

# An e-publishing archaeology

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## Abstract

The original concept of a publication is to include a limited amount of content in a manageable space in order to be retrievable, mobile and possibly consistent. But as soon as humans have been accustomed to the dimension of the single publication they have tried to overcome its limits and expand it, possibly including as much information as possible in a printed form. Multi-volume works and then encyclopaedias have helped dividing what couldn't be bound in a single still manageable (printed) space, but after the dematerialisation of the publishing space the boundaries has been first blurred and then just vanished, giving room to prototypes, visions and artworks.

## History of the infinite publication.

The aim to have more space for content in publications arose during the 20th century, as a consequence of a progressively more dynamic, global and information-based society.

Breaking the boundaries of the print publications was something envisioned by the early avant-garde movements. We can already find a reconsideration of the reading space and experience in the experiments made by futurists with their tin books with metal pages unnumbered and potentially increasable in quantity, like "L'anguria lirica" by Tullio d'Albisola [1]. But it was suprematist El Lissitzky in 1926 first envisioning a transcendence in printed content space "The printed surface transcends space and time. The printed surface, the infinity of books, must be transcended." [2]

## The collapse of the printed space.

Among the different attempts to saturate even more the printed space through technological means, there are plenty of "inventions" in the golden mechanical era. One of the most symbolic is one made by an inventor who wanted to minimise the space of print (which is quite similar to what a couple of decades later would have been done by microfilms).

Rear Admiral Bradley Fiske developed in 1922 the "reading machine", a small device allowing to print stuff in very tiny paper space and then magnifying it in order to be read, collapsing the space of print and enhancing its portability. The printed space starts to be pushed to collapse [3].

A widely acknowledged conceptual attempt to overcome it, has been written by Vannevar Bush in 1945 when he sketched a Memex system [4], a kind of enhanced microfilm storage system, which should have drastically reduced the space of publications, making them completely search-

able. And in the educational sector in the same years the prototype of a kind of infinite mechanical book has been built by the spanish teacher Ángela Ruiz Robles in 1949. Her "Enciclopedia Mecánica" [5] was meant to connect spellers and drawings, have rolls to display more content in a single space, and wheels to compose sentences, but had also a quite unique "zoom function" in order to let the students focus on a specific part of the content.

## The explosion of content space.

*Transcending* space could also mean not knowing in advance the size of a publication, remaining unknown unless it's printed or the number of pages is displayed (that's more or less how ebooks work now).

The 'radio newspaper' tested during the second half of 1930s was meant to allow a radio listener to print a daily newspaper at home. It was transmitted through dedicated radio frequencies, and then decoded and printed through a specific device integrated into the classic radio receiver of that time.

Then a significant shift in the way of managing the space of content happened: the advent of the retro-illuminated screen. The space of the screen is transcendent as it can be infinitely filled. And with the advent and subsequent familiarisation with screens, the idea of transcendent publishing spaces arrived, first through Science Fiction and then in reality.

In fact already in 1948, Richard Shaver in his "I Remember Lemuria" [6] short novel published in *Amazing Stories*, wrote about an enigmatic object that he called "a pocket reading machine", and only three years later, in 1951, Isaac Asimov in his short story "The Fun They Had" imagined some "telebooks" [7]. In this story a couple of kids living in 2157 find an old printed book from the previous century, stating at some at some point "what a waste. When you're through with the book, you just throw it away, I guess. Our television screen must have had a million books on it and it's good for plenty more. I wouldn't throw it away."

And two years later in 1961, science fiction writer Stanislaw Lem in his "Return from the Stars" [8] described a new type of books: "the book were crystals with recorded contents. They could be read with the aid of an opton, which was similar to a book but had only one page between the covers. At a touch, successive pages of the text appeared to it."

And just a few years before the Internet would have completely changed the whole mediascape, in 1989, a more defined prototype was described by another science fiction writer Ben Bova, in his novel "Cyberbooks" [9]. Here he tells the story of a young programmer inventing an electronic book device, and how this device disrupts the New

York-centred publishing industry: "...he pulled a gray oblong box about five inches by nine and less than an inch thick. Its front was almost entirely a dark display screen. There was a row of fingertip-sized touchpads beneath the screen." The e-books are delivered by "chip wafers" but what the protagonist was passionately questioning was the potentially uncontrollable nature of information: "What you want into the hands of your readers is information — which does not necessarily have to be in the form of ink marks on paper."

Already, in 1968, Alan Kay showed for the first time his Dynabook [10] prototype, never realised but meant for educational purposes, and quite similar to the contemporary tablets until the year 2000s when we'll have the first mass-scale produced e-book readers, and then the Kindle, defined in 2009 by the *The Wall Street Journal* "the book that contains all books" [11].

### Artists' rendering of endless publications.

When we look at the artists' use of publications as artistic medium, there's a prime concept that rapidly emerges, which is thinking about publications as archives, repository of elements, collected, stored and preserved on the publication's page. This concept has been applied since the beginning of the artists' book production.

Already in 1963 one of the first acknowledged modern artist's book, "Twentysix Gasoline Stations", by Edward Ruscha [12], was compiled as a collection of photographs of gasoline stations he encountered during his recurrent trips to visit his parents. The book is used as an archive, storing those pictures as an abstract and personal memory album.

Numerous artists have used the same strategy over time, using the space of the pages to "accumulate" coherent content, becoming then a self-inclusive archive.

But in the current post-digital dimension, the infinite number of online pictures represent a huge visual material for artists. Using publications as archives can even be more ambitious than just a limited edition printed repository. Even more a single book can easily upscale to candidate as a time capsule.

That's exactly what La Société Anonyme, an international artist collective did with their *The SKOR Codex* [13], whose content (text, pictures and sounds) is binary encoded, with enclosed visual instructions about how to decode it. It's meant to be preserved for the future in a classic 'time capsule' strategy.

So the concept of print publication as archive of the digital has been revamped and expanded. Among the many visual examples there are only a few which use a computational approach with no pictures.

Jacques Derrida in his "Paper Machine" says "Paper is utilised in an experience involving the body; ... so it mobilises both time and space". [14]

A glimpse of the striking paradoxes this mobilisation of time and space can cause now, should be found in this last example of impossible print archive of an iconic endless publication: "Print Wikipedia" is an art project by Michael Mandiberg [15]. He printed 106 of the 7,473 volumes of Wikipedia as it existed on April 7, 2015 and also included wallpaper displaying 1,980 additional volumes. A 36-vol-

ume index of all of the 7.5 million contributors to Wikipedia is also part of the project. The table of contents takes up 91 700-page volumes. The printed volume only includes text of the articles. Images and references are not included. The project was shown at Denny Gallery in New York City in the summer of 2015.

### Fragmentation of information, Endless structure and self-gratifying loops.

But beyond the publication structure we're accustomed to, there's an ongoing subtle and universal change in the structure and perception of content. The Facebook timeline and its algorithmically designed mix of very personal and very general content, is epitomising the structure of all the other content-based social media (Twitter, Instagram, Pinterest, just to name a few) as well as plenty of major content-based online magazines and platforms where you can scroll down automatically, uploading content that fills up the screen as needed, almost indefinitely.

The crucial premise to this model is the fragmentation of information, its reduction to the so-called "bite-sized content" which facilitates the mechanisms of perceiving a still manageable but in fact endless sequence.

Alex Galloway affirms in his *The Interface Effect* "This 'reduction' is a necessary trauma resulting from the impossibility of thinking the global in the here and now, of reading the present as historical." [16]

Our reading attitude has changed accordingly, and it has been reshaped not only by this new structure and its constant availability, but also by two type of loops which are based on two respective basic brain mechanisms.

The first belongs to an area of our brain called "substantia nigra/ventral segmental area" [17] which responds to novel stimuli proportionally producing dopamine. Basically the more important the novelty we're exposed (compared to what is stored in our long-term memory), the more we're rewarded with dopamine production.

The second is connected to the "variable interval reinforcement schedule" [18], a behavioural scheme which states how rewarding a subject in a variable interval of time, while he's busy in a repetitive activity, addicts him to go on indefinitely. So basically the endless publishing scheme is addictive because we're biologically totally prone to substantial novelties, and it's even worse when we're rewarded occasionally.

This terrific mechanisms then fits very well with a self-gratification loop, and so with the famine for content in any form, and it somehow justifies the attitude to create social bubbles.

### Conclusions.

The tension to overcome the limits of publications towards an infinite one is more vivid than ever, even if it seems more connected to a selfish human ambition than to a real need of communication or archiving.

We already have an infinite amount of content available, even in extremely specialised niches. Redefining the concept of "publication" is then more important than ever, especially understanding the cultural importance of its limits versus the dangers of hard to control loops.

Reclaiming the format of traditional publication, and their “reading experience” is then essential, not only to understand the current formats, but also to create new hybrid formats aimed to technologically expand the historical physical limits, with rewarding social and cultural aims, rather than indulge in addictive consumerism.

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