people who have grown up surrounded by electronic devices from the time they were born are more inclined to apply their disposable income to the purchase of connectivity and apps, and to devote the leisure time previous generations might have spent on reading to social media, video and online games, and watching streaming content from YouTube and other sources. The way they use both their time and their money represents a massive sea change.

In this sense, the correct understanding is not that paper-based books are competing with ebooks, but that the entire publishing business is faced off against the full spectrum of new digital entertainment media. Television, which long ruled the media world, and the automobile, which has been the king of consumer durables, are in effectively the same boat.

A New Fusion Reading Experience

Until now, discussions about the future of books have tended to focus on whether print books can survive, or on pitting print books and ebooks against each other to point out in what ways ebooks are better and in what ways they fall short.

But I believe the time has come to abandon the dualistic assumptions underlying such talk, and to instead begin thinking about how the best aspects of both worlds—analog and digital—can be brought together in a way that will allow books and magazines of both the paper and electronic varieties to hold their own in coexistence with

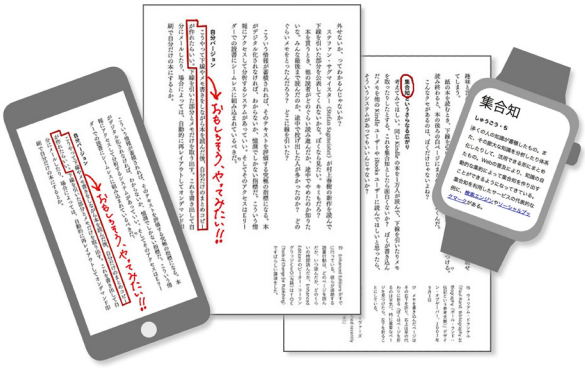
other media and entertainment. One tool that may hold the key to such a union is the smart pen.

Imagine with me the book of the future. I have in front of me a book printed on paper, but an ebook with the same content is available for reading on a smart device—mine happens to be an iPhone, but an Android phone will do just as well—and I have purchased both versions as a set.

I leave the phone in my bag or pocket as I open the paper book and begin reading. I enjoy the way the book feels in my hand, and as I read, the changing thickness of the pages gives me a tactile sense of my progress that I find satisfying. I can easily flip back to previous pages when necessary, to refresh my memory of what I read before. Then some particular phrase catches my attention, and I decide to mark it with my smart pen. The line I draw is instantly reflected in the electronic copy of the book loaded on my phone. There's no need for me to take the device out to check; I can read on without interruption.

As I continue to read, I come across a word I don't know. I circle it with my smart pen and look at my wrist. The definition is displayed on my Apple Watch.

Reading further, I'm particularly struck by something the author says and I want to share it with my friends. I frame the passage in a box with my smart pen, jot down a brief note next to it, and checkmark the sharing icon in the corner of the page. Now my markings are reflected not only in the electronic copy of the book on my



Circle a word on the page and the definition appears automatically on your Apple Watch. Enter an interlinear note and checkmark "Share" to make it appear in your friends' electronic copies of the same book.

The Smart Pen holds endless hidden possibilities.
(Photo from the NeoLAB Convergence site: http://www.neolab.kr/smartpen/)

own phone, but also in the copies of all my friends who own the ebook, in a color that identifies me as the source.

I'm so engrossed in the book that I finish it in a single sitting. It was a superb read, and I'd like to let the author know what I thought, so I write a few lines in the comment box and checkmark it when I'm finished. My remarks are automatically sent to the author's email address. I make a mental note to ask the author to sign my book with the smart pen if I ever have a chance to meet him. His signature will appear in my electronic copy as well, and it will be a nice keepsake.

It suddenly occurs to me to check my phone, and I see that one of my friends has added a comment to the passage I shared earlier. . . .

What do you think? Does this vision of the book of the future sound like a pipe dream?

I have in fact been using a device called the Neo Smartpen N2 for some time now, and the ideas I've outlined above are among those that came to me as I was thinking about the kind of applications the device might make possible.

The N2 is a second-generation digital pen developed by the South Korean company NeoLAB Convergence. It is compatible with both iOS and Android devices. A camera built into the tip of the pen reads microscopic patterns on the surface of special paper to track its coordinates, so that what the pen is writing appears simultaneously in the companion notebook app on a paired smartphone or tablet. And by checkmarking the mail icon in the corner of the

page, the notes and drawings on the page can be sent to a pre-set email address.

The N2 is capable of sensing 256 different levels of pressure, and because the pen's path is stored as stroke data, it can be scaled up or down without any loss of detail (maximum resolution is 1100 dpi).

There have previously been other examples of this technology, but it is the refinements seen in the N2 hardware, together with the versatility of its software, that make the future book scenario I sketch out above seem entirely possible. Since the N2 pen itself can internally store the equivalent of a thousand A4-sized pages of stroke data for later syncing, it's even possible to head out for a walk with nothing but a paper book and a pen and still have the same experience.

There may remain hurdles to overcome, but I can't help feeling that it will be through these sorts of possibilities that books can finally transcend the differences between analog and digital and move on to their next stage of development.

Kazutoshi Ōtani (1958–) is a technology writer who maintains a presence in a wide variety of media. His interview subjects have included Steve Jobs, Bill Gates and Steve Wozniak. He is director of AssistOn in Harajuku, and vice-chair of the non-profit MOSA. Among his publications are *Appuru no Mirai* (The Future of Apple), and *Seikō Suru Kaisha wa Naze "Shashin" o Daiji ni Suru no ka* (Why Successful Companies Obsess Over Their Photos).

VOYAGER TIMELINE

1998.7	T-Time Internet Vertical Writing and Reading Model (Hybrid edition), a software which converts HTML files into book-like text in a vertical layout, was released.
1998.10	Adapted TTZ format into T-Time, a predecessor of dotbook format (.book).
2000.6	Adapted .book file format.
2000.9	.book was adopted as the standard ebook format in the PABURI electronic library, the collaborative electronic bookstore of four major publishing companies (KADOKAWA GROUP PUBLISHING, Kodansha, SHUEISHA, SHINCHOSHA Publishing).
2006.2	Implemented low-brightness mode in T-Time. Made it possible for visually impaired persons to read .books by providing choices in font size, brightness of screen and a magnifying glass.
2006.10	Made T-Time compatible with Denshi-Kataribe, a text-to-speech software, which made it possible to listen to .books.
	Cooperated with CELSYS and INFOCITY. Adapted BookSurfing, a reader for mobile phones. Started distributing .book files in BookSurfing format.
2008.5	Announced T-Time Crochet. Started distributing encrypted .book files in increments for faster access. Realized a distributing system for high capacity content, such as comics, that can instantly respond to users' requests regarding display mode.
2008.7	Released T-Time for iPhone. Started providing comic books for iPhone and iPod touch in App Store.
2011.10	Released the "EPUB3 Japanese Basic Standard" in Japanese and English. Jointly launched the EPUB Japanese Standard Study Group (EPUBJP).
2011.12	Released "BinB", a new reading system by Books in Browsers. At the same time, opened "BinB store" running on this BinB system.
2012.7	Started providing the "BinB" reading system to Yahoo! Japan Bookstore.
2012.12	Provided the "BinB" reading system to Shueisha's "Ultra Jump Magazine Official Website".
2013.2	Published "Book: A Futurist's Manifesto – Japanese Edition –" edited by H. McGuire and B. O'Leary, originally published by O'Reilly Media. Provided the "BinB" reading system to Kodansha's special bookstore site "Denponya San (Mr. e-Bookstore)".
2013.4	Provided the Chinese-compatible "BinB" reading system to Taiwanese e-Bookstores, "eCrowd Media Inc." and "Wanderer Digital Publishing Inc.".
2013.10	"BinB" reading system, adds support for Aozora Bunko. Launch new site "Aozora in Browsers" which features vertical writing display of public domain eBooks registered in Aozora Bunko.
2014.7	Released "Romancer", a web service for eBook production, publishing, and promotion.
	Start partnership with Ixtan, the rights management firm for work of author Natsuki Ikezawa. Ikezawa's series "impala e-books" is now available in online bookstores from around the world.
2015.2	Start providing "BinB", a browser based reading system, to a digital comic promotional site "Mugenshi" by CHING WIN PUBLISHING CO., LTD.
2015.7	Began Yoshio Kataoka Digital Collection Project. First 100 titles by the author was released, remaining titles will be released chronologically.

Voyager Books

Yoshio Kataoka's 100 titles in eBook

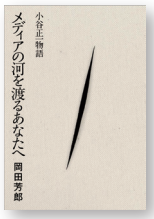
Released in July 1, 2015

Natsuki Ikezawa's Master Digital Collection

Available from "impala e-books" series.

TEXT: the next frontier

"Looking at the Future of Book and Publishing"



For Authors, For Readers

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