Always the eBook of the Future

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Article

A joke shared wistfully by Brazilians about their country goes, "Brazil is the country of the future, and always will be."[1] The same sentiment may apply to the eBook: the eBook is the future of publishing, with vast potential, but its promise is always in the future, just out of reach.

In their third decade, depending on one's definition, eBooks are still in their incunabula moment. Although eBooks emerged prior to the year 2000, they began to garner a more robust market after the launch of Amazon's Kindle and Apple's iPhone, both in 2007, and Apple's iPad in 2010. At least by some measures, eBooks today are thriving and are bound to continue to evolve, just as publishing itself has evolved over more than five centuries. In two articles written a dozen years ago, I discussed the parallels between incunabula in publishing—a period of roughly 50 years denoting the early period of the printing press in Europe, until 1500—and offered observations about and the future of electronic publishing (Warren 2009, 2010). Where are we now in this evolution of electronic publishing?

During the first six months of 2021, eBooks made up 18 percent of sales across all categories of book sales, or more than one in six books sold, and 41 percent of sales in the adult fiction category (NPD 2021). One can also, as my wife enjoys doing, check out an eBook from the library, through Overdrive or several other vendors, though you may be hamstrung by long waiting lists for popular titles. During the COVID-19 pandemic, eBook lending surged at public and academic libraries; Denver Public Library had 2.3 million eBook checkouts last year, a 60 percent increase, spending a full third of its collection budget on digital content (Gross 2021). Overdrive, the largest eBook vendor to public libraries, reported a 33 percent increase over 2019, as readers worldwide borrowed 430 million eBooks, audiobooks, and digital magazines from public libraries, and a 27 percent increase in the borrowing of eBooks and digital audiobooks from academic libraries between March 2020 and March 2021 (Overdrive 2021a,

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1. The phrase is attributed to Charles de Gaulle, but possibly apocryphal.

2021b). Meanwhile, eReaders are still finding a market, of sorts: Barnes & Noble's latest NOOK, the GlowLight 4, launched on December 8, 2021 (Heater 2021); Amazon released its latest Kindle, the Kindle Paperwhite Signature Edition, in October 2021 (Gartenberg 2021); Kobo is still chugging along. The list of failed eReaders, however, is as long as those that have survived.

On these devices, titles nevertheless are for the most part, as I described them in 2009, a "picture of a book"—a digitized version of the publisher's printed book. They offer increased portability, accessibility, and perhaps convenience, which are not necessarily to be discounted. But they are designed and produced to mimic, as much as possible, the experience of reading a printed book. Crucially, platforms such as the Amazon Kindle, Apple Books (formerly iBooks), and Barnes & Noble NOOK neither support nor encourage these types of enhanced editions. This article examines the current state and future prospects for enhanced eBooks, "hypertextuality," interactivity, augmented reality, data- and gesture-based manipulation, and other evolutionary features, which can transform the eBook into a fundamentally different experience in reading and engagement.

Enhanced eBooks are one of the always future eBooks' holy grails, promising riches in the form of extra materials and engagement that go beyond what the printed book can offer. The RAND Corporation's 2006 enhanced edition of *I Want You! The Evolution of the All-Volunteer Force*, by Bernard Rostker, offered a still-unprecedented wealth of 1,700 primary source documents linked directly from citations in the electronic version of the book, including presidential memos, letters, government memoranda, staff papers, reports, audio, and video clips (Warren 2009; Rostker 2006). The extra material, with a total of more than 2,500 primary source documents, was presented on a DVD bound inside the hardcover edition of the book—there is no practical way to include such extensive material in or with an EPUB file.

Other publishers have experimented with enhanced eBook initiatives. Independent trade publisher Melville House's HybridBook project provided enhanced "Illuminations," such as essays, historical texts, maps, recipes, photographs, illustrations, and other material related to the original book. Melville House publisher and co-founder Dennis Johnson was initially excited about the program, developed in 2011 to complement print and advance the promise of eBooks. The publisher's Art of the Novella series presented a QR code in the physical edition that a consumer could scan and follow the link to download a PDF, at no extra charge, with enhanced materials. Herman Melville's *Bartleby, the Scrivener* included biographical notes, Melville's correspondence while writing the book with friends such as Nathaniel Hawthorne, Melville's ruminations on philosophers such as Kierkegaard, period maps of New York and other colored art, and even a recipe for ginger nuts, a poor person's snack that Bartleby munches on throughout the novella. Melville House hoped the HybridBook project

would also be a sales tool that encouraged booksellers to recommend their editions. The challenges and constraints of such an approach are considerable, however, including issues related to permissions, storage, archiving, interface, useability, and, perhaps especially, an uncertain business model or ROI for enhanced editions. Melville House's effort withered due to lack of interest; despite some encouragement from academics, few customers downloaded the extra materials. "The eBook lost that war," concedes Johnson (2021).

The promise of enhanced eBooks lives on, however, in a number of open publishing platform initiatives for (mostly) scholarly monographs, such as Manifold, a collaboration between the CUNY Graduate Center, the University of Minnesota Press, and Cast Iron Coding (https://manifoldapp.org); PubPub, developed by MIT Press and MIT's Knowledge Futures Group (https://www.pubpub.org); Fulcrum, developed by Michigan Publishing (https://www.fulcrum.org/about/); and several others. These open platforms have differences, but similarities abound; they are all designed to present the sort of enhanced editions that some scholarly authors have clamored for, but at scale. They offer the ability to present video, audio, data; enable annotations and other social reading; provide an online reading experience responsive to different devices (desktop, laptop, tablet, smartphone) while also offering the ability to sell, when appropriate, the printed version; and facilitate the flexibility to publish updates and corrections; among other features. They also provide the potential for enhanced accessibility and discoverability. This landscape is vast: John W. Maxwell and his team at the Canadian Institute for Studies in Publishing at Simon Fraser University identified 85 open source publishing platforms, narrowed down to a catalog of 50 projects in a report of this landscape and ecosystem (Maxwell 2019).

Hypertext differentiates and propels Wikipedia beyond our obsolete editions of Encyclopedia Britannica. It's not the only factor, and one can argue whether individual articles are reliable sources of information, but certainly one of the powerful features of the Wikipedia platform are the links to and from different articles, notably, within the same ecosystem. Crossref brings the advantages of hypertext to journals and other research, making works easier to link, cite, discover, and reuse. But hypertext has largely eluded eBooks to date. I'm still waiting for the *Ulysses* or *Infinite Jest* of hypertextuality, a post-post-modern, choose-your-own-adventure hypertext novel. There are a few storytelling platforms offering the ability to create nonlinear, hypertext narratives, such as Eastgate (http://www.eastgate.com), inklewriter (https://www.inklestudios.com/inklewriter/), Quest (http://textadventures.co.uk/quest), Twine (http://twinery.org), and others, but this form of storytelling has yet to gain traction, at least within publishing.

Where interactive, hypertextual narrative has gained a foothold is predominantly in the gaming industry, where video game design and artificial intelligence (AI) are combining in increasingly powerful and complex procedural storytelling (Gordon 2021).

Procedural stories often blur the line between novels and games. A few years ago, I spoke with Jon Ingold, one of the founders of Inkle Studios (https://www.inklestudios.com). Inkle Studios has successfully published interactive stories such as *80 Days* (an adaptation of Jules Verne's *Around the World in Eighty Days*), *Heaven's Vault*, *Overboard*, and others and provides the interactive storytelling tool inklewriter. Ingold mentioned that *80 Days* was embraced by the gaming community and press but was ignored by publishing-specific media. Released in 2014, *80 Days* garnered *Time* magazine's Game of the Year; was nominated for four BAFTA Awards by the British Academy of Film and Television Arts; was chosen as a Best of 2014 Games by the Apple App store; and won numerous other gaming awards. But *Publishers Weekly*, the *New York Times Book Review*, and other publishing media lack reviews of these interactive, game-like stories, and coverage and accolades from the publishing community for *80 Days* was nonexistent (Ingold 2014).

These types of interactive, hypertextual stories are also challenging to write and produce. Novelists or other storytellers create an arc that is traditionally linear: A leads to B, to C, to D. Needless to say, there are many variations on this structure, but for the most part, authors do not write a million different pathways or possibilities. Inkle Studio's Ingold mentioned to me that *80 Days* starts the same for all readers/players, but each choice leads to different possibilities, an almost (but not quite) endless realm of possibilities, until the story arcs back into a finite ending. According to Ingold, inklewriter is both a platform to support interactive storytellers and a way of identifying potential talent for Inkle's procedural games (Ingold 2014). Games such as Wildermyth, developed by Worldwalker Games in Austin, Texas, use procedural storytelling to generate user-driven stories, with text, maps, elements of tabletop roleplaying, character development, and endless playability (Kunzelman 2021; Worldwalker Games 2021). AI has the potential to create narrative arcs that are completely different for each reader/user/player.

In what ways might AI play a role in transforming the novel and other storytelling genres as well as the publication experience? Can a novel be written by a computer, and what are the ethical implications of a computer writing a novel? Is it possible to write a novel using only AI? If a novelist wanted to use inklewriter to create a novel, would they have to include inklewriter in the acknowledgments and on the copyright page? Is intellectual property the same for a novel written by a computer? Is an AI-written novel the same as a novel written by a human being? Can a computer, or AI, write an original novel?

The next step for eBooks, which for 27 years have been largely a picture of a book, is to become a hybrid of a book, a game, a social network, and/or a research platform. These enhanced eBooks will be able to connect a reader to an author; to other readers;

to other works; to media such as photos, maps, illustrations, and other texts; and perhaps even to a network of people with similar interests.

Indeed, the two paragraphs immediately above were themselves written by AI, using the program Sudowrite (https://www.sudowrite.com), developed by Amit Gupta on the new Microsoft-backed OpenAI platform GPT-3. As an experiment, I fed several paragraphs of this article into Sudowrite, clicked its "Wormhole" to discover what it would generate, and chose the two paragraphs immediately above from two of the three different choices presented by the app; I gave both paragraphs a very light edit but otherwise they are presented as "written" by AI. Should a novelist be worried? (Yes, and for reasons that go beyond AI.) AI can write a book review and simulate the writing of Gay Talese (Zeitchick 2021). It's plausible that Amazon, which has shown no love for publishers and little, if any, for authors, would find AI-generated fiction and nonfiction desirable for its customers. Amazon's lack of oversight over third-party sellers allows authors and publishers to offer misleading and even fraudulent content (Streitfeld 2021). Content producers can use— and likely already are using—Sudowrite or other AI programs to write books that they publish on Amazon's online bookstore and the Kindle Direct Publishing platform.

Interactive features such as augmented reality (AR), gesture-based manipulation, user-driven data manipulation, and interactive infographics are yet mirages on the horizon of the publishing landscape. AR has found some limited use to date in education and children's books. Adrian Clark and colleagues (2012) used the "pop-up book" metaphor to describe an educational coloring book with user-generated three-dimensional content using an AR publishing system based on natural feature tracking and image processing techniques. Push Pop Press co-founders Mike Matas and Kimon Tsinteris demonstrated the promise of immersive apps with Al Gore's *Our Choice*, a reading experience that allowed readers to interact with data and visualizations. The developer was acquired by Facebook, which never pursued the idea of publishing digital textbooks. Touch Press, another innovative pioneer of interactive book apps, such as Theodore Gray's *The Elements: A Visual Exploration* and T. S. Eliot's *The Waste Land* (the latter in a partnership with Faber and Faber), likewise abandoned efforts after divestitures and rebranding (Cowdrey 2016). To date, publishers and publishing platforms have failed to fully embrace these technologies, but one would be remiss in counting them out over the long haul. Perhaps a sign of things to come (or not), in 2020, Springer Nature announced its first digital textbook, *Archaeoastronomy: Introduction to the Science of Stars and Stones*, featuring multimedia in the form of augmented reality and videos, as part of its MOOC&BOOK product line.

Author and digital innovator Kate Pullinger is co-investigator of Amplified Publishing, a research effort to examine and propel the potential, challenges, and opportunities of publishing, part of UK-based incubator Bristol+Bath Creative R+D. Pullinger,

director of the Centre for Cultural and Creative Industries, Bath Spa University, has written both traditional novels, including *Forest Green* (Penguin Random House, 2020), as well as several works of immersive digital fiction, including *Breathe* (2018), a browser-based book for mobile phones created in collaboration with the research project Ambient Literature, London-based publishers Visual Editions, and Google Creative Lab, Sydney. Pullinger is one of the creators—with producer Ian Harper and digital artist Chris Joseph—of the dazzlingly creative *Inanimate Alice* (https://inanimatealice.com), a born digital transmedia story originally published in 2005 and one of the foremost examples of the future of the book (Warren 2010).

Pullinger and her team at Amplified Publishing recently announced funding for three prototypes, all focused on creators, community, and commerce (Bristol+Bath Creative R+D 2021). "These prototypes are developing new ways for creators to reach audiences as well as new ways to generate income," according to Pullinger (2022).

> Innovation in traditional publishing has focused on digital workflows, and there has not been as much innovation around content. This work, to create an interdisciplinary research project, arises out of my interest in that, as well as questions such as: How will the games industry influence publishing? Is the inexorable rise of visual media a threat to reading? What can book publishers learn from other creative industries when it comes to finding new audiences? Follower.TV is one of those ideas that you think, why has no one done this before? It will allow a creator to aggregate all the content they've produced on multiple platforms, like Instagram, TikTok, a blog, a podcast, into a single, chronological feed, so an audience can find it all in one place. The creator can also make sure all their content flows to Follow.TV so they can communicate to their audience across all these platforms. Lost Horizon plans to bring audiences into immersive music festivals via 360 video and virtual reality, like a punk metaverse. The third prototype, Storm Jar, will be a community for people who write horror fiction, where you can auction your nightmares, with micro attributions, using a sustainable version of NFTs. If you start a horror fiction story, you have an attribution, and then if I add to that story, I have an attribution, all via NFTs. (Pullinger 2022)

These are early prototypes, but all provide a glimpse into a crystal ball of the intersection of digital publishing and entertainment.

Danish author, designer, and publisher Kim Bjørn, the founder of Bjooks, produces beautifully designed and printed books about the intersection of music and technology. Emphasis on *printed*. As a publisher, guitarist, and composer, I can't help but love, even obsess a bit, about books like *Pedal Crush: Stompbox Effects for Creative Music Making* and *Push Turn Move: Interface Design in Electronic Music*. Their content, design, and production are brilliant, substantial, and immersive, with hundreds of photos and

detailed diagrams; illuminating essays on the history, design, philosophy, engineering, and experience of music creation and technology; and interviews with designers, producers, creators, and artists. The printed books leave nothing to be desired, worth every penny of their purchase price. Bjørn raised DKK 650,572 (~US $100,100) from 1,430 backers on Kickstarter to bring his first book, *Push Turn Move*, to life. Bjørn (2021) notes that consumers seem to be returning to print; he doesn't feel eBooks provide the same value as the printed book and is protective of the printed book, aware that PDFs of his books will inevitably end up on a pirate server. But he remains excited about some aspects of the future, such as the potential of augmented reality.

Envision these titles as the eBooks of the future, an always future eBook dream. Click on one of *Pedal Crush*'s hundreds of effects pedals, or one of *Push Turn Move*'s synthesizers, and hear a sound sample. Tap to listen as Radiohead guitarist Ed O'Brien demonstrates some of his favorite guitar pedals; watch composer and electronic music pioneer Suzanne Ciani demonstrate her use of a synthesizer to create a new song; or visit the workshop of Stockholm-based Teenage Engineering. Tweak different parameters to affect the sound, swapping the order of guitar pedals on the signal chain or tweaking the knobs of a synthesizer. Assemble different electronic components yourself to create a new imaginary device. Use AR to visualize Teenage Engineering's OP-1 synthesizer in 3D and play a few notes on its virtual keyboard via gesture-based technology.

Publishing is a stable landscape of continuous change. We'll always have print—early reports of the death of print were premature. Digital publishing will always have challenges of scale, ROI, and the struggle against indifferent or hostile platforms. And the technical innovations that over the past three decades have begun to transform reading and writing will continue to foster creativity, interactivity, interconnection, customization, and immersive experiences that propel us into the future.

Author Biography

John Warren is Director and Associate Professor in the Master of Professional Studies in Publishing program at The George Washington University. He formerly held the positions of Director, George Mason University Press; Marketing and Sales Director, Georgetown University Press; Director of Marketing, Publications, RAND Corporation; and Marketing Manager at Sage Publications and Fondo de Cultura Económica. He has a master's in international management from the School of Global Policy and Strategy at the University of California, San Diego. He is fluent in Spanish and Portuguese, is a frequent speaker at international publishing conferences, and has authored several articles about the evolution of eBooks, including "Zen and the Art of Metadata Maintenance" and "Innovation and the Future of E-Books" (2009), for which he was

the winner of the International Award for Excellence in the development of the book. He authored an open textbook on Impact in Publishing for the Library Publishing Curriculum. He is a classical guitarist and composer as well as a regular contributor to *Classical Guitar* and *Acoustic Guitar* magazines.

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