The document/book as a form of curatorial creativity.

Master's Thesis

Pamela Medina López
supervised by Bassam el Baroni

Master's Programme in Visual Culture and Contemporary Art
Curating, Managing and Mediating Art
Aalto University School of Arts, Design and Architecture
Department of Art
May 15, 2020

Acknowledgments

I wish to express my sincere appreciation to my supervisor, Professor Bassam el Baroni, for all the help, advice, and patience throughout the research and writing process.

I want to extend my appreciation to all the CuMMA and ViCCA staff, and to Nora Sternfeld and Marko Karo with whom I initially started working on my thesis before their departure from Aalto University, their initial guidance was also very valuable.

I wish to acknowledge the support and encouragement of my family and my boyfriend. They kept me going on during the most challenging moments. This work would not have been possible without their input and their help.

Finally, I would like to thank my friend and colleagues, in particular Daniela Pascual, the members of the *milo* association, Irfan Hendrian, and all the people (artists, curators, graphic designers, scientists, etc.) that have inspired me with their projects, ideas, and conversations.

Abstract

This thesis discusses the document/book as an act of recording that can serve as a form of curatorial creativity. Firstly, it explores the document as a space in a hybrid analog and digital era. Then, it introduces concrete examples of how curating the gallery and the book has changed in the 20th and 21st centuries. It follows a critical analysis of society as one big accumulation of documents. It proposes the invention of writing as the base of our current digital spaces and the space of the book as architecture. In respect to the curatorial discourse, it focuses on Springer's proposition of engaging with the library in order to develop new ways of organizing, collecting, and reassembling information.

The first chapter introduces Benjamin Bratton's diagram of The Stack, which serves to explore the physical spaces of information, describing how the infrastructure of books has come to expand significantly from clay to paper, and now to the Cloud. It proposes the codex-book, a stack of paper sheets, as an analogy of the stack through the example of artist Irfan Hendrian *Some Other Matter* exhibition. It also proposes the page—a place of inventory and invention— as the first virtual space of humanity.

The second chapter discusses the library's primary functions of storage and retrievability —proposing the Library of Alexandria as the first information organization. Then comes back to an example of how the old model of the library can be used for creating a new display for the gallery as well as giving value to its collection through physical activation. Finally, it explores some of the invisible systems (covers, algorithms, tags) that are now building our digital libraries.

The third chapter focuses on copy and print as essential tools for recording, preservation, and building collections. It introduces the history of mass digitization and the changes it has brought to analog documents. It also explores the space of digital and print through Kenneth Goldsmith's curatorial project that called out to print out all the internet. This example leads us to discuss the history of the A4-size paper sheet as the first completely standardize product.

The fourth chapter presents the "neutral" containers —starting from the concept of the *gallery-book* proposed by Bernard Teyssendier's as a place of movement, pleasure, and learning. It also explores architecture and design as curatorial infrastructure for exhibitions happening both in a gallery space and on a blank document. Finally, it creates a parallel between the white paper page and the white gallery wall as places of artistic intervention, which far from being invisible follow specific predefined structures.

The fifth chapter focuses on presenting projects that propose new curated writing and reading contexts between the print and digital. Here, Brian O'Doherty's issue for *Aspen* magazine is proposed as proto-hypertext or as a premonition of the website. Then, the website-as-gallery concept is explored through the example of Kadist's *One Sentence Exhibition* project. This example leads to exploring the fragility and impermanence of the hyperlink, in contrast to its printed counterparts.

The final chapter presents three projects that use the infrastructure of the book and the library as a curatorial agency —proposing new methods for curating information through collection, organization, and research. *Intercalations* a paginated exhibition series by Anna-Sophie Springer and Etienne Turpin; MAP, a folded encyclopedia by the David A. Garcia architecture studio; and *Carte(s) Mémoire(s)* by ExposerPublier that proposes the exhibition as an activation.

Contents

i Acknowledgments

ii Abstract

5 Introductory essay

10 The document as space: analog and digital in an era of hybridity

13 The Stack as a model
15 The physical spaces of information
16 The paper book as a metaphor of The Stack
25 The page: the first virtual space

27 Storage and retrievability: the bedrocks of the library
27 The Library of Alexandria: the first information organization
30 The library as a system for display and activation
36 The new infrastructures of collections

39 Copy and print: tools for recording and preservation
40 Mass digitization
44 The space of digital and print
47 The A4-size standard

49 How curating the gallery/book has changed in the 20th - 21st centuries

50 The "neutral" containers: the gallery, the cube, and the page
51 The *book-gallery*
53 Architecture and design as curatorial infrastructure
57 The white wall/page as sites for artistic intervention

59 Curating in between architecture and bits
59 *Aspen* magazine: a *proto-hypertext*
65 The website as exhibition
69 The impermanence of the hyperlink

70 Transforming the library/book: three examples of curating in print
71 *Intercalations*: a paginated exhibition
72 *MAP*: the folded encyclopedia
74 *Carte(s) Mémoire(s)*: exhibition as activation

78 Conclusion

80 References

También te quería decir que, ¡qué horror comprar tantos libros y no leerlos! Porque básicamente ahora estoy teniendo una *book* situation aquí, y digo: ¡chuchas! si por lo menos me hubiese leído todos estos libros, no sé, igual y el futuro sería mejor, o el presente, o el pasado por lo menos. Pero ahora lo único que tengo son cosas que no se dónde guardar.[1]

[1] Daniela Pascual, WhatsApp audio message to the author, March 29th, 2020. Translated from the Spanish: "I also wanted to tell you that, what a nightmare to buy so many books and not read them! Because basically now I'm having a book situation here, and I say: Yikes! If at least I had read all these books, I don't know maybe the future would be better, or the present, or the past at least. But now all I have are things I don't know where to store."

Introductory essay

In "Legere and *βιβλιοθήκη*: The Library as Idea and Space"[1], Anna-Sophie Springer refers to the famous phrase of Victor Hugo's novel *Notre-Dame de Paris*: "Ceci tuera cela" [This will kill that][2], agreeing with the idea that the libraries became the new cathedrals of the cities, in particular during the Enlightenment period in Western culture. From this moment on, libraries became a place of dissemination of knowledge, with the book overtaking the role of the clerical. Books, these finite spaces for ideas, were a perfect place to translate, multiply, and vehiculate stories.

According to Victor Hugo, the superiority of writing over stone dates from the invention of the printing press. Precisely because this technique enabled the book to become the instrument of predilection for vehiculating our thoughts to a larger public, it dethroned architecture which until then held this primordial role:

> It was a presentiment that human thought, in changing its form, was about to change its mode of expression; that the dominant idea of each generation would no longer be written with the same matter, and in the same manner; that the book of stone, so solid and so durable, was about to make way for the book of paper, more solid and still more durable.[3]

However, Springer argues that the phrase "Ceci tuera cela" was just a provocative exaggeration, and that "the printing press by no means did away with architecture, just as the digital turn has not replaced printed matter"[4]. This is quite true, architecture (stone/wood), print (paper/ink) and digital (codes/energy) are now much more intertwined than we tend to think so, as one holds the other and vice versa. We are living in a hybrid technological world, where both analogical (devices, books, machines, etc.) and digital (information in the form of bytes) are so tied together that is almost impossible to differentiate them anymore. Yes, the invention of the printing press was a significant turn, as the invention of the digital is today. However, we should not dissociate these three because they are all based on the same principle: a formal production of human thought.

Reading Victor Hugo's chapter with a contemporary eye, we can say that what happened is that with the advent of the printing press, a rectangular-shaped bounded device (the printed book), became the preferred form of dissemination of information. Writing and the *word*[5] still remain at the

---

[1] Anna-Sophie Springer, "Melancholies of the Paginated Mind: The Library as Curatorial Space," in *Fantasies of the Library*, ed. Anna-Sophie Springer and Etienne Turpin (Berlin: K. Verlag, 2015), 1-141 (unpair only), www.synapse.info/publications /intercalations, 15.

[2] For a full story of the writing of *Notre-Dame de Paris* by Victor Hugo, see Jean-Marc Hovasse, "À Propos de l'œuvre" Gallica (BnF Essentiels, n.d.), https://gallica.bnf.fr/essentiels/hugo/dame-paris/propos-oeuvre. The fifth book of Notre-Dame de Paris was not included in its original edition (Gosselin), it was added in the "eighth edition" published by Renduel in 1832. Despite this, its second chapter, "Ceci tuera cela", has remained one of the most famous of the novel.

[3] Victor Hugo, *Notre-Dame de Paris*, trans. Isabel F. Hapgood, EBook (The Project Gutenberg, 2009), http://www.gutenberg.org/files/2610/2610-h/2610-h.htm.

[4] Springer, "The Library as Curatorial Space," 19.

[5] Defined as "the smallest unit of language (whether written, spoken, or read)". Cambridge Dictionary, "Word", in *Password English–French Learner's Dictionary* (K Dictionaries LTD, 2014), https://dictionary.cambridge.org/fr/dictionnaire/anglais-francais/word.

base of the revolution that is taking place today with the digital culture. As Kenneth Goldsmith points outs in his book *Uncreative Writing: Managing Language in the Digital Age*, today, all of the information (images, videos, sound, PDFs, and emails) that what we can access and all the content we can produce through any "digital" device is powered by codes which are themselves ordered sequence of symbols from an alphabet, the basic material that has propelled writing since its stabilized form.[6]

Indeed, written language[7] is a huge part of the infrastructure that is powering our current world, and one that has done so since the days of the Sumerian clay tablets.[8] In 1974, Georges Perec wrote:

> There are few events which don't leave a written trace at least. At one time or another, almost everything passes through a sheet of paper, the page of a notebook, or of a diary, or some other chance support (a Métro ticket, the margin of a newspaper, a cigarette packet, the back of an envelope, etc.) on which, at varying speeds and by a different technique depending on the place, time or mood, one or another of the miscellaneous elements that comprise the everydayness of life comes to be inscribed.[9]

In 2020, we keep writing on those spaces and even more. Now, new digital spaces where we write coexist with older ones in paper and stone. We have devised spaces for quick notes, for quick transmission of messages through writing and other media. However, longer texts —in particular those that we intend to publish[10]— we mostly write them on Word or similar text processors that convert our ideas into written codes. These, in turn, make it possible for words to appear in front of us in a textual form that we understand. These text processors often mimic the way words would appear if we were writing on a "blank page", which is useful in case we want to print them. It is clear that these types of software have borrowed some of its vocabulary and functioning modes from those used to produce the printed page.

Before digital language, words were almost found imprisoned by the page.[11] However, today we can annotate, we can cross, we can cut, we can paste texts (and images) as we could with a printed medium, but on a screen. As Goldsmith points out:

> You could say that this isn't writing, and, in the traditional sense, you'd be right. But this is where things get interesting: we aren't hammering away on typewriters; instead—focused all day on powerful machines with infinite possibilities, connected to networks with a number of equally infinite possibilities—the writer's role is being significantly challenged, expanded, and updated.[12]

It is exactly in this particular context that the book has not lost its thematic and material relevance. As suggested by Johanna Drucker, the book allows us to use a simple form while being open "to an unlimited complexity through the relation of elements to each other in a finite arrangement."[13] Today, ink-on-paper editions remain relinquished by libraries and individuals because the printed book is one of the most durable and reliable

---

[6] Kenneth Goldsmith, *Uncreative Writing : Managing Language in the Digital Age* (New York: Columbia University Press, 2011), 17.

[7] For a short story on the formal evolution of writing, see Bibliothèque nationale de France, "L'aventure des écritures", YouTube Video, *Salle Christophe Colomb*, May 6, 2017, https://www.youtube.com/watch?v=EsWUuRI7UGk.

[8] David A. Garcia, ed., *Archive, MAP / Manual of Architectural Possibilities* (Copenhagen: David A. Garcia Studio, 2010), 14°, 8°.

[9] Georges Perec, *Species of Spaces and Other Pieces*, trans. John Sturrock (New York: Penguin Classics, 1998), 12.

[10] Texts that are meant to be publicly share, edited, printed or distributed in finite form.

[11] Goldsmith, *Uncreative Writing*, 25.

[12] *Ibid.*, 24.

[13] Johanna Drucker quoted in Springer, "The Library as Curatorial Space," 5.

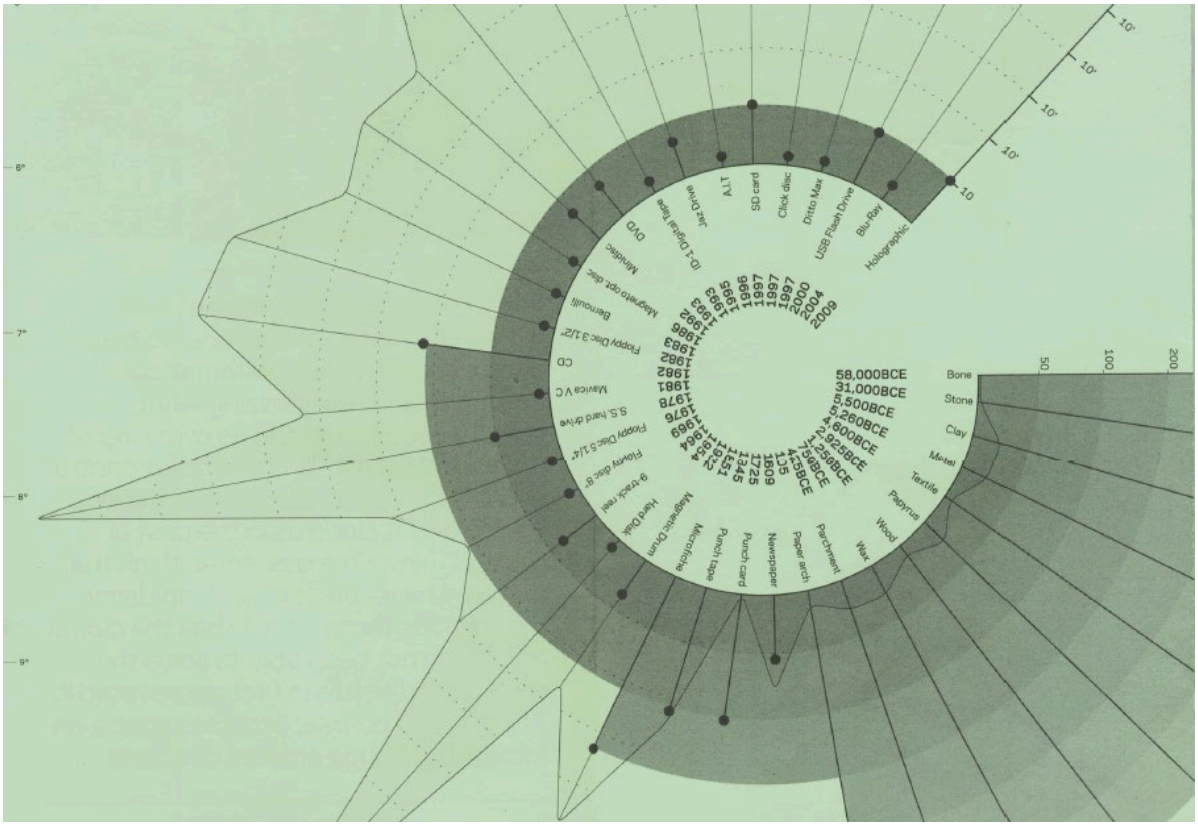


Fig. 1. Scan from a chart that compares the storage capacity of different technologies with its average lifespan reproduced in "Archive", *MAP/Manual of Architectural Possibilites*, vol. 003, 2010

Note that the paper arch, a hight-quality type of air-dried paper used by printers, has an average lifespan time of around 220 years, while a Hard Disk of only of around 3 years.

back-up technologies that we have.[14] (see fig. 1) Even though this point can be contestable, of the technologies we currently use daily, a paper book is still more reliable than a Hard Disk.

Moreover, contrary to a website or an e-book, printed books require no mediating device or any other type of infrastructure, such as an internet connection, to be consulted. Once a book is printed, it is immune to technological obsolescence.[15] As of today, paper is of significant importance, mainly because of its stability and its "originality".

In 2010, the Google Books team —whose ambitious goal is to digitize the entire world's books[16]— said that they estimated that 129,864,880 million books had been written since the beginning of writing. While this estimation gives us a particular idea of the mass of information that has been produced in a finite form, it is limited by the definition they use for what a book is.[17] In order to come to this estimation, Google Books team chose to understand the book as a "tome" or an idealized bound volume:

> A tome can have millions of copies (e.g. a particular edition of "Angels and Demons" by Dan Brown) or can exist in just one or two copies (such as an obscure master's thesis languishing in a university library). (...) Our definition is very close to what ISBNs (International Standard Book Numbers) are supposed to represent, so why can't we just count those? First, ISBNs (and their SBN precursors) have been around only since the mid 1960s, and were not widely adopted until the early-to-mid

[14] Kevin Kelly, "Scan This Book!," *The New York Times*, May 14, 2006, https://www.nytimes.com/2006/05/14/magazine/14publishing.html.

[15] *Ibid.*

[16] Google, "Google Books History", *Google Books*, accessed April 9, 2020, https://books.google.com/googlebooks/about/history.html.

[17] Roma Panganiban, "How Many Books Have Ever Been Published?", *Mental Floss*, September 9, 2016, https://www.mentalfloss.com/article/85305/how-many-books-have-ever-been-published.

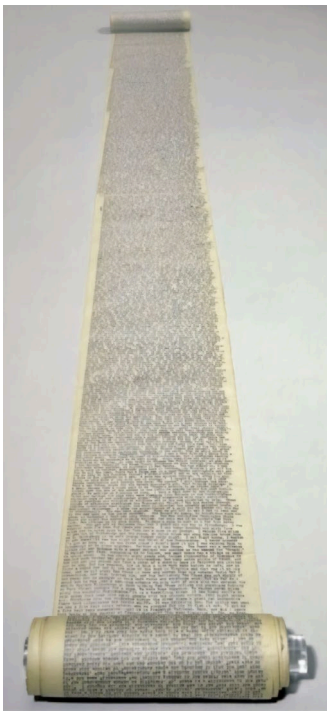
> seventies. They also remain a mostly western phenomenon. So, most books printed earlier, and those not intended for commercial distribution or printed in other regions of the world, have never been assigned an ISBN. The other reason we can't rely on ISBNs alone is that ever since they became an accepted standard, they have been used in non-standard ways. (...) They are also often assigned to things other than books.[18]

Here, the Google Books team addressed a crucial question, which is the role of standardization and the invisible powers that rule the economy of modern publishing. However, the problem with merely defining the book as a tome, as Google does, is that we leave out many printed objects that might do act as a "volume" but that exist outside of a shelf. What we can take from this example is that the definition of a book is a fundamental question, especially when concerning the curatorial practice. What we choose to consider a book becomes essential because the definition we choose to use might completely change our approach towards it.

Books have existed long before the introduction of the printing press, but its hardware[19], as we know today, does come from its imposition after the Gutenberg's revolution.[20] Before paper was largely adopted as the preferred medium for the bound book, there were two other major ones: the papyrus and the parchment. The papyrus opened the way for the scrolls to impose as the preferred form for storing writing for many centuries.[21] However, due to political and economic reasons, the invention of the parchment ,around 190 BC[22], marked a turning point in the history of the book. This medium lead to the invention of the codex, a stack of bound pages.

Fig. 2. Typescript scroll of Jack Kerouac's novel *On the Road*(published 1957). Photo: Christie's

Written between April 2 and April 22, 1951, the book is comprised of 125,000 words, type-written on one long scroll reaching an impressive 36 meters (118 feet) long.



The codex format, which progressively substituted the scrolls[23], changed again the format of the book as early civilizations knew it. And of course, the change in these formats led to a change in the needs for storing these objects. Funnily enough, the scrolls might resemble much more to the way we read our book on the screens in particular in PDF format. Therefore, looking into the past can also give us clever insights for new (or not so new) ways of understanding and conceiving the book (see fig. 2). A system that might seem archaic might come in handy when the formal revolutions come into play.

The advent of the digital, now, is creating a similar revolution as of the invention of the parchment in the 1st century or the invention of the printing press in the 15th century. A revolution in the way information is being stored, shared, and consumed, which comes with new formats for books that still exist and coexist with older ones. As suggested by Howard, "the appearance of the written word and image has been adapted to suit the practical constraints of a book"[24]. So maybe, we should not see the book as standardized form but as an evolving one. Maybe the best definition is to understand the book as a sequence of spaces and moments as artist Ulises Carrión defines it in his text of the "The New Art of Making Books".[25]

---

[18] Leonid Taycher, "Books of the World, Stand up and Be Counted! All 129,864,880 of You," Blogspot (Google Book Search, August 5, 2010), http://booksearch.blogspot.com/2010/08/books-of-world-stand-up-and-be-counted.html.

[19] "The equipment, machines and vehicles used to do something." Oxford Advanced Learner's Dictionary, "Hardware," *Oxford Learner's Dictionary*, accessed May 8, 2020, https://www.oxfordlearnersdictionaries.com/definition/english/hardware.

[20] Nicole Howard, *The Book: The Life Story of a Technology* (Westport: Greenwood Publishing Group, 2005), https://books.google.fr/books/about/TheBook.html?id=4WwdMJKXzhEC&rediresc=y., 1-2.

[21] Howard, *Story of a Technology*, 4.

[22] "Tradition has it that parchment was invented as the result of book-collecting rivalry between Ptolemy V of Egypt and Eumenes II of Pergamum about 190 BC. Fearing the library at Pergamum might outstrip the collections at Alexandria, Ptolemy placed an embargo on papyrus to prevent his rival from making any more books, whereupon Eumenes made parchment. The fact that both the Greek and Latin words for parchment mean "stuff from Pergamum" offers some support for the tradition." George Unwin and David H. Tucker, "History of Publishing," in *Encyclopædia Britannica*, April 2, 2020, https://www.britannica.com/topic/publishing.

[23] Howard, *Story of a Technology*, 5.

[24] *Ibid.*, 2.

[25] Ulises Carrión, "The New Art of Making Books," in *Second Thoughts* (Amsterdam: VOID distributors, 1980), 7.

So, the book, at least for what this text concerns, we will define it as a writing surface/a document that preserves a particular configuration of information.[26] Therefore, the form of the book and its infrastructure vary from culture to culture, and from civilization to civilization, depending on the technical, cultural, and political constraints of the moment it is created.

Already in 1934, Paul Otlet —considered to be the founder of Information Science— gave a similar definition for the book in the chapter "Le Livre et le Document" [The Book and the Document] of his *Traité de Documentation* [Treaty of Documentation], in which he deconstructs and analyses all the infrastructure related to the book and the document, which he considers being one same thing. He assimilates the book to an evolving species. He also proposes that we can arrive to new forms of the book in two different ways: by asking for what it should be used for (other than what it already does) or by analyzing its structure and then thinking of new methods to recompose and re-organize its parts.[27]

Springer tells us that "from the perspective of an emerging curatorial discourse, the conceptual richness of the book as a medium can be further explored"[28], which is what we will try to do in the following pages.

[26] Howard, *Story of a Technology*, 2.

[27] Paul Otlet, "Le Livre et Le Document," in *Traité de Documentation* (Brussels: Editiones Mundaneum, 1934), 43–247, https://fr.wikisource.org/wiki/Trait%C3%A9dedocumentation/LeLivreetleDocument, 126.

[28] Springer, "The Library as Curatorial Space," 5.

The document as space: analog and digital in an era of hybridity

At a biological level, humans need information to survive, and everything that exists has information, which is transmitted to us by our senses.[29] In terms of culture and identity, information is also essential for the human species, with reading and writing being considered fundamental human skills. However, reading and writing are not innate; they are unnatural acts that were "made possible by the purposeful development of the alphabet and many other technologies."[30] French philosopher, Michel de Certeau, describes the action of writing as follows:

> I designate as "writing" the concrete activity that consists in constructing, on its own, blank space (*un espace propre*) —the page— a text that has power over the exteriority from which it has first been isolated. At this elementary level, three elements are decisive.[31]

In this definition, de Certeau describes writing as in literature. However, the three elements that he identifies (blank page, text, exteriority) can apply to the overall practice of writing as a recording act. At a broader level, a blank page is a real place, and the text is a type of arrangement of information that comes from the exterior. The text then gets inscribed within an object, and, finally, it returns to the external system it came from. Thus, writing needs a social world in order to exist. In this regard, Maurizio Ferraris's theory of documentality comes in handy. In this theory, he distinguishes three types of objects that constitute the human world: natural (or physical), ideal, and social.[32] According to Ferraris, human society is not based on communication, as is often believed, but it is instead based on recording. He tells us that "without documentality, there can be no society, no intentionality, and ultimately, no projects either."[33] Therefore, documents[34] occupy a central position within the sphere of society, for which he proposes the following rule:

> Object = Inscribed Act: social objects are social acts (concerning at least two people) characterized by the fact of being inscribed, in a document, in a computer file, or simply in people's heads. [35]

To better understand these ideas, we can refer to German artist Philipp Naujoks. He works with an extensive range of mediums, often reutilizing

[29] Waseem Afzal, "Information Organizations," in *Management of Information Organizations*, 1st edition (Cambridge: Chandos Publishing, 2012), 105.

[30] Nicholas G. Carr, *The Shallows : What the Internet Is Doing to Our Brains*, Kindle edition (New York: W. W. Norton & Company, 2011), 50.

[31] Michel De Certeau, *The Practice of Everyday Life*, trans. Steven Rendall, vol. 1 (Berkeley: University of California Press, 1988), 134.

[32] Maurizio Ferraris, "Social Ontology and Documentality," in *Approaches to Legal Ontologies*, (New York: Springer, 2011), 91.

[33] Maurizio Ferraris, *From Fountain to Moleskine: The Work of Art in the Age of Its Technological Producibility* (Leiden: Brill, 2019), 64.

[34] He classifies documents into two categories: weak and strong. He defines weak documents as those that are produced without the intention of creating a document, but that can later be used as such (i.e. fingerprints). Strong documents represent those that are written and follow clear and precise rules. Maurizio Ferraris and Valeria Martino, "What Is Documediality and Why Traces, Documents and Archives Are Normative," *Law Text Culture*, vol. 22, no. 1 (2018), https://ro.uow.edu.au/ltc/vol22/iss1/3/, 21-22.

[35] Ferraris, "Social Ontology and Documentality," 90.

social objects that he finds in his immediate surroundings. The invisible algorithms, codes, numbers, and systems that shape our society are key elements of his artworks. He often uses digital tools to extract information from ordinary objects, transforming them into conceptual art pieces.

In the summer of 2019, Naujoks focused on the colorful sportswear of the hikers of the Engadin mountains. He took photographs of many sports enthusiasts all around the city of St. Moritz. Afterward, he used a code-color picking app to reveal the RGB code of the jackets: FFF9C4, FFE57F, E57373. (see fig. 3) In a further step, the artist adventured in a translation exercise by using the Lindenmayer system, a type of formal grammar. He transformed the code information from the flashy jackets (an everyday object) into a new configuration, a new visual object. For him, this translation process does not constitute his artwork as such. Instead, it serves as an exploration tool; as a step within the creative process. Objects, situations, and socially constructed systems become sources of information for producing new physical, spatial and conceptual configurations.(see fig. 4)

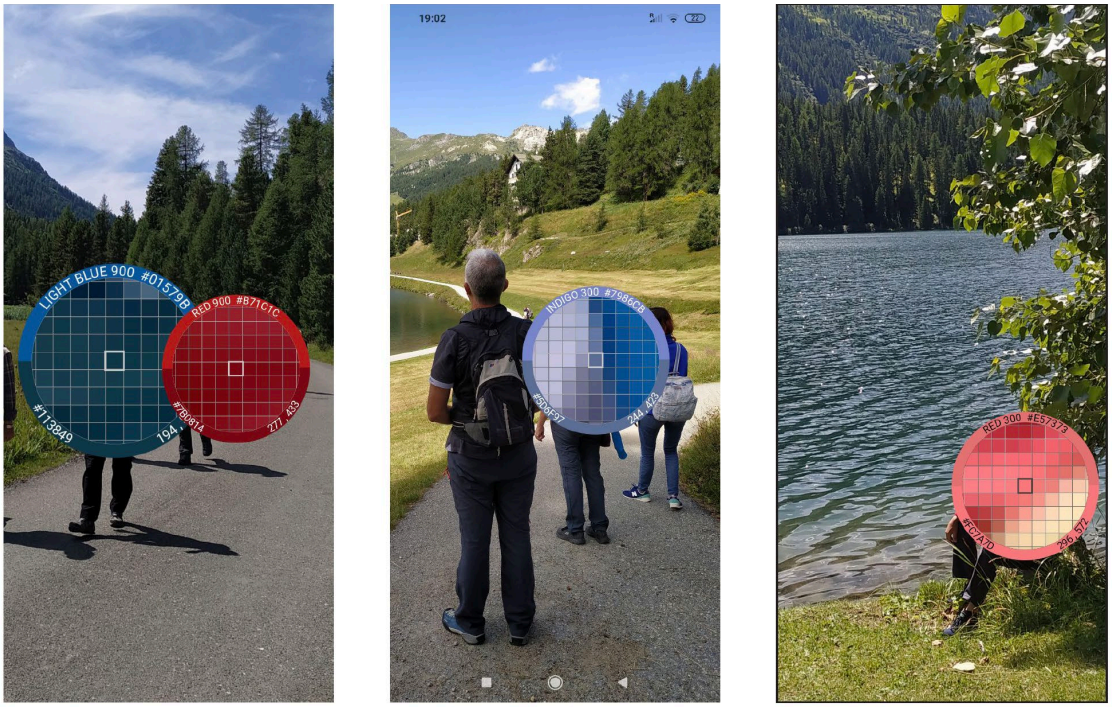


Fig. 3. Screenshots from Phlipp Naujoks's working process in St.Moritz, during the summer 2019. Courtesy of the Artist.

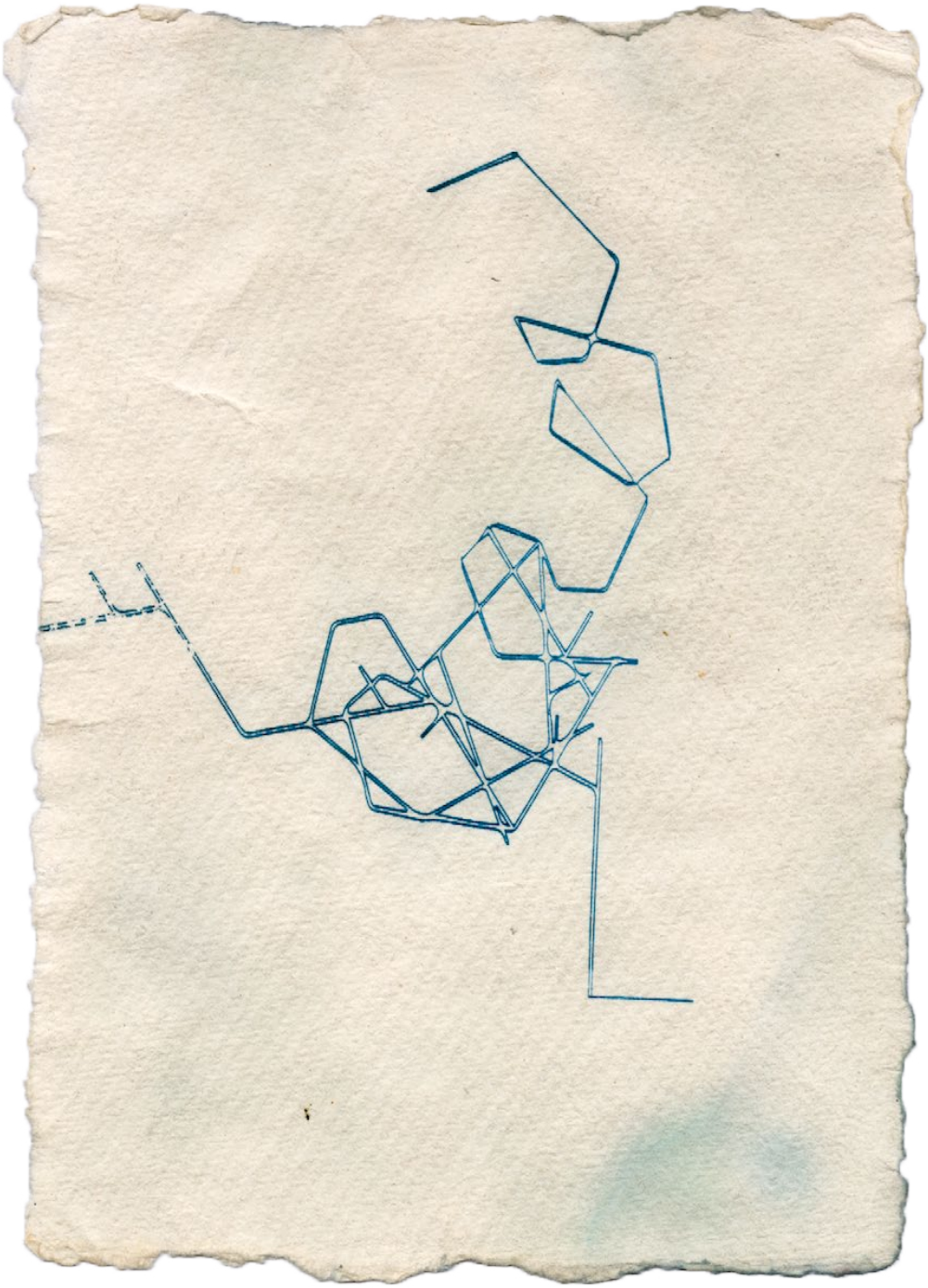
If we accept Ferraris's proposition that inscriptions are at the base of our society; then, we have been producing and collecting them since the very first alphabet. Throughout centuries, we have built a big stack of recorded acts that can be transformed, rearranged, translated, extracted, and reorganized by one or more individuals. Indeed, new technologies do not transform older forms of writing; they further diversify and expand them. In this regard, we can refer to Marshall McLuhan's famous phrase "(...)the content of any medium is always another medium. The content of writing is speech, just as the written word is the content of print, and print is the content of telegraph."[36] For Ferraris, before speech, there is one even more basic medium for recording: the mind, which constitutes the first tabula or writing surface that gathers inscriptions.[37] Within this logic, the book, like the library, are some of the many places where information can be contained. They are fundamental objects that have been building our social reality, and that now coexist with other electronic devices and digital spaces.

> Social objects (...) consist of inscriptions: on paper, magnetic

Fig. 4. Philipp Naujoks, *The I system from the St. Mortiz Sportsman*, 2019, laser cyanotype on paper. Courtesy of the Artist [next page]

36 Marshall McLuhan, *Understanding Media* (London: Routledge Classics, 2001), 8.

37 Ferraris, "Social Ontology and Documentality," 91.



memories, and people's minds; and, from this perspective, the allegiance between phone and computer guaranteed by the mobile phone represents a formidable tool for constructing social reality.[38]

The Stack as a model

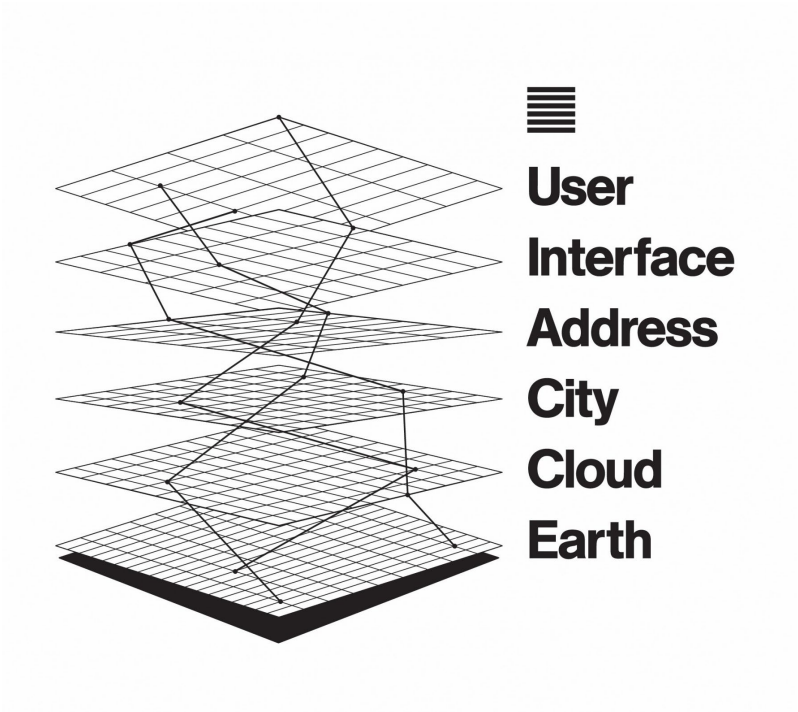


Fig. 5. The Stack diagram by Benjamin Bratton

In *The Stack: On Software and Sovereignty*, Benjamin Bratton points out that it is often presupposed that when we talk about digitality and virtuality, we are talking about something immaterial, but it is not.[39] Any information, no matter how abstract, exists physically.[40] Whether it is a small PDF file or a huge skyscraper in NY, they both have had to use physical energy and resources in order for us to interact with them. Our digital and virtual spaces are not existing independently from older social, political, and technological infrastructures. On the contrary, they are very much overlapping with older analog forms, layering one on top of the other. All together, they form one a new vertical totality or a coherent whole that Bratton calls "The Stack"[41].

The metaphor of the stack comes from computer science, where it is defined as a linear data structure used to store a collection of objects. It follows a particular order in which the operations are performed, either by adding or removing the last (bottom or top) layer.[42] Bratton identifies six layers: Earth, Cloud, City, Address, Interface, User. As we can observe through the diagram (see fig. 5), each layer would be one platform on its own. However, at the same time, it is vertically connected and supported by all the other layers. As a vertical totality, it becomes a thickened political geography, one that is creating new governing architectures[43].

As an analogy of Bratton's model of The Stack, we can evoke Korean

[38] Maurizio Ferraris, *Where Are You?, An Ontology of the Cell Phone*, trans. Sarah de Sanctis, Ebook Edition (New York: Fordham University Press, 2014), https://books.google.fr/books?id=uJKUDwAAQBAJ&hl=fr&num=14, 20.

[39] Benjamin Bratton in Gray Area Festival, ed., "The Stack We Have and The Stack To Come | Benjamin Bratton | The 2016 Gray Area Festival," YouTube Video, *Gray Area*, April 18, 2018, https://www.youtube.com/watch?v=HRiAF6ILpxw.

[40] Garcia, *Archive*, 9°, 18°.

[41] Bratton, "The Stack We Have," video.

[42] Christensson Per, "Stack Defintion," in *Tech Terms*, July 23, 2014, accessed May 8, 2020, https://techterms.com/definition/stack.

[43] Bratton, "The Stack We Have," video.

multimedia artist Yun Soo Kim. Since 1999, Soo has been collecting fingerprints and footprints that she transforms into stacked layers of translucent PVC sheets. An example of her process is the installation *Deserts of Wind* from 2004/5 in which the artist used 54 vinyl footprints that she superimposed 60 times (see fig. 6), getting larger and larger on every layer.[44]

As a result of the overlapping/expanding act, the original form of the footprint's trace slowly disappears, revealing new accidental landscapes —often resembling waves, clouds, mountains or deserts— that emerge in space. When seen from the top, these landscapes become flat, like a topographical map. (see fig. 7) However, when seen from a side angle, their vertical structure is made visible. (see fig. 8)

Fig. 6. Kim Yunsoo, *Deserts of Wind*, 2004/5, PVC. Photo: Google arts and culture

Fig. 7. Kim Yunsoo, Longing for Innocence, 2003, PVC. Photo:cahiers de seoul

> The foot is the meeting point between humans and nature. I think that the Human is only a link of a bigger body, composed of the Earth, nature and the sky.[45]

[44] Haemi Chung and Jean-Nicolas Lechat, eds., "Les Archéologies Mentales de Kim Yun Soo," *Cahiers de Seoul*, issue 2, 2019, https://cahierdeseoul.com/yun-soo-kim/.

[45] Yun Soo Kim in Chung and Lechat, "Les Archéologies Mentales de Kim Yun Soo". Translated from the French: "Le pied est le point de rencontre entre l'être humain et la nature. Je pense que l'Homme n'est qu'un maillon d'un organisme plus grand dont font partie la terre, la nature, le ciel"

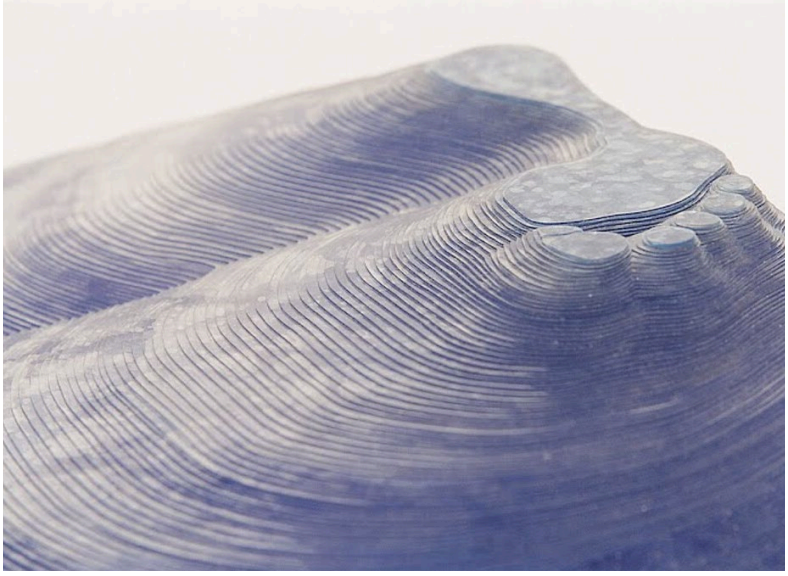


Fig. 8. Kim Yunsoo, Longing for Innocence, 2003, PVC. Photo:cahiers de seoul

With Bratton's model of the stack in mind (see fig.5), we will continue to explore some of the infrastructures that define our writing spaces in order to better understand the printed book as an alternative site for curating.

The physical spaces of information

With the multiplication of new media and an explosion of new writing softwares, platforms, and technologies for data storage, the infrastructures governing our physical spaces have come to expand significantly. Our impetus for collecting and storing has only added layers and layers of new information to the stack. Since we are looking into the printed book as a place for curatorial creativity, it seems relevant to first go back a little and explore other layers that connect directly with older forms of the book.

In terms of the formal evolution of the book, the most stable form of writing for a long time was the bound book.[46] A form that is now being challenged by dematerialization. The passage from the *volumen* (scroll) to the codex (bounded-book) marked a significant change its form and format. Today, new portable devices (smartphones and tablets) are challenging, once more, the form of the book that has been dominating us for a while. Like the codex, these devices can move with us; they can follow us, but with yet more information inside them. Nevertheless, with a change in form, it also comes a change in its modalities of diffusion and its adjacent spaces. Thus, the addition of new infrastructural layers to older existing infrastructures are making a significant impact on the way our society and its cultural objects are built and organized.

Marshall McLuhan tells us that roads and written words were closely interrelated for a long time until the advent of the telegraph, when the message could travel faster than a messenger, thus changing its medium from paper to air.[47] However, words and routes are still very much connected until this day; but they are a little bit more hidden under the Earth. The fiber-optic cables that make it possible for us to read a book online often lie under existing roads and bridges, as it is easier for them to be changed and updated. It would be a mistake to think that we are replacing older physical spaces with new immaterial ones. We are by no means leaving physicality aside, we are just placing them out of sight (see fig. 9), and as geographer Mark Graham puts it:

> These cyberplaces are not simple floating and static mirrors of

[46] Goldsmith, *Uncreative Writing*, 17.

47 McLuhan, *Understanding Media*, 97.

Fig. 9. Lefdal Mine data center, Norway

The Lefdal Mine is located in the region Sogn og Fjordane between Måløy and Nordfjordeid. It is situated next to a deep, cold fjord with a stable and ample supply of price leading CO2-neutral energy (hydroelectric). It has excellent links to the local road network, shipping port, communication and fiber networks, two local airports and a helipad on site. The town of Måløy is considered as one of the most important ports in the coastal region of Sogn og Fjordane and is able to support the technical skills and maintenance requirements for such a remote and secure data center.

The mine today consists of six levels divided into 75 chambers with a potential white space area of 120.000 m2.

> the physical world. They are instead often a component of the palimpsest of place. The virtual Earth and digital representations of place are often characterized by a reflexive relationship with their physical counterparts: they are shaped by, and, in turn, shape the physical world.[48]

Graham's view of cyberplaces —as directly connected with physical counterparts— is precisely what Bratton's diagram shows us: the Earth layer is very much connected to the latest one of the Cloud. To build the Cloud, to build immaterial information, we need physical resources from the Earth. Therefore, the way we use and extract those resources has important social, political, and economic implications. Furthermore, while new digital technologies change fast, at a rate that it is difficult for us to grasp, physical ones change at a slower rate. Thus creating a complicated relationship between old and new.[49]

The information that we store externally, no matter what medium, is to "last as long as the material it is written on or written with"[50]. Printed matter in a good-quality material can last for a thousand years, while the most extended warranty for a hard disc is only around three years (see fig. 1). So, an immaterial book is in constant need of energy to be kept alive.

The paper book as a metaphor of The Stack

The parchment, as a material, marked a turning point in the history of the book in Western history. It influenced the passage from the volumen to the codex. The latter, a stack of bound pages, largely imposed from the 4th

[48] Mark Graham quoted in Taylor Shelton and Matthew Zook, "Geography of Information Society," in *International Encyclopedia of the Social & Behavioral Sciences*, ed. James D. Wright (Oxford: Elsevier, 2015), https://www.sciencedirect.com/science/article/pii/B9780080970868720277?via%3Dihub, 92.

[49] Tung-Hui Hu, "The Shape of the Network," in *A Prehistory of the Cloud* (Cambridge: The MIT Press, 2015), 2.

[50] Garcia, *Archive*, 6°, 14°.

century AD in Europe and the Middle East.[51] The new structure of the codex, contrary to the scroll, presented the advantage to be able to hold more information. It was able to hold more data within a smaller space.[52] (see fig. 10) Paper became an ideal material for the codex book because it permitted to group far more pages (thus more text), by placing them one on top of the other. Similarly, light and electricity, used for our new portable devices (i.e., smartphones and tablets), are challenging those older forms of the book.

The conquest of paper over the world was slow, and it did not happen overnight. Paper has been produced in China for far longer than anywhere else in the world. Since the 3rd century, it was widely used in all the Chinese Empire. By 610 AD, the Japanese acquired knowledge of the method and adopted it as well. From the end of the 8th century, the Muslim world introduced the use of paper in its territories.[53] The first European paper mill is believed to have been built in 1150 in Spain. In the 15th century, paper mills existed in Italy, France, Germany, and England, and by the end of the 16th century, paper was being made throughout Europe.

However, its standardization became a reality only after the industrial revolution. It all began with the invention of the first machine to produce 'continuous paper' in 1799 (see fig. 11), and so, this material became a by-product of growing literacy levels and societal development. Indeed, paper is today "one of the most accessible and mass-produced materials in the modern world."[54] Even today paper is everywhere; it a huge part of the infrastructure that rules our everyday life. (see fig. 12) But, what about the connection of the paper to the Earth's layer of The Stack?

Fig. 10.Conversation

Pamela: Oye, podemos tener la atestación en nuestro celular en vez de que este impresa?

Daniel: Sí.

PM: ¿Y entonces por qué la imprimimos? ¿Prefieres tener tu atestación en papel y no en tu celular?

DM: Porque hay más *traçabilité* en mi teléfono que en el papel. No quiero que me llegue una multa porque leyeron mi QR code. En el papel no tienen forma de saber exactamente a qué hora lo creé y no tienen más información de la que está escrita.[1]

[1] Daniel and the author, casual conversation while in COVID confinement in France, April 18, 2020.Translated from the Spanish:"Pamela Medina: Hey, can we have our permit [to go outside] on our phones intead of printing it? Daniel Medina: Yes. PM: Then why are we printing ours? Do you prefer to have them on paper than in your phone? DM: Because there is more traçabilité on my phone than on paper. I don't want to receive a fine because they read my QR code. With the paper they have no way of knowing at exactly what time I created it. They do not have more information that what they see written."

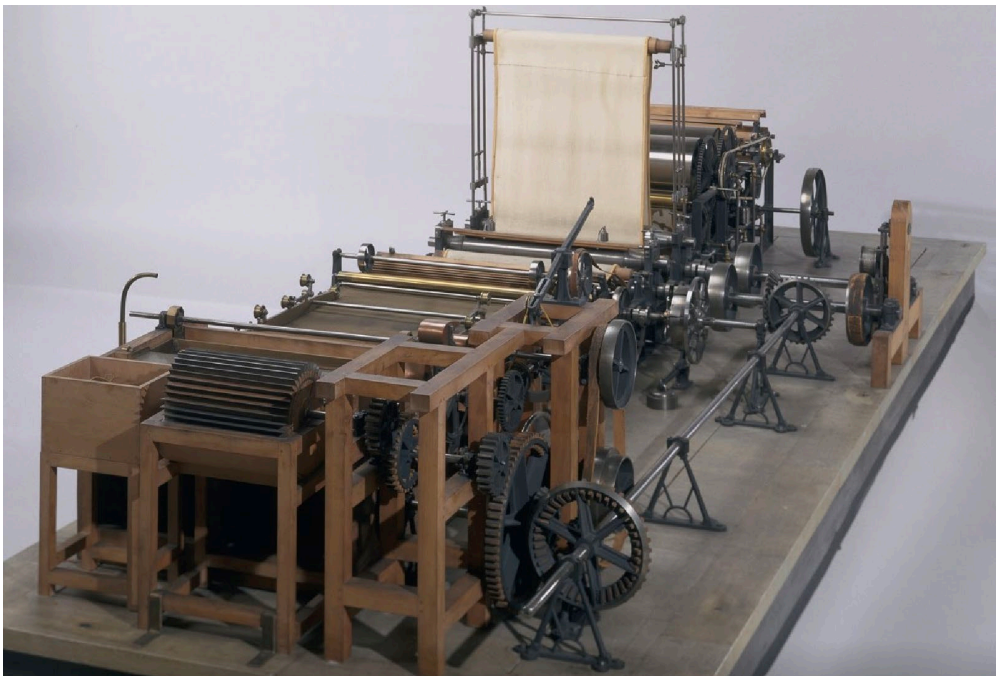


Fig.11.Machine for making paper (1834) patented by Louis Nicolas Robert in 1799. Photo: Musée des arts et métiers

This machine was designed to meet the growing demand for paper while limiting its production costs. It reproduces the gestures of artisans and follows the main stages of paper manufacturing. An "endless" (340 cm long and 64 cm wide) moving wire could receive a continuous flow of stock and deliver a continuous sheet of wet paper to a pair of squeeze rolls.

Paper, whether using modern methods or producing it by hand method, is made up of connected vegetable (cellulose-based) fibers. These fibers come

[51] Bibliotèque nationale de France, "Matières et Formes : Chronologie," *L'Aventure des écritures, matières et formes* (BnF Classes, 1999), http://classes.bnf.fr/dossisup/chrono/indexc.htm.

[52] Anne Berthier, "Du Volumen Au Codex," ed. Bibliothèque nationale de France, *L'Aventure du Livre* (BnF Classes), accessed May 9, 2020, http://classes.bnf.fr/livre/arret/histoire-du-livre/premiers-supports/07.htm.

[53] Catherine Laulhère and Thierry Dubus, "Le Papier," in *La Fabrication. Les clés des techniques du livre*, ed. Catherine Laulhère and Thierry Dubus (Paris: Éditions du Cercle de la Librairie, 2012): 41-56, https://www.cairn.info/la-fabrication--9782765410133-page-41.htm.

[54] viction:ary, ed., *Material Matters*, vol. 04: Paper (Hong Kong: viction:ary, 2019), 2.

Scene 4.

A book is opened, a page turned.

1. HER: **Introduction. Paper is everywhere.**

It's true. Look around you.

There's tissue paper for blowing your nose. Paper money for buying things. Letters, shopping lists, bus tickets, train tickets, cinema tickets, confetti, passports, postcards, love notes, hate mail, toilet roll, newspapers, bills, more bills, posters, last will and testament, and post-it notes to remind you not to forget that thing you always forget.

Imagine your life without paper for a second.

Can't do it, can you?

Paper is essential to our lives. Our spiritual, educational, legal and sex lives. We write our dreams on paper. We tell our secrets. Paper is an expression of our deepest selves. Paper is us.

from no other place than directly from the Earth (cotton, plants, trees).[55] Today, paper is often made by using recycled materials. However, the very first source to produce it remains a product from nature itself: water.[56] As much as we have used paper to build our world, the physical qualities of this material have also shaped us as a society, the Earth itself shapes us back. As Bratton puts it: "We are inside The Stack and it is inside of us."[57] Since the beginning of history, technological progress has continuously affected our relationship with the Earth.

Today, our world has become one big accumulation of complicated mechanical and technological processes that can transform any type of raw material into something new. Often pushing old technologies aside or adding more layers on top of them. This complicated relationship with a continuously growing stack has pushed us to ignore the values and connections that lie behind the infrastructure of our cultural objects. As artist Irfan Hendrian says when talking about his solo exhibition *Some Other Matter* at Aloft at Hermès in Singapore:

> I'm trying to show how detached we are from materials in the new digital age, the value it holds for us, and how it connects us with nature. (...) The material world has shaped our history and nature, it gives us possibilities of producing anything, thus directly influencing everything in our lives. Our interaction with it every day imbues it with memories, meaning and values.[58]

Indeed, this 2019 exhibition embarked upon an exploration of how our new technologies have affected our relationship to paper. *Some other matter* presented an overall space that reminded us of an abandoned construction site. It included installation pieces like *Behind Urban Decay* (see fig. 15 & 16), *Tropical Ephemerality: Brick Stack* (see fx), *Ephemerality: Column*, *Material Recollection*, *Temporary Matter: Sawhorse* and *Temporary Matter: Scaffolding* (see fx).

Through Hendrian's exhibition pictures (see fig. 13), we can see the powerful materiality that emerges from the works. There is a burned and decayed corrugated metal wall, a massive pile of stacked bricks, a pile of concrete blocks, and a wooden sawhorse and scaffolding. At first glance, we do not have the impression that these objects acquire their volume through layering. They seem like regular conglomerated pieces of matter (concrete, terracotta, wood, and metal). However, they acquire their volume through a stack of printed layers of paper (see fig. 15), just like a book or 3D printed objects (see fig. 14).

By turning paper into construction materials, the artist challenges the apparent fragility of paper as a medium. Nevertheless, more than just reflecting in the aesthetics of these objects, Hendrian approaches—in his own manner—the question of how paper connects with some other layers of the stack (Earth, Cloud, City, Address, Interface, User). (see fig. 5) Paper becomes a raw material, a resource, just like clay or wood. The installation also connects deeply with the social and city layer, one that touches upon the history of Bandung (Indonesia), where the artist lives and works.

The city of Bandung had an important printing and publishing industry that kept growing year after year until many of the printing houses started suddenly to close in the late 2000s.[59] The artist tells us that the invention of the computer in the 70s did not replace the printing need. On the contrary,

Fig. 12. Screenshot of the script of *A history of paper* by Oliver Emanuel on BBC Radio 4 Afternoon Drama, January 26th, 2016. BBC Radio Drama archive [previous page]

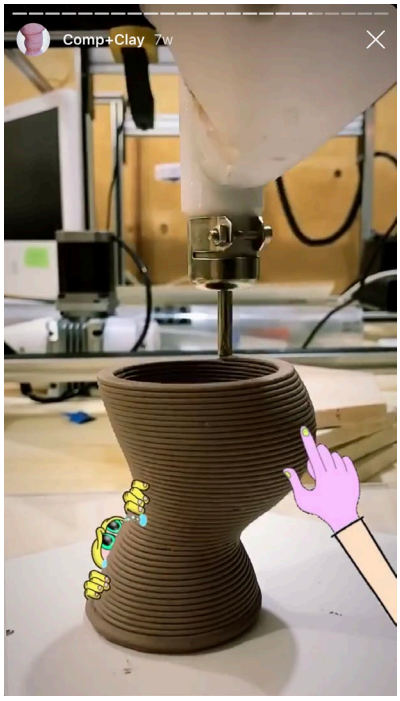


Fig. 13. Screenshot of an Instragram story by Bryan J Cera @cera.tops. 3D printed object with clay.

Fig. 14. *Ephemerality: Column*,2019, layers of offset lithography on duplex board, wood rod and concrete base, 37 x 37 x 250 cm. Courtesy of the Artist. [detail]

[55] For a deeper understanding of the paper making process, see Sappi, "The Paper Making Process," YouTube Video, *Sappi Tube*, March 2, 2012, https://www.youtube.com/watch?v=E4C3X26dxbM.

[56] The World Counts, "Consumption", *The World Counts*, 2020, https://www.theworldcounts.com/challenges/consumption/other-products/environmental-impact-of-paper. "It takes 10 liters of water to produce a single A4-sheet of paper. The pulp and paper industry is the single largest industrial consumer of water in Western countries."

[57] Bratton, "The Stack We Have", video.

[58] Irfan Hendrian quoted in Hong Xinying, "You'll Never Expect That Indonesian Artist Irfan Hendrian's Artworks Are Made of Paper," *Tatler Singapore*, September 23, 2019, https://sg.asiatatler.com/life/aloft-at-hermes-exhibition-indonesian-artist-irfan-hendrian-creates-artwork-with-paper.

[59] Irfan Hendrian, Instagram message to the author, April 23, 2020.

Fig. 15. Exhibition view of *Some Other Matter*. Solo exhibition of Irfan Hendrian at Aloft at Hermès, Singapore, 2019. Courtesy of the Artist.

the demand for paper skyrocketed in the city due to the arrival of new printing technologies. However, with the sudden decay of the printing economy in the '00s, many of these sites were left to abandonment. To which Hendrian wonders what will the potential of the halted printing technology could become? These installations, as the artist pointed out, are an "ode" to the changing printing industry in his city in a new digital age. They also reveal a new changing urban and social landscape that results from a change in technologies.

In his site-specific installation, *Behind Urban Decay* (see fig.16 & 17), the artist recovered corrugated steel and wood from the abandoned sites. He used them to build a new fence for the gallery space that he covered with pages of old printed publications, which he had collected from several houses starting from his own. Most of these pages covering the new walls came from architectural, interior design and home decoration magazines. Once, stripped out from their binding, they created a new unity. The wall becomes a collage of pages that were once stored inside libraries or cupboards

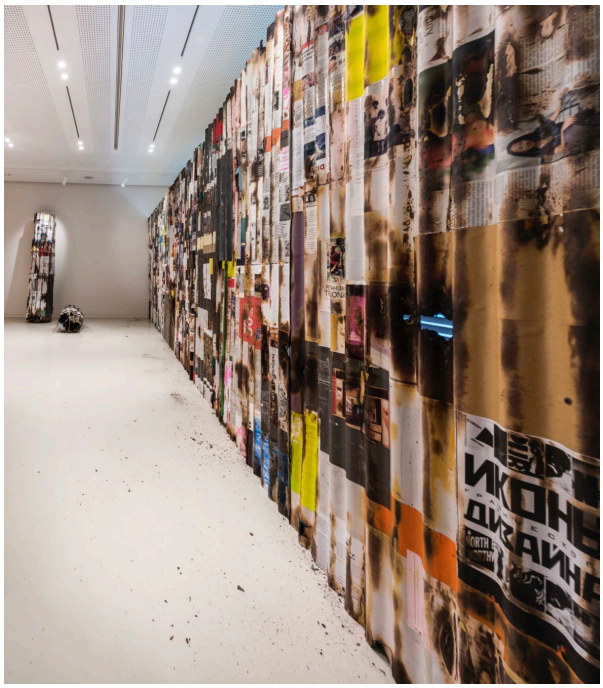


Fig. 16. *Behind Urban Decay*, 2019, paper reclaimed publications, reclaimed corrugated steel and wood frame, site specific intallation. Courtesy of the Artist.

Fig. 17. *Behind Urban Decay* , 2019. Courtesy of the Artist. [detail]

Fig. 18. Picture by Irfan Hendrian of a currugated wall in Bandung. Courtesy of the Artist.

waiting for a new usage to come.[60]

In Bandung, these corrugated fences are usually built around abandoned construction sites as a way of safekeeping a portion of land and the materials stored within its limits.[61] The are often recovered with paper posters and graffitis, thus using the fence as a space for informal communication. Here, Hendrian reutilizes this use of the fence by creating a wall that gives a new life to the stored information of the publication's pages, while still reminding us of its decay.

The other two installation, *Temporary Matter: Sawhorse* and *Scaffolding*, consisted of those two objects, sawhorse and a scaffolding, that the artist also built by reclaiming abandoned wooden objects from the sites. (fig. 22) Here, he alternated the real wood with paper that mimicked a wooden beam, thus transforming the paper back into wood. (see fig. 19, 20 & 22)

Fig. 20 & 21. *Temporary Matter: Scafolding* and *Sawhorse* close up views. Courtesy of the artist.

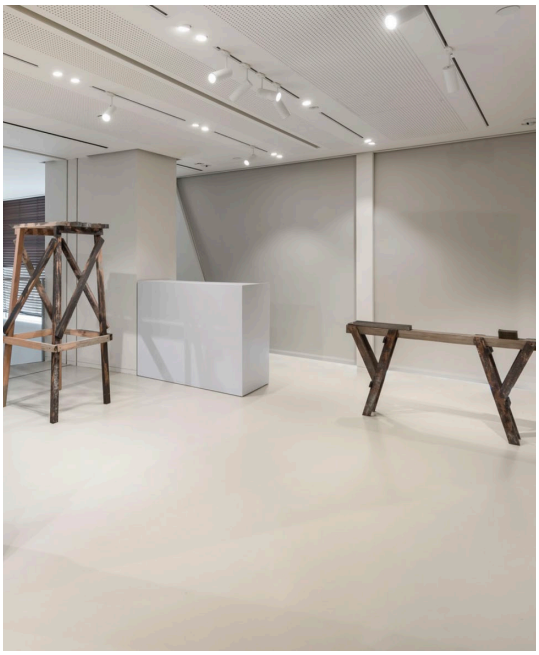


Fig. 22. Abandoned sawhorse in Bandung photographed and reclaimed by Irfan Hendrian. Courtesy of the Artist.

Fig. 19. Exhibition view of the installation *Temporary Matter: Scafolding* and *Sawhorse* at *Some Other Matter*, 2019. Courtesy of the Artist.

[60] Hendrian to the author

[61] *Ibid.*

Fig. 23 & 24. *Tropical Ephemerality: Brick Stack*, 2019, 1500 books, 1700 pages photos of tropical weed offset lithography on office paper, unbound prints on concrete slab & bricks, variable dimensions.

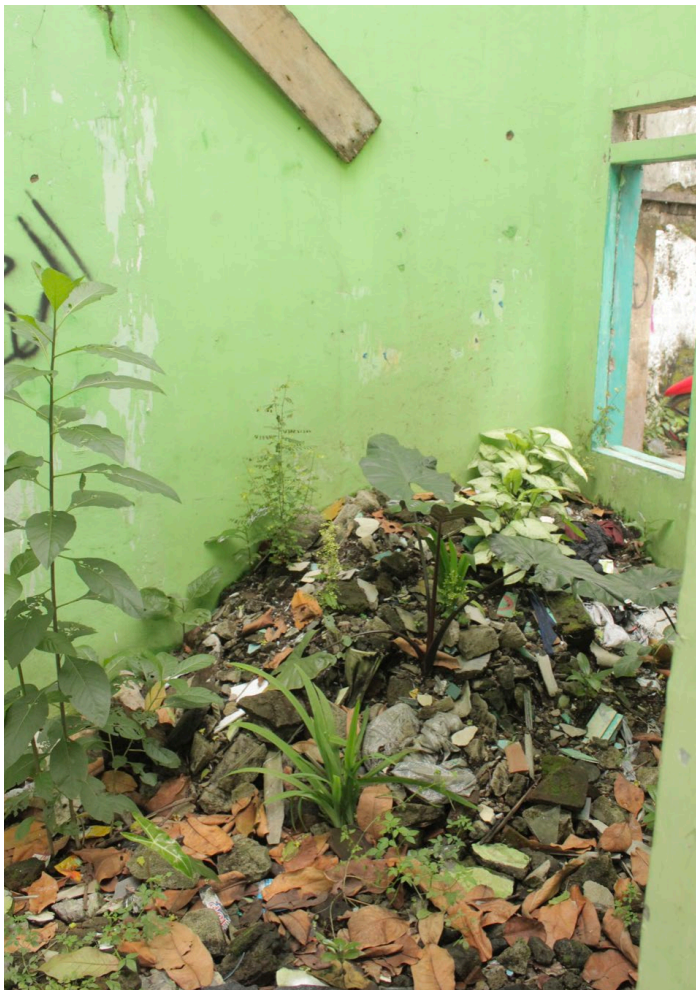


Fig. 25 & 26. [top] Plants growing out from debris in Bandung photographed by Irfan Hendrian. Courtesy of the Artist.

[bottom] Plants growing out from bricks in an abandoned construction site in Bandung photographed by Irfan Hendrian. Courtesy of the Artist.

Finally, we will talk about *Tropical Ephemerality: Brick Stack*, the most relevant piece for our topic of the book. This installation consisted of 1,500 books piled up together and mixed with real bricks. It also consisted on another pile of long uncut printed sheets of the book's pages, the overall reposed on top of a concrete slab. (see fig. 15, 25, 26) Each book was made out of 1,700 pages and an ochre-colored cover, thus giving the size, thickness, and appearance of real brick. While visiting the abandoned sites, Hendrian also collected pictures of the different plants, typical from South East Asia, that grew out of bricks and cement. (see fig. 25 & 26) From these pictures, he chose and reproduced 23 them inside the pages of every one of the books.

The production of these objects was the most challenging one, as it was very problematic for the artist to mass-produce such thick objects. Nowadays, most of the mass-produced books do not exceed a 2 inches thickness. In Bandung, there were no machines that could bind that many pages.[62] As the artist tells us, it is simply "not a wise investment because of the low demand for it, especially now in the digital era." So, he had to develop a manual technique that replicated the machine's process.

One crucial aspect of the whole exhibition is that the visitors could take the books and the paper sheets with them just like in the abandoned construction sites in Indonesia. There, it is common practice for people to come and take whatever abandoned materials and objects they find.[63] Therefore, altering once again the chain of the stack.

In this exhibition, paper acted as a storing software, one that contains and spreads information; as a repairing tool, one that helped to build the missing parts of wooden beams; and as a construction material, one which helped to build solid volumes of matter.

PM: What is your perception of paper today?

IH: I think that the perception of paper we have is the same as with any other material today. IKEA has popularized the use of their 'engineered wood' and plastic veneer that looks like wood but has different properties than the real wood. Over time we have come to accept the cheaper substitute as the real one and are unable to differentiate them both. We are losing the intrinsic opportunity to learn and experience this material ourselves.

So, I always look at paper as a material that has many usages and has different values throughout history. People have used it for many purposes, not only as material to be printed and written on, but also for producing durable clothes, window screens that directly exposed to outside elements, or air filters that protect machinery. Many people tend to understand paper through the type of paper they use everyday, office paper, which is very thin and delicate. But, who knows how this understanding comes to change in a decade when we do not use office paper anymore? We might be more familiar with paper as a hard and durable packaging mate.[1]

[1] Irfan Hendrian, Instagram message to the author, April 23, 2020.

[62] Hendrian to the author

[63] *Ibid.*

The page: the first virtual space

Now we come back to a vital component of the books' architecture: the page. Beautifully described by George Perec in the chapter "The Page" of his book *Species of Spaces and Other Pieces*, the page is one of those finite space in which we live. The page is as much of a space as a city, a street, our room, or even our bed.[64] In our everyday language, the term "page" designs a great variety of things; it can be a Web page, the page of a book, one page A4, a Facebook Page, and so on. The page, as the book, has evolved from a stone to a seemingly infinite white surface visible through a screen. But, what hides behind this term of the page?

To write is to leave traces, and the page is one of those places where any trace can exist and be reconfigured. The word page is used today to refer to almost any digital or physical space that stores in a single "real" place or at a single "present" moment a certain amount of information. Again, in the words of Perec, the page is as much as a place for documentation as it is a place of invention:

> This is how space begins, with words only, signs traced on the blank page. (...) Space as inventory, space as invention. Space begins with that model map in the old editions of the Petit Larousse illustré, which used to represent something like 65 geographical terms in 60 sq. cm., miraculously brought together, deliberately abstract.[65]

The history of the page is indeed very much related to the history of human society. More concretely, the word "page" derives at the same time from the Latin word *pagina*, the storied trellis which carries the grapes of the vine; of *pagus*, the village, a humanized space on the edge of the furrows; and of *pango*, which means to firmly plant in the ground, to plant, to set boundaries.[66] Coming from the notion of boundaries, the page is then a geometrically constructed system of organization, repetition, and containment.

As a bi-dimensional space, it has its origins in the fundamental question of the format. In a BnF's website[67] devoted purely to the history of writing, it is proposed that the page was born with the invention of the map by Anaximander (c. 610 - 546 BC), the first Greek geographer[68]. Although this map is now lost, we know that he imagined a place where the entire inhabited universe could fit into a small tablet[69] that could be held in the that could be held in the palm of our hands. The first page —whether in clay, stone or papyrus— was also conceived as a reduced space constructed close to the body, with dimensions that could fit in our eyes and hands. This description is not too different from that of our modern smartphone devices. Our digital and electronic devices still hold pages, or, as Lucie Trunel puts it, they are a single *page-écran*[70] (*screen-page*). The *screen-page* (see fx) exists in a format that can be, in theory, infinite. It can be extended as much as desired in height and width; unless, of course, we want to print it.

When it comes to the book, its pages have been linked together in different ways throughout history, going from the rotulus to the volumen, and from the codex to digital devices.[71] Lucie Trunel asks of we should still consider this new type of screen-pages a page. To which we could argue that we can

---

[64] Perec, *Species of Spaces*, 6.

[65] *Ibid.*, 13.

[66] Anne Zali, ed., *L'Aventure Des Écritures III: La Page*, exhibition catalogue (Paris: Bibliothèque nationale de France, 1999).

[67] Bibliothèque nationale de France, "La Page," *L'aventure des écritures* (BnF Classes, 1999), http://classes.bnf.fr/ecritures/enimages/lapage/histoire1.htm.

[68] To learn more about Anaximander, see Dirk L. Couprie, "Anaximander," *Internet Encyclopedia of Philosophy*, accessed April 15, 2020, https://www.iep.utm.edu/anaximan.

[69] Agathemerus cited in Sheldon S. Wolin and Nicholas Xenos, *Fugitive Democracy : And Other Essays* (Princeton: Princeton University Press, 2018), 121. "Anaximander the Milesian, a disciple of Thales, first dared to draw the inhabited world on a tablet; after him, Hecataeus the Milesian, a much-traveled man, made the map more accurate, so that it became a source of wonder."

[70] Lucile Trunel, "L'écran, La Page Aujourd'hui," *L'aventure des écritures* (BnF Classes), accessed May 9, 2020, http://classes.bnf.fr/ecritures/arret/page/tablette/05.htm.

[71] *Ibid.*

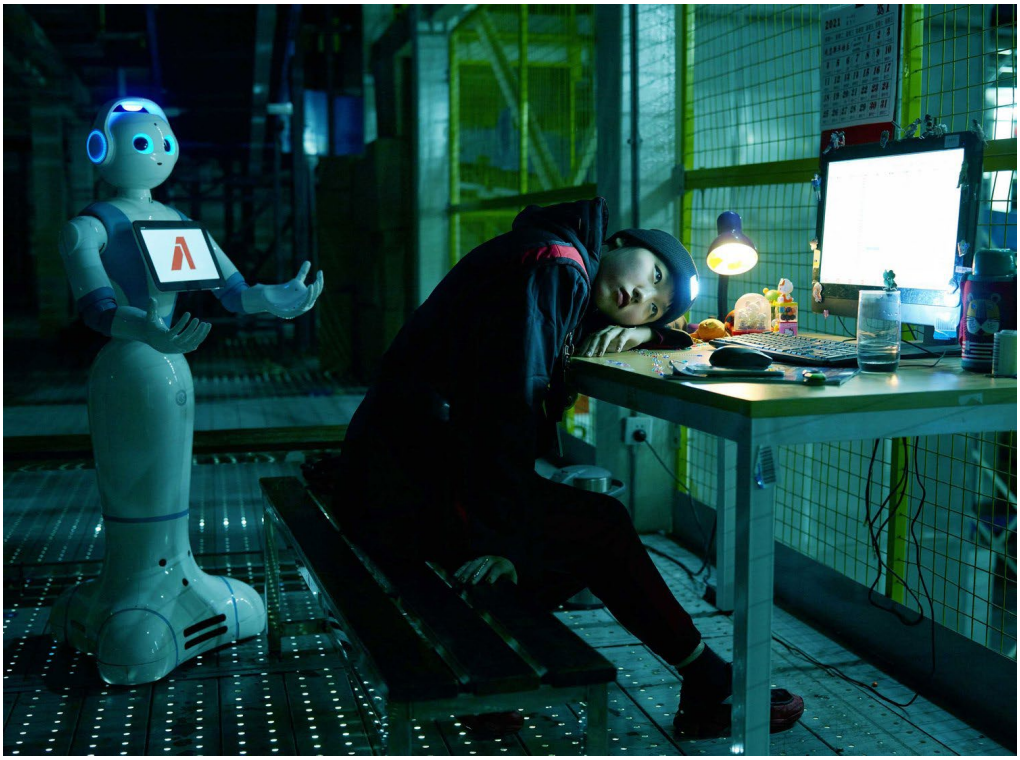


Fig. 27. Cao Fei, *Asia One*, 2018, Inkjet print

and we should. Even though pages' formats and mediums have changed in time, all types of pages (be it a map, a paper page, or a screen-page) act as a system of recording and as a place for invention. Older forms, far from disappearing, are still inscribed in the new arrangement possibilities of today's screen-pages. Paper pages, maps, webpages, can now be grouped together as a stack of printed paper sheets or as long rotulus navigable through the hyperlink. Indeed, pages bound through links are the new type of books, but they do not replace the older ones.

The page could have been indeed the first virtual space that was ever created. A virtual space is, today, associated with the Internet and the infinite and invisible possibilities we have of connectivity.[72] When talking of the virtual space, Information specialist, Waseem Afzal, says that "virtual space presents a unique environment of its own: an environment in which individuals and organizations are continuously producing, packaging, repackaging[73], recording, discarding, modifying, transferring, disseminating, accessing, and using information."[74] With these characteristics in mind, we could say that since the first page, humans have been using this space to do all of these things. The difference is that in preindustrial times, the amount of time and energy spent in accessing, copying, transforming, and producing documents was significantly higher due to the technical means they had.

Today the screen is the meeting point between the reader and the author, and vice versa. The text has become entirely mobile and transformable, but only as long as we have access to the interfaces for connecting to these new digital spaces. Thus, as Josh Worth writes on his blog "the paper page acts as a permanent record of particular moment, while a feed-form webpage is a moving vessel headed for future, leaving the past in its wake."[75]

> The web up until this point has been confined to some sort of rectangular screen. But that is not how it's going to be. Gutenberg has the potential of moving us into the next time. [76]

[72] In computing, to which we often associate the word "virtual" nowadays, virtual is usually referred to as something not physically existing as such but made by software to appear to do so.

[73] He uses the term packaging to describe the act of having descriptive labels or other information about an artifact so that the user can have an idea of it.

[74] Waseem Afzal, "Information Organizations," 116.

[75] Josh Worth, "The Infinite Scroll - Is the Web Messing with Our Sense of Time and Story?," *Josh Worth* (blog), June 19, 2015, https://joshworth.com/the-infinite-scroll/.

[76] Morten Rand-Hendriksen quoted in "The New Gutenberg Editing Experience," Wordpress, accessed April 10, 2020, https://wordpress.org/gutenberg/.

Storage and retrievability: the bedrocks of the library

> Socrates was right. As people grew accustomed to writing down their thoughts and reading the thoughts others had written down, they became less dependent on the contents of their own memory. What once had to be stored in the head could instead be stored on tablets and scrolls or between the covers of codices.[77]

With the invention of writing, people began to recall things employing external marks and not from within themselves. Over time, books, libraries, shelves, paper pages, notebooks became supplements to "to the brain's biological storehouse"[78]. The revolution came with the fact that people did not have to remember and memorize everything; they could instead look it up.

As for books, which is the most stabilized form of writing, they have been collected and preserved since the very first alphabet[79]; Mesopotamians, Egyptians, Assyrians all had collections of written works. However, we could say that the first library to collect information "in an attempt to make sense of it through organization, reading, commentary, and interpretation"[80] was the mythical Library of Alexandria. This library was in fact part of a larger complex called the Mouseion, which was dedicated to the Muses[81], and which be equivalent to today's universities. Libraries from the ancient times posed the bases for all the storing and search systems that we have today. These systems have even influenced the way our new libraries are building through mass digitization. However, those classification systems come with limit and cracks[82], as the follow specific rules that allow a certain level of rationalization.

Nanna Bonde Thylstrup points out that the infrastructure of mass digitization includes different kinds of polities and politics. They can be legal infrastructures (copyright, trade law), material infrastructures (books, shelving systems, wires, scanners, server parks), disciplinary infrastructures (algorithms, searching, reading, and downloading), and societal infrastructures (public/private, national/global, profit/non-profit).[83] In the previous chapter, we already took upon the material infrastructure of the document/book. Therefore, in the following section, we will focus on exploring some others that touch upon the library, and in particular, those concerning disciplinary and societal infrastructures.

The Library of Alexandria: the first information organization

Similarly to the World Wide Web today, The Great Library of Alexandria was designed to store and share all of the information circulating in the known

[77] Carr, *The Shallows*, 177.

[78] *Ibid.*.

[79] Robert Barnes, "Cloistered Bookworms in the Chicken-Coop of the Muses: The Ancient Library of Alexandria," in *The Library of Alexandria: Center of Learning in the Ancient World*, ed. Roy MacLeod (London: I.B. Tauris & Co Ltd., 2004), 61.

[80] Springer, "The Library as Curatorial Space," 15.

[81] *Ibid.*

[82] *Ibid.*, 25.

[83] Nanna Bonde Thylstrup, *The Politics of Mass Digitalization* (Cambridge: The MIT press, 2018), 26.

world in one single place.[84] It has been suggested that the library housed between 30 and 70 percent of all the existing books.[85] As noted by many classical and modern scholars, the library had achieved huge notoriety by the end of the second century BC. However, with the massive accumulation of knowledge came also a significant drawback: over-accumulation. We could argue that it is since the library of Alexandria that we have been collecting surpluses of information[86], which led to the creation of the first systems for retrievability and organization of data. Zenodotos (330 – 260 BC), for example, was the first to arrange authors and some books, in alphabetical order.[87]

Yet, the key figure in this regard is the Poet and scholar Callimachus of Cyrene, who went further than merely ordering the books. He instead "tried to provide complete and reliable access to the library holdings"[88] through the *πίναξ* or *Pinakes*[89](Tables). Through a collection of 120 books, of which we now only have some fragments, Callimachus elaborated a critical and biographical survey of the most important Greek authors and its book that were held in the Library of Alexandria.

Today, undertaking the subjective task of manually classifying and analyzing the most influential authors of the known world of all times would be in itself an impossible task. To do so, we have more advanced systems of retrievability, such as search engines, algorithms, that do the works for us (or against us). o do so, we have more advanced systems of retrievability, such as search engines, algorithms, that do the works for us (or against us). Algorithmic logic is used to organize and deliver content, while softwares mediates our information access and its discovery.[90] The library since ancient times has been acting in between those two (logic and software).

By collecting, organizing, and classifying, the Museion of Alexandria was maybe one of the first information organizations[91] for social culture, thus posing the bases for the development of the infrastructures of the library and the book. Exploring the field of information science can be quite relevant when we think of the book-as-exhibition, the gallery-as-exhibition or even the web-as exhibition —the three being interchangeable. A very good definition for "information infrastructure" is proposed by Afzal:

> The information infrastructure is a global network of people, organizations, agencies, policies, processes, and technologies organized in a loosely coordinated system to enhance the creation, production, dissemination, organization, storage, retrieval, and preservation of information and knowledge for people. The primary objective of this network is the diffusion of knowledge for a society. [92]

Through a diagram (see fig. 28), Afzal divides these information organizations into three different types: non-profit, for-profit, for-profit/non-profit, depending on the space they occupy (physical or virtual). As we can see, the library, the archive, and the museum repose at the base of the

---

[84] Monica Berti and Virgilio Costa, "The Ancient Library of Alexandria. A Model for Classical Scholarship in the Age of Million Book Libraries," Preprint of *CLIR Proceedings of the International Symposium on the Scaife Digital Library*, 2009, 15. "According to the Letter of Aristeas, the Ptolemies founded the Alexandrian library with the aim of collecting not "many" or "very many" books, but all the books in the world: 'Demetrius of Phalerum, the director of the king's library, received vast sums of money, for the purpose of collecting together, as far as he possibly could, all the books in the world'."

[85] Kelly, "Scan This Book!"

[86] Garcia, *Archive*, 17º 13º.

[87] Rudolph Pfeiffer cited in Berti and Costa, "The Ancient Library of Alexandria," 12.

[88] Berti and Costa, "The Ancient Library of Alexandria," 12.

[89] *Ibid.,* 11. "The Greek word πίναξ(pl. πίνακες) means, in general, a "board" or "plank" made of various materials, such as wood or metal. The term is also used for plates with anything drawn or engraved on them (drawing or writing tablets). The term soon acquired the meaning of "picture" or "map," and "register," "list," or "catalogue"."

[90] Drew Austin, "Cold Discovery," *Real Life*, December 10, 2018, https://reallifemag.com/cold-discovery/.

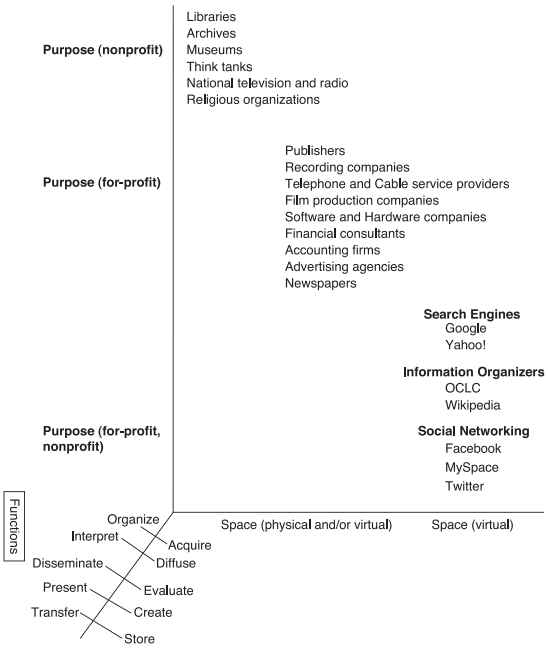
[91] For a comprehensive explanation of information organizations, see Afzal, "Information Organizations"

[92] Greer et al. quoted in Afzal, "Information Organizations," 112.

non-profit organizations. Publishers, recording companies, film production companies, they belong to the non-profit organizations, while search engines like Google or Yahoo or Social networks act in between profiles and non-profit. However, all the above treat, manage, classify, archive, present, and diffuse masses of information produced by humans. Curators, in fact, frequently work in between many of these different types of institutions.

Management of Information Organizations

Figure 4.5 **Information organizations sector**



Note: The horizontal axis represents the dimension of space (physical and virtual), whereas the vertical axis represents purpose (for-profit and nonprofit). A third axis (z-axis) represents some of the functions performed by these organizations. It is important to note that the aforementioned organizations are not the only information organizations and therefore the information organizations sector can include other organizations that perform the function(s) described in the definition of information organizations.

Fig. 28. Informations organization diagram by Waseem Afzal

This takes us back to Ferraris's proposition of the document as the base for human society.[93] All of the organizations proposed by Afzal deal directly with the document as defined by Ferraris, as inscriptions on any physical medium. A library deals with books, newspaper, and more recently, with digital books; a museum deals with objects containing traces of individuals and collective memory; a search engine deals with all sort of information accessible on the Web, plus with all the mass of data that we produce through our searches. Ferraris and Martino tells us that we can identify three historical phases of documentality[94]: capitalism (production of commodities), mediality (communication), and documediality (recording). According to him, we are currently living in this documediality age, as "recording" has become central for social objects. (see fig. 29) We still produce documents like in the other three epochs, but the way we produce them and the relevance that we give to them has changed:

> Every search, every message, every published selfie becomes a document, i.e. a written act, and so the work itself (or production methods) is transformed into production of documents.[95]

Therefore, with an explosion in our document's production (willingly or unwillingly) —not only physical but now virtual too— our need for

Fig. 29. Screenshot from the Mimo App course on Data.

[93] Ferraris and Martino, "What Is Documediality," 21 -22.

[94] *Ibid.*, 27.

[95] *Ibid.*, 28.

information organizations that can manage it all increases. Thus, working with documents, becomes a real process of translation, of (re) organization and of (re)conversion of systems from very different places, like the Web, the library, the book, or even a Twitter feed.

Finding and creating spaces that can hold new configurations and arrangements of already existing information becomes therefore essential. In this hybrid space, as Springer proposes that the curator could act in between the librarian (who activates and creates access to information) and the reader (the one who comes and goes from the outside).[96]

The library as a system for display and activation

The library, as an arrangement system, can also be a model for curating inside the gallery space. In this regard, we would talk about the exhibition *Ce n'est pas la taille qui compte* (It is not the size that matters) at the Maison d'Art Bernard Anthonioz in 2018. The curators of the exhibition, graphic designers François Havegeer, Sacha Leopold[97] and Quentin Schmerber, transformed the gallery space into a hybrid space that positions itself somewhere in-between a museum, an archive, and a library of small printed object. Some of these included invitations, exhibition catalogs, flyers, bookmarks, and business cards (see fig. 30 & 31) with designs that challenge constraints of format, economy, and production.

Fig. 30. SpMillot, *Nouvelles en trois lignes/Catalogue des éditions Cent Pages*, object no. 47 , 2009, mixed technique, 17 ×11,5 cm and 17×2,5 cm at the Maba (2018). Photo: Jean-Michel Geridan

Fig. 31. OK-RM, *A Collection of Nine Kippenberger Editions, One Boetti Watch, a Cigarette and Yellow*, object no. 112, 2017, paying cards, 9.2×6.5 cm at ravisius textor (2020). Photo: ravisius textor

[96] Springer, "The Library as Curatorial Space," 7.

[97] François Havegeer and Sacha Leopold work as a graphic designer duo: s-y-n-d-i-c-a-t

Ce n'est pas la taille qui compte marked the beginning of a series of exhibitions —or episodes—[98] presenting the Fonds international des objets imprimés de petite taille (International Collection of Small-Scale Printed Objects). With every new exhibition (see fx), the collection is meant to grow as it travels until it finds a venue where it will be stored. A space that will be "capable of making the objects freely available to the public."[99] The objective of this collection is both to build a new layer to the story of contemporary graphic design[100], as well as to add value to smaller graphic objects —which otherwise would be forgotten— and its authors.

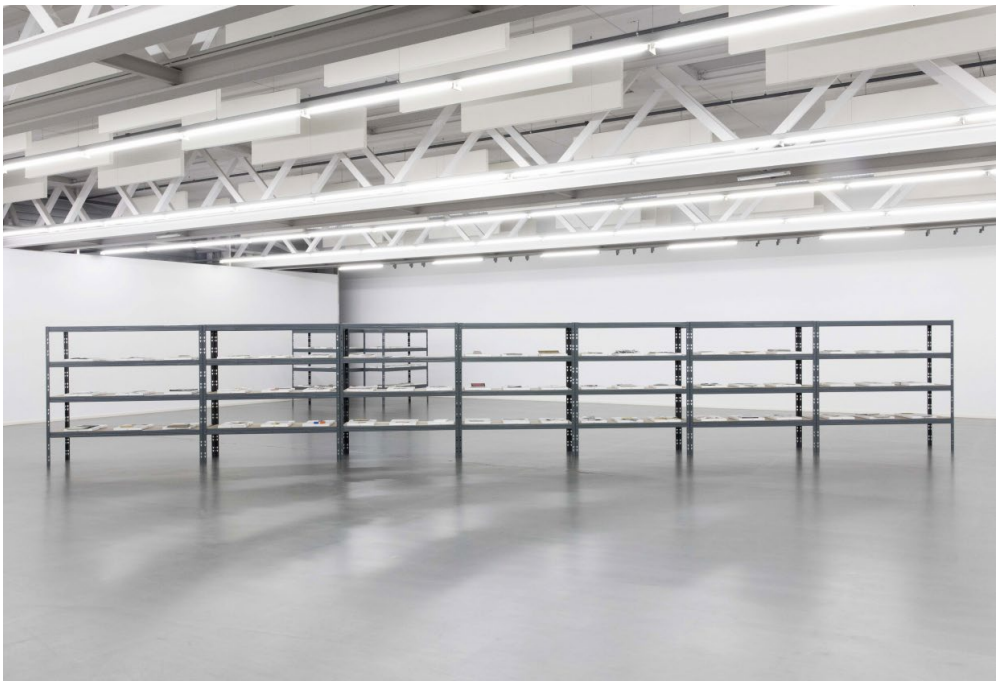


Fig. 32 & 33. *Fonds international des objets imprimés de petite taille*, ECAL/École cantonale d'art de Lausanne, Switzerland, 2019. Photo: Jimmy Rachez

[98] Following exhibitions, titled Fonds International d'objets imprimés de petite taille, include: École Supérieure d'Art de Cambrai, Cambrai, France, 2019; Carré du Thèatre de l'Hotel de Ville, Le Havre, France, 2019; Kunsthal Gent, Gent, Netherlands, 2019; ECAL/École cantonale d'art de Lausanne, Renens, Switzerland, 2019; ravisius textor, Nevers, France, 2020

[99] s-y-n-d-i-c-a-t, "Le Fonds International Des Objets Imprimés de Petite Taille," *Fonds international* (s-y-n-d-i-c-a-t, 2019), http://fondsinternational.com/.

[100] s-y-n-d-i-c-a-t, "Le Fonds International". "The exhibition thus offers a different history of contemporary graphic design, one where the quality of the object on display is not (solely) defined by a format and a support, but rather by the intelligence of the form, the execution, the materials, and the experimentation that eventually gave birth to it."

Fig. 34, 35 & 36. *Ce n'est pas la taille qui compte*, MABA/Maison d'Art Bernard Anthonioz, France, 2018. Photos: Aurélien Mole

The exhibition distinguished itself particularly by its scenography, conceived by S-y-n-d-i-c-a-t alongside designer Pernelle Poyet. Instead of being protected under plexiglass, all the objects were displayed on three-level open metal shelves, that remind us of those hidden in the reserves of museums. Here, however, they were freely accessible to the public, inviting them to be manipulated. Each object was placed on top of a white cardboard box, where it is stored when it is not on display (see fig. 37). The box also acted as an exhibition label as it displays the information of each object it contains.

Fig. 37. *Fonds international des objets imprimés de petite taille*, ECAL/École cantonale d'art de Lausanne, Switzerland, 2019. Photo: Jimmy Rachez

The first object that the visitor encountered was the latest addition (until then) of the collection: the exhibition's invitation. This object (see fig. 38), with inventory no. 250, reproduced the foldable medicaments' information leaflets. As noted by Émeline Jaret this design responded to the curators'

motivations for experimenting with the interstices where graphic design can exist and grow.[101]

When putting together a collection of small-format items, the curators looked long and hard for a project that borrowed the paper stock and multiple folds notably used in medication notices. Finding none, they used the principle in the invitation, allowing them to include that type of document in the collection.

N°: 250
Title: *MABA*
Graphic Design: Syndicat
Date: 2018 Format: 7,5 × 10 cm
Type: 1 invitation Technique: multiple folds

Fig. 38. Invitation to the exhibition *Ce n'est pas la taille qui compte*, 2018, object no. 250 of the International Collection of Small-Scale Printed Objects.

Through this display, the exhibition could be visited in various ways, but, mainly, the visitor should adventure inside a library-like space alone. If one were to see or manipulate all of the 250 exhibited objects, it would have taken a while. However, here, like in a library, the visitor can select which books to engage in. The visitor could also follow a classic commented visit or assist in any of the programmed discursive visits (economy, making identity, techniques of production, and a card's game) with the curators.

[101] Émeline Jaret, "'Ce n'est Pas La Taille Qui Compte'. Nogent-Sur-Marne, Maison d'Art Bernard Anthonioz (Maba) – 13 septembre – 16 décembre 2018," *Marges*, vol. 28, no. 1, 2019, https://www.cairn.info/revue-marges-2019-1-page-144.htm.

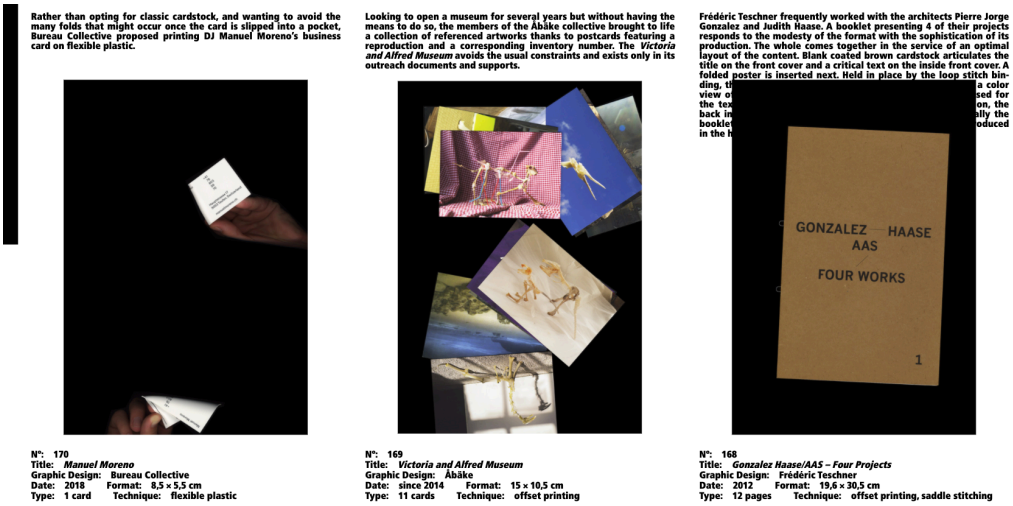


Fig. 39. International Collection of Small-Scale Printed Objects website

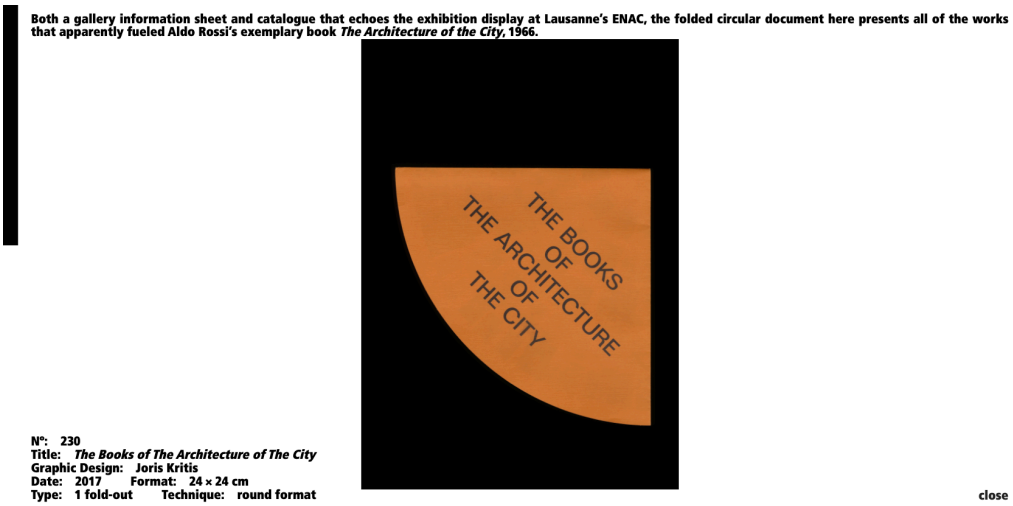


Fig. 40. Joris Kritis, *The Books of The Architecture of The City*, 2017, object no. 230, randomly displayed by the the International Collection of Small-Scale Printed Objects website's algorithm

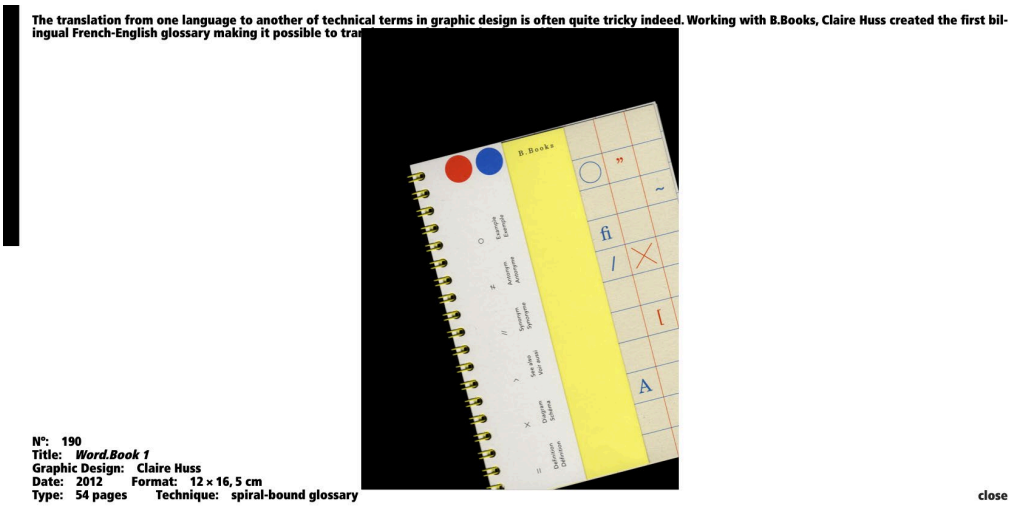


Fig. 41. Claire Huss, *Word.Book 1*, 2012, object no. 190, randomly displayed by the International Collection of Small-Scale Printed Objects website's algorithm

Nevertheless, this collection originated long before this "public presentation" or institutionalization. Schmerber mentions in an interview that the idea for the project originated around 2014 when he was working as an assistant cataloguer at the École Supérieure d'Art et Design in Amiens. There, he discovered a small collection of documents and objects, presenting interesting designs. Peggy Letuppe, the head cataloguer of the school, had started archiving these small objects inside boxes so that the students were able to consult and reference documents from other graphic designers. After this encounter, Schmerber decided to take the collection a step further by actively indexing and acquiring new objects directly from graphic designers and studios.[102]

Through the act of cataloging these printed objects, and by putting them on a shelf, they become equal to a "book" that we can manipulate, consult, reference. Therefore, transforming them into valuable documents. Indeed, each printed object stores information or, more precisely, visual and formal knowledge. On the other hand, through the act of exhibiting, what was once a small personal collection acquires new value. It also gave birth to an online archive —and a future public library— that make visible the numerous possibilities of arranging information on paper within the constraints of the current print economy.

Today, the collection counts 261 objects according to its website, specifically created to access and navigate through the whole inventory (see fig. 39 - 42). The online archive, built in parallel to the exhibition, was also designed by the curators themselves, as they are graphic designers. In our screens, we can see three objects a time. This three-column structure (see fig. 39) might evoke the three levels of the shelves in the exhibition's scenography. In terms of its search-ability, there is an algorithm that presents us, randomly, with a different item of the collection each time we enter the archive. However, we can also scroll the collection by date, technique, size, date, and author (see fig. 42). The archive's website acts as a sort of hybrid of an exhibition catalog and a museum's collection database.

Overall, this exhibition is one great example of how the physical library can serve as a model for curating inside the exhibition space, as both (the library and the gallery) act as a repository of objects. The exhibition, as a whole, gets transformed into a movable library/archive that must adapt to the architecture of the places where the exhibitions will follow. Even so, in its online format. The gallery's function is also challenged as it actively engages with the visitor, giving them the possibility to manipulate the objects and to touch the artworks. Through the digital layer, these objects become accessible to a broader public.

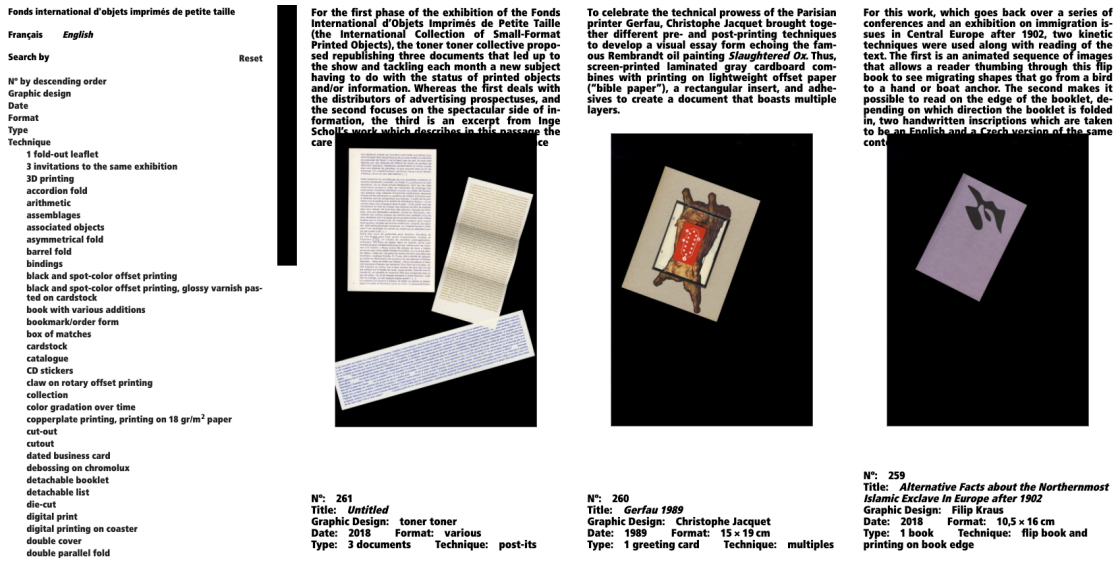


Fig. 42. International Collection of Small-Scale Printed Objects website's menu

[102] Maison d'Art Bernard Anthonioz, ed., *Ce n'est Pas La Taille Qui Compte*, exhibition catalogue (Paris: Fondation nationale des Arts Graphiques et Plastiques, 2018), 13

The new infrastructures of collections

We have come to develop an idea that good infrastructures are those that are imperceptible, but as scholar Lori Emerson says "the drive to make interfaces[103] invisible limits our ability to understand and change their inner workings."[104] The books, the library, the gallery, a computer program, these are all interfaces, and need important infrastructural systems to exist. In this regard, Keller Easterling writes:

> The word "infrastructure" typically conjures associations with physical networks for transportation, communication, our utilities. (...) Yet today, more than grids of pipes and wires, infrastructure includes pools of microwaves beaming from satellites and populations of atomized electronic devices that we hold in our hands. The shared standards and ideas that control everything from technical objects to management styles also constitute infrastructure. Far from hidden, infrastructure is now the overt point of contact and access between us all—the rules governing the space of everyday life.[105]

According to Easterling's definition, we can consider the library itself as an infrastructure. It has developed specific protocols, standards, and systems for storing and retrieving information since its inception. The vast amounts of information we produce have resulted in a plurality of types of documents. This has come to extend our understanding of the library and, therefore, of the book. How is the book changing in 2020, when most people spend more time reading their social media accounts or surfing the Web than reading an actual printed book? Could we say that we are reading books on Twitter? Maybe, maybe not, but we can consider an online platform to be a collection of information, organized in its own manner, and through its own infrastructures.

The library has been further extended outside of the public library, more recently into the digital space, which has come to modify our approach towards it. We navigate through libraries and collections more often than ever before. However, we often fail to see the construction of such, let us just take our own devices as an example. Every day, we encounter digital curated libraries and collections of all types of media: playlists on Spotify or Youtube, collections of bookmarked websites, collections of movies, collections of books (either as files in PDF format or specific e-book formats), collections in blogs, and many others. (see fig. 43 - 46) These collections are curated by each one of us, hand-picked by somebody else, or even curated by an algorithm according to our queries[106]. With the increase in a type of data that can be automatically filtered and analyzed, archives and collections are more than ever using standardized actions to curate their contents.

The elements that once defined the reading and our understanding of a book (as a closed system) are now being challenged by these new type of remote collections that we access through our screens and that we are also unconsciously building— or rather algorithms invisibly are— through specific actions and the choices of searches we make. These algorithms are the new essential systems for retrievability, as they use that data we provide to shrink the infinite possibilities into something manageable. In the article "Cold Discovery", Drew Austin reminds us that in the new digital platforms, "we never have to face the blinding totality of that variety all at once."[107] So, with the multiplication of new types of libraries and its collections, the infrastructure of the book is bound to change too. "A cover once represented

---

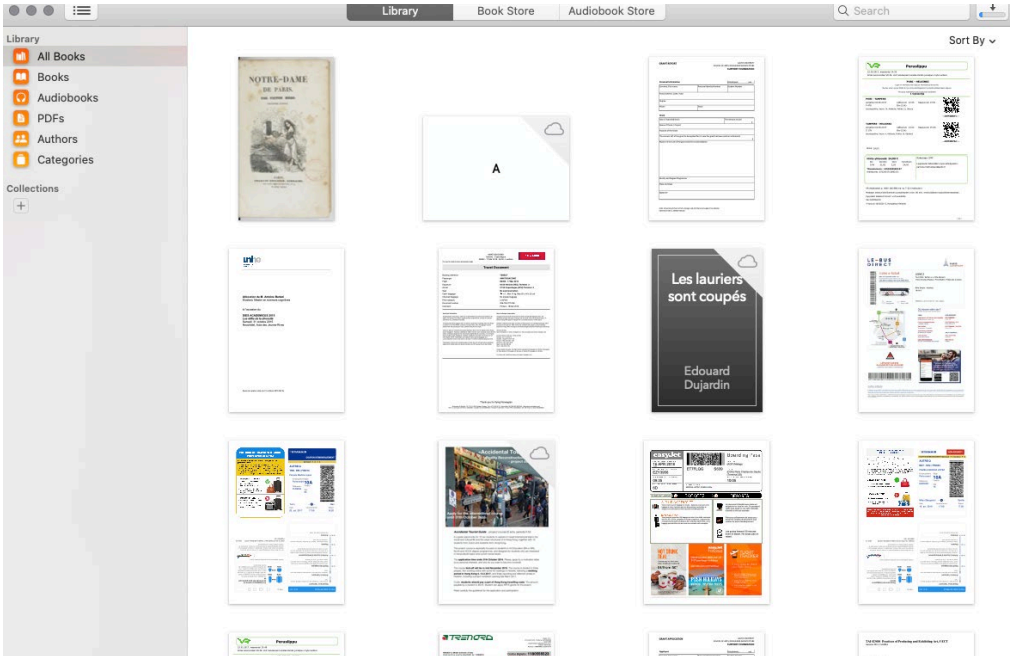
[103] A term she uses to define what could also be understood as infrastructure.

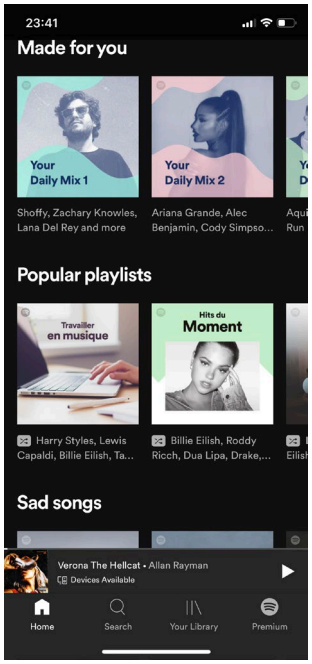
[104] Lori Emerson cited in Amaranth Borsuk, *The Book*, Kindle Edition (Cambridge: The MIT Press, 2018), chap. 4.

[105] Keller Easterling, *Extrastatecraft: The Power of Infrastructure Space* (London: Verso, 2016), 11.

[106] Margaret Rouse, "What Is Query? - Definition," WhatIs (TechTarget Network, 2017), https://searchsqlserver.techtarget.com/definition/query. "A query is a question, often expressed in a formal way. Queries can accomplish a few different tasks. Primarily, queries are used to find specific data by filtering specific criteria. Queries can also calculate or summarize data, as well as automate data management tasks."

[107] Drew Austin, "Cold Discovery"





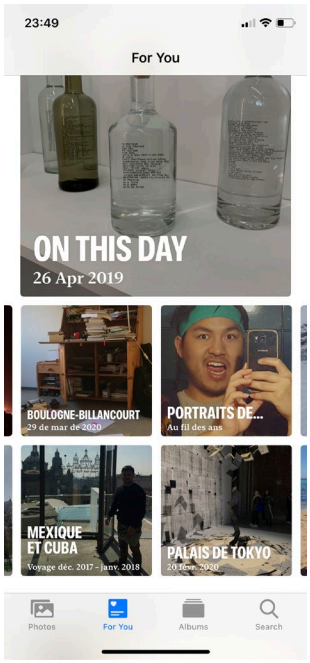


Fig. 43, 44, 45, 46. Screenshots of various libraries on my phone and computer.

a book's tangible individuality, its discreteness. Now, on screens, covers persist as vestigial rectangular images, superfluously ornamenting search results or PDFs."[108]

While we could argue that a cover —whether it is from a movie or a book— is still useful as a visual reference of the contents in a document, we can still agree with Austin that a cover on a digital library has not the same use and value than it has on a printed space. Just like algorithms and tags today, standardized titles and covers were once the most important infrastructure of the printed book. They became necessary to facilitate the identification of books after their sudden influx after the invention of the printing press. In the Middle Ages, for example, a book did not need to have a standard title, and the most crucial element for retrieving a text in one's own library was the text's incipit.[109] The fewer items we own, the easier it is to remember them without needing complicated and individual systems.

A physical cover is, in fact, a specific analog protocol for engaging with a

[108] Austin, "Cold Discovery"

[109] *Ibid.*

particular physical object. Far more than a container or shell for content, the cover is an interface between that content and human society, the intermediate layer that positions the information in the world. A physical cover is, in fact, a specific analog protocol for engaging with a particular physical object. Far more than a container or shell for content, the cover is an interface between that content and human society. This intermediate layer positions the information in the world. Covers served to organize physical space but mostly to create points of access, just like a road connecting two cities or a door connecting the kitchen with the living room.[110] Therefore, when dealing with new kinds of digital spaces, their particular protocols are also as important, because they subject us their logics and norms:

> If covers can be construed as misleading or superficial wrappers, platform algorithms are hardly more honest. They introduce their own form of deception, feeding users content according to biases and affordances that are frequently opaque, obfuscated, concealed, or misleadingly represented. At their most transparent, streaming services like Spotify reductively mirror your past choices back to you; Netflix, however, has gone as far as to covertly recontextualize movie screen shots for its menu displays based on individual viewers' data, in order to entice those viewers to watch more — an algorithmic subversion of the physical cover that is slightly different for everyone.[111]

Coming back to Springer's idea that the rearrangement of archival information can create new adjacencies and meanings, it seems crucial to acknowledge which systems are ruling our access to analog and digital information. As she says, while these modern keyword cross-referring systems— just like covers or alphabetical and numerical systems before— already create relationships between individual items with others exiting in the world, "it is ultimately only the subjective and diverse desire from within a collective usership that can complete the library in its mission and meaning."[112]

Fig. 47. Jorge Mendez Blake, *Chapter XLIII: Empty Library*, 2017, Guadalajara, Mexico.

Empty Library is made up of a series of concrete bookcases that are spatially organized around two existing plant beds in a pedestrian area. Contrary to the main objective of libraries- the conservation, cataloging and distribution of the cultural heritage-, this series of bookshelves does not contain books, rather it remains silent, as a remnant of another era or waiting to be filled.

[110] Austin, "Cold Discovery"

[111] *Ibid.*

[112] Springer, "The Library as Curatorial Space," 31.

Copy and print: tools for recording and preservation

As our capacity for production of information has augmented, libraries have multiplied and have grown bigger. Due to an insufficiency of physical space that results from having too many items in a collection, we have a constant need for new archival and reproduction technologies. Our libraries, as we saw in the last chapter, are not only made out of paper books anymore, and they also exist virtually.

New technologies have made possible the acceleration in the migration of information into the universal form of digital bits.[113] Documents are now also powered by electricity. However, even though we cannot see the overall contents of the Internet at the same time, it does not mean that the information is not recorded somewhere. The conversion of the print into digital form has also transformed the way we acquire, produce, read, and organize documents/books. New technologies like OCR[114] have transformed that way we approach authorship and ownership, and accessibility.

> When the Gutenberg printing press was a new invention gradually turning the book into a real mass medium, not everyone welcomed this technology with enthusiasm and excitement. In a mode of address similar to the contemporary skeptics lamenting the death of the book in a world of digitization, printed books on paper were also once seen with suspicion by the monks occupied in monastic scriptoria. Trained to copy texts o parchment in meticulous handiwork, some of these scribes doubted that the new books would even last 100 years, as they believed these printed objects to be less durable than the older tradition of the manuscript."[115]

Copying has existed since the first human; it inherent to our species even at a biological level. However, before the photocopiers, scanner, printer, and personal computers, it was not as straightforward or as cheap for anyone to have an exact copy of documents.[116]

When we talk about something scanned, it has already been downloaded in a sense; it has circulated on paper before existing as digital dots. Copying has been since the very first universal library, one of the most essential tools for a collection. Copies serve to preserve the knowledge of the world, but producing exact doubles of specific works was expensive and time-consuming in preindustrial times. However, as Kevin Kelley points out:

> That ancient economics of creation was overturned at the dawn of the industrial age by the technologies of mass production. Suddenly, the cost of duplication was lower than the cost of appropriation.[117]

Thus, with the change in the simplicity of copying, the values associated with it have shifted too, and older economies of copyrighted content are also having hard time adapting to it. As of today, every single action that we undertake on our devices require for a copy of that data to be made somewhere. Almost every single content existing online and on paper can be copied or reproduced (through screenshots, photos, scanning, copy-paste, downloading). Before, mass production of goods (including books) owning an exact copy or reproduction of anything would be almost as valuable as

[113] Kelly, "Scan This Book!"

[114] Optical Character Recognition, or OCR, is a technology that enables you to convert different types of documents, such as scanned paper documents, PDF files or images captured by a digital camera into editable and searchable data.

[115] Anna-Sophie Springer, "Reading, Rooms, Reading, Machines," in *Fantasies of the Library*, ed. Anna-Sophie Springer and Etienne Turpin (Berlin: K. Verlag, 2015), www.synapse.info/publications/intercalations, 51.

[116] Marcus Boon, *In Praise of Copying* (Cambridge: Harvard University Press, 2013), https://www.hup.harvard.edu/features/in-praise-of-copying/In-Praise-of-Copying-by-Marcus-Boon-HUP-free-full-text.pdf, 197.

[117] Kelly, "Scan This Book!"

the original work, until the copy, in particular in Western culture, gained a more negative connotation, often associated with a lack of effort and originality.[118] However, once more, the value of the copy is shifting into actions that cannot be copied with ways "to recall, annotate, personalise, edit, authenticate, display, mark, transfer and engage an object."[119]

Mass digitization

Since ancient times, libraries have enlarged their collections in a very similar way through acquisition, gifts, loans, bequest, and by producing their own texts, and by making copies. Before the massification of literature, the most common method of owning a book would be to hand-copy the texts. However, with the library of Alexandria —as their objective was to have the biggest collection of the world— their acquisition strategy was a bit more extreme. [120] In a certain way, it might be comparable to what it is happening now with private companies like Google, who took the mythical example of the library of Alexandria as an inspiration for their idea of building the most prominent digital library in the world.[121]

In Alexandria, numerous stories exist around the methods of appropriation there were used for acquiring books. Some accounts say that the Ptolemy dynasty searched every ship that arrived in the city looking for books. If one was found, it was taken to the library in order to produce a copy of it by the library's scribes. They also assessed whether to keep the copy or confiscate the original work. In this last case, it is said that they compensated the owner and gave them back the copy instead of their original work.[122] While the exact veracity of these stories is difficult to corroborate, they nonetheless give a broad view of the value that libraries created over the books they decide to store and preserve through collecting, which is something that has not changed much. Whether it is in a physical library or a digital one, the possibility of accessing information that we have not produced ourselves is at the very base of our society.

The content we now have access to has grown exponentially through mass digitization and the distribution of those contents that the Internet has made possible.[123] However, it is relevant to note that Google was not the first to have used new copying technologies in order to add and store every possible book in their collections. Thyslup tells us that before the advent of the Web there were "numerous attempts at capturing and remediating books in scalable forms, for the purposes both of preservation and of extending the reach of library collections."[124]

Microfilm[125], patented for the first time by French photographer and inventor René Dragon in 1859[126], was, before the digital scanner, the most promising of technologies for storing, preserving, and reproducing documents. Nowadays, microfilm still exists, but digital document storage is often

---

[118] Boon, *In Praise of Copying*, 108-109.

[119] Kelly, "Scan This Book!"

[120] James Crawford, "The Life and Death of the Library of Alexandria," *Literary Hub*, March 13, 2017, https://lithub.com/the-life-and-death-of-the-library-of-alexandria/.

[121] Google, "Google Books History"

[122] Antonio Marco Martínez, "The Library of Alexandria (3): The Library of Alexandria Acquired Books in a Curious Way," *Antiquitatem: History of Greece and Rome. Anecdotes of Classical Ancient World* (blog), March 31, 2014, http://en.antiquitatem.com/library-of-alexandria-books-copy/.

[123] James Somers, "Torching the Modern-Day Library of Alexandria," *The Atlantic*, April 20, 2017, https://www.theatlantic.com/technology/archive/2017/04/the-tragedy-of-google-books/523320/.

[124] Thylstrup, *The Politics of Mass Digitalization*, 8.

[125] "Microfilm Definition", *Technopedia*, accessed April 15, 2020, https://www.techopedia.com/definition/8337/microfilm. Defined as an analog storage medium using film reels which are exposed and developed into photographic records using a photographic process. Viewing microfilm requires microfilm readers, which are simple devices consisting of a light source and magnification.

[126] Ernie Smith, "The Strange History of Microfilm, Which Will Be With Us for Centuries," *Atlas Obscura*, June 20, 2016, https://www.atlasobscura.com/articles/the-strange-history-of-microfilm-which-will-be-with-us-for-centuries.

preferred, as the stored contents are more accessible and distributable and less likely to suffer physical damage. However, many argue that as a technology, microfilm is much more durable than digital documents since it can last over 500 years if stored properly.[127]

Paul Otlet, alongside engineer Robert Goldschmidt proposed in 1906, a new form of the book through photography, calling it the *livre microphotographique*[128]. They saw in the already existing microfilm technology a way to get around the size and storage limitations imposed by the codex format in libraries. Thylstrup reminds us that for Otlet "the most important transformations would not take place in the book itself, but in substitutes for it."[129]

He was right, the format of the book since the 20th century has been massively changing. It has, and still is, being translated/copied from paper into analog and digital formats through images. Although the technology of the optical scanners that we use to digitize our documents in 2020 is not the same as that of the microfilm, their concept is similar. In both cases, the book is reproduced page by page through an image, which altogether becomes one single document again but in a reduced size of the original document. Sometime after Otlet and Goldschmidt's publication, in 1927, the Library of Congress started microfilming more than three million pages of books and manuscripts in the British Library.[130] As of today, this technology is still in use because of its advantages over technological obsolesce and durability, just like the book.

Other early precursors of mass digitization have existed before Google Books. Two of them are the Project Gutenberg (which converts free-of copyright analog texts into digital text through manual conversion)[131] and the French mass digitisation project affiliated with the construction of the Bibliothèque nationale de France (BnF) in 1989[132]. Libraries, in particular big national libraries like the BnF, can invest in resources and machines for undertaking massive digitization tasks.

Nevertheless, digitizing one's own books did not make much sense until the advent of smaller interfaces— such as our computers and smartphones— and the institution of new information organizations such as Google, Yahoo, Ask and MSN with their corresponding search technology that enables us to grab and read any document uploaded to the Web. As written by Kelly:

> Turning inked letters into electronic dots that can be read on a screen is simply the first essential step in creating this new library. The real magic will come in the second act, as each word in each book is cross-linked, clustered, cited, extracted, indexed, analyzed, annotated, remixed, reassembled and woven deeper into the culture than ever before. In the new world of books, every bit informs another; every page reads all the other pages.[133]

While the possibilities of mass digitization are often associated with broader accessibility, we need to keep in mind that these digital spaces and information organizations have their own politics and thus affect us directly when we use them. In terms of private digitization, we are no longer physically acquiring those objects. Therefore, we must rely on that the companies and institutions that digitally store our information will not

---

[127] Paul Schor, "M Comme Microfilm" YouTube Video, *Paris Diderot*, January 30, 2017, https://www.youtube.com/watch?v=lCMafShkpM.

[128] Robert Goldschmidt, *Sur une forme nouvelle du livre : le livre microphotographique* (Bruxelles: Institut International de Bibliographie, 1906), https://iiif.lib.harvard.edu/manifests/view/drs:13788331$1i.

[129] Thylstrup, *The Politics of Mass Digitalization*, 8.

[130] *Ibid.*, 8-9.

[131] Michael Hart, "The History and Philosophy of Project Gutenberg;" *Project Gutenberg*, 1992, https://www.gutenberg.org/wiki/Gutenberg:TheHistoryandPhilosophyofProjectGutenbergbyMichaelHart.

[132] To learn more about this project, see Thylstrup, *Mass Digitalization*, 10-11.

[133] Kelly, "Scan This Book!"

change their politics of access for its users.

Many libraries, individuals, and companies around the world that have started big projects of digitization are often doing so in need of space and cost reductions. Thus, they might decide to get rid of parts of the collection of physical documents that they have already digitized. Document destruction makes us wonder what will happen with all our physical documents once when we replace them with a technology that might not be as durable as paper. This is what happened in 2013 at Cologne University.

Around 150,000 picture slides that reproduced artworks[134] —which had been the supporting material for many lectures at Cologne University's since the 1950s— became obsolete after the introduction of digital imaging. As they were only occupying space, the University was bound to get rid of them. It is at this point that artist Philip Goldbach decided to give a second life to these slides. He took all of the documents and spilled them out on the floor of the Museum Wiesbaden, thus destroying their systematic order. (see fig. 48 & 49) Through this act of disorganization, Goldbach stripped these documents from their associated use. Therefore, exposing their materiality and the usefulness of disorganized and unreferenced information.[135]

Fig. 48. Philipp Goldbach, *Sturm / Iconoclasm*, 2013/2014, installation, small-image format slides, former slide archives of Cologne University's Institute of Art History, Museum Wiesbaden. Courtesy Philipp Goldbach / VG Bild-Kunst Photo: Wolfgang Günzel

Fig. 49. Philipp Goldbach, *Sturm / Iconoclasm*, 2013/2014. Museum Wiesbaden. Courtesy Philipp Goldbach / VG Bild-Kunst Photo: Wolfgang Günzel [detail]

Then in a second act, in 2015, Goldbach reassembled this entire collection into a new form that he titled *Via Lucis*. (see fig. 50) He stacked all of the slides one on top of the other, producing a sort of three-dimensional mural of white noise. In this new rearrangement, the slides do not serve anymore as carriers of the information. We can no longer access what they reproduced/contained in the image. Yet, through reorganization, a new type of ensemble is produced. Just like the pixels of our computers, these

[134] Philipp Goldbach, "Via Lucis," Philip Goldbach's website, accessed April 9, 2020, http://www.pgoldbach.de/vialucis1.html.

[135] *Ibid.*

squares, compressed all together, produce an entirely new image, an object carrying even more layers of information inside its individual elements; they hold more than over 2000 years of cultural history.

The imagery of art history is now collectively contained within an area of 2.5 x 8 meters, each slide adding a mark and actively participating in a new chaotic order.[136] Furthermore, as Isabella Smith suggests, these slides produce a visual effect that "recalls the static of screens—the same screens that have been part of the digital revolution that made the slide format redundant, and this archive (as well as others like it) obsolete."[137]

By manually giving a new order to the slides, Goldbach's artwork also reminds us of the manual work that is needed to scan documents or the manual gesture of turning pages. However, mass digitization is mainly done by scanning robots that can scan more than 1000 pages per hour.[138]

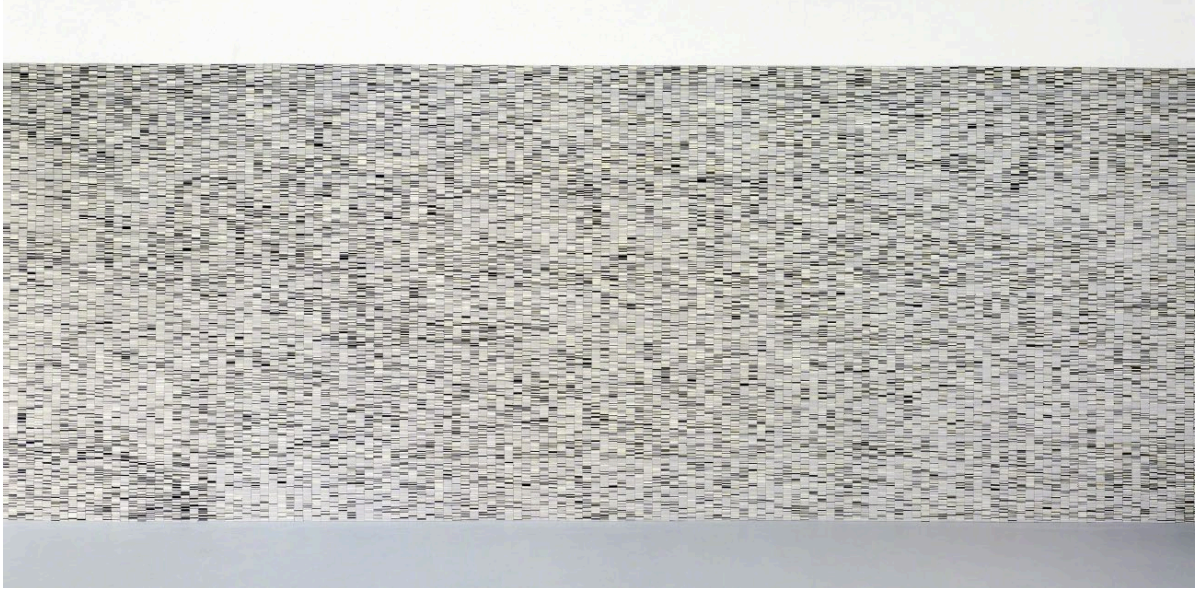


Fig. 50. Philipp Goldbach, *Via Lucis*, 2015, c. 150,000 small-image formal slides, former slide archive of Cologne University's Institute of Art History, 275 × 800 cm. Courtesy of Annely Juda Fine Art

The space of digital and print

Whether in a digital code or in print, information takes up space, real-life space. According to Kelly, with the technology available in 2006, it would have been possible to store everything humans have "published"[139] since the invention of writing —if fully digitalized and compressed— into a 50 petabyte hard disks. In order to house that number of petabytes, a building of the size of a small library would have been needed.[140] Today, in 2020, we are much further away from those numbers because we are producing information at a faster rate, particularly in terms of high-quality videos and images.(see fig. 52)

Depending on how this information is stored and organised, it can take either more or less physical space. Stacking pages was one of the biggest revolutions in terms of compression:

> The space of a sheet of paper (regulation international size, as used in Government departments, on sale at all stationers)

[136] Goldbach, "Via Lucis"

[137] Isabella Smith, "Philipp Goldbach's Meditations On Changing Technology," *Artsy*, February 4, 2016, https://www.artsy.net/article/artsy-philipp-goldbach-s-meditations-on-changing-technology.

[138] Kelly, "Scan This Book!"

[139] *Ibid.* "At least 32 million books, 750 million articles and essays, 25 million songs, 500 million images, 500,000 movies, 3 million videos, TV shows and short films and 100 billion public Web pages."

[140] *Ibid.*

Fig. 51. Aerial view of Lake Trasimeno

> measures 623.7 sq. cm. You have to write a little over sixteen pages to take up one square metre. Assuming the average format of a book to be 21 by 29.7 cm, you could, if you were to pull apart all the printed books kept in the Bibliotheque Nationale and spread the pages carefully out one beside the other, cover the whole, either of the island of St Helena or of Lake Trasimeno.[141]

In this paragraph, Georges Perec makes evident the spatial qualities of the paper and the importance of compression for space reduction. We could again refer to Goldbach's *Via Lucis*, which demonstrated the same thing. When spread over the floor, the 150,000 printed slides occupied a more significant area than when they were all stacked together. Moreover, by comparing the Lake Trasimeno to the BnF, Perec also highlights the role of the library as a container, containing masses of space in compressed formats.

Libraries in fact, have been growing so much until a point where it is no longer possible for them to hold anymore content, unless they expand exactly because they take up space. By the end of the 20th century, many of the biggest libraries in the Western world were sinking under its printed burden.[142] We just need to take a look at the numerous library projects that emerged all over the world after 1980. Almost in every country, there has been a project for a new library site in order to increase its storage capacity. Then, just like microfilm, digitation arrived as a solution for making space by ideating forms of compressing information for its storage.

However, replacing paper and making information smaller does not mean that we have stopped over-producing information. We might be aggravating the problem as it is now easier than ever to print and reprint any given document directly from our portable devices. Moreover, digital technologies also occupy space, as Marcus Boon reminds us:

> It is as impossible for two copies of a digital file to be stored in the same place as it is for two copies of an object to occupy the same point in space-time. (...) Thus, just as two urinals cannot occupy the same space, the same is true for two digital files, which would have to be stored either on different computers or in different locations on the same hard drive.[143]

BIT TERMINOLOGY

BIT
0.125 B
1 Bit is a single yes/no decision

BYTE
1 B
1 B One character, 8 bits **10 B** One word (a word of language, not a computer word) **100 B** Telegram; two punched computer (Hollerith) cards

KILOYTE
1,000 B
1 KB Joke; (very) short story **2 KB** Typewritten page **5 KB** Computer word processed page **10 KB** Page out of an encyclopedia, 1 colour thumbnail picture **50 KB** Image of a document page, scanned **100 KB** Photograph, low resolution **200 KB** Two boxes (4000) punched computer (Hollerith) cards **500 KB** Five boxes, one case (10,000 of punched computer (Hollerith) card

MEGABYTE
1,000,000 B
1 MB Small novel; 3.5" diskette, 1 chest x-ray **2 MB** Photograph, high resolution **5 MB** Complete works of Shakespeare; 30 seconds of broadcast quality video, 1 microfiche (105 mm film) **10 MB** 1 average library book scanned Black and White, Minute of high-fidelity sound = 1 hour of low quality audio; Box of 3.5" diskettes **20 MB** Two boxes of 3.5" diskettes **50 MB** Digital mammogram **100 MB** Yard of books on a shelf; two encyclopedia volumes **125 MB** 2,500 pages A4 scanned B&W, 1 roll of 16 mm microfilm (30.5 m) **200 MB** Reel of 9-track tape; IBM 3480 cartridge tape **250 MB** 1 roll of 35 mm microfilm (30.5 m) **500 MB** CD-ROM, 10,000 pages A4 scanned B&W = 1 pulped pine tree (loblolly)

GIGABYTE
1,000,000,000 B
1 GB Information on a pick up truck load of paper; symphony in high-fidelity sound; broadcast quality movie, 20,000 images = 200 fiche, 100 books scanned **2 GB** 20 yards of books on a shelf, 1 hour of compressed colour video **5 GB** 1 lumber tree (51 cm diameter, 33.5 m tall, 50 years old) turned into 100,000 pages scanned B&W **9.4 GB** 1 DVD 20 GB Audio collection of the works of Beethoven **50 GB** Library floor of books on shelves **100 GB** Library floor of academic journals on shelves

TERABYTE
1,000,000,000,000 B
1 TB Automated tape robot; all the X-ray films in a large technological hospital; 50,000 trees made into paper and printed; daily rate of EOS (Earth Orbiting System) data (1998) **2 TB** Academic research library **10 TB** Printed collection of the U. S. Library of Congress **50 TB** Contents of a large mass storage system

PETABYTE
1,000,000,000,000,000 B
1 PB 3 years of EOS data (2001) **2 PB** All U. S. academic research libraries **20 PB 1995** production of hard-disk drives **200 PB** All printed material

EXABYTE
1,000,000,000,000,000,000 B
5 EB All words ever spoken by human beings

ZETTABYTE
1,000,000,000,000,000,000,000 B
As of yet incomprehensible quantities of data

In addition and after the zettabyte is the yottabyte which is equivalent to $1x10^{24}$ bytes.

The value of a byte is dependant on whether a decimal or binary system is used. In a decimal system where information is encoded in 10's, for example, a hard drive, 10 GB = 1000000000 bytes. However in a binary system where information is encoded in 1's and 0's, for example, a computer, 10 GB = 1073741824 bytes.

THE HERMITAGE EXHIBITS
5%
OF ITS TOTAL COLLECTION OF
3 MILLION ITEMS

THE LOUVRE EXHIBITS
12%
OF ITS TOTAL COLLECTION OF
380,000 ITEMS

THE BRITISH LIBRARY EXHIBITS
3%
OF ITS TOTAL COLLECTION OF
14 MILLION ITEMS

THE BRITISH MUSEUM EXHIBITS
1%
OF ITS TOTAL COLLECTION OF
7 MILLION ITEMS

Fig. 52. Scan from the Bit Terminology section from the MAP publication.

[141] Perec, *Species of Spaces*, 10.

[142] Garcia, *Archive*, 17° 12°.

[143] Boon, *In Praise of Copying*, 198.

Just as Perec estimated that we could cover the Lake Trasimeno with the entire pages hold in the BnF, George Harwood and Evangeline Walker estimated in 2015 that the entire Internet could be fit onto somewhere between 68.1 billion and 136 billion pages of A4 paper, if each web page could be printed onto 15 to 30 paper pages.[144]

Yet, even before this estimate, in 2013, Kenneth Goldsmith had already reflected upon this seemingly impossible task: Printing Out the Internet. From July to August, more than 10 tons of printed sheets of paper cumulated inside of the 500m² exhibition space of the LABOR gallery in Mexico City. (see fig. 53) Pamela Echeverría, director of the gallery, had asked to ideate an exhibition in memory of Aaron Swartz.[145] After some ideas that could not concretize, Goldsmith decided to do an inclusive project. He published a Tumblr post[146] asking people all over the world to participate in the exhibition by printing out the Internet and sending the pages to the gallery.[147] Going from bank statement, online diaries, news articles, to personal email, by the end of the project, more than 20,000 contributors people had contributed with some document.[148]

Through this project, Goldsmith never really intended to print all the Internet but was somewhat interested in raising questions through the craziness of the idea of trying to materialize the immaterial. Whether people had or had not participated in the call, the conversation generated by the action call for *Printing out the internet* was more powerful. By seeing this mountain of papers, we get a sense of information overwhelming, and this is just a tiny fraction of the contents of the Internet.

As expected, the reception of the exhibition also got some critiques for being unecological.[149] Indeed, if we were to print the whole Internet, we would use many resources to produce inks and paper. However, more than going against these critiques, they should be some of the many relevant questions to pose ourselves about the space of print and digital. For what do we print? Why is it ok to digitize all the books in the world, as Google attempts to do so, but it is not ok to print the whole Internet? What Earth resources are we using to maintain the digital books?

The A4-size standard

> For most people, printing is a way of preserving content, of fixing it in a bound, physical location.[150]

The exhibition *Printing out all the Internet*, takes us to another very relevant question, that of the format of the paper sheet. At first glance, in terms of the paper pages, nothing seems out of the ordinary. However, considering that these pages could have come from anywhere in the world, one thing could do strike us: how all the pages look exactly the same. Every single piece of document, coming from very varied groups of people, was printed in a relatively similar size. They all look like the same small white rectangular

[144] George Harwood and Evangeline Walker, "How Much of the Amazon Would It Take to Print the Internet?," *Journal of Interdisciplinary Science Topics*, vol. 4 (June 3, 2015), https://journals.le.ac.uk/ojs1/index.php/jist/article/view/760/712.

[145] Daniela Franco, "Imprime, Que Algo Queda: Poeta Convoca Al Mundo a Imprimir Todo Internet," *Letras Libres*, June 26, 2013, https://www.letraslibres.com/mexico-espana/imprime-que-algo-queda-poeta-convoca-al-mundo-imprimir-todo-internet.

[146] The first post suggested sending in personal documents, like one's Gmail inbox or blog, as well as archives from sites like Wikipedia, the New York Times and WikiLeaks.

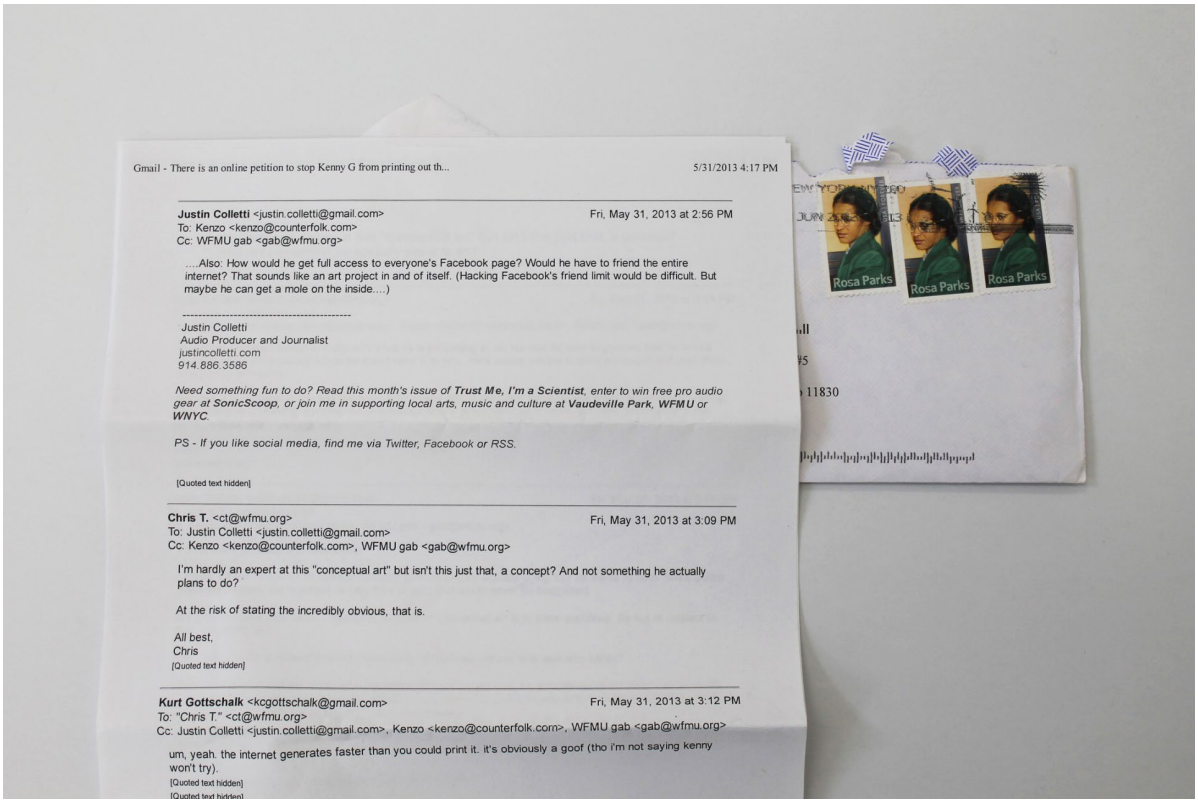
[147] Dan Zak, "'Printing Out the Internet' Exhibit Is Crowdsourced Work of Art," *The Washington Post*, July 26, 2013, https://www.washingtonpost.com/lifestyle/style/print-this-web-page-mail-it-to-mexico-citys-labor-gallery-make-art/2013/07/26/534e2582-f320-11e2-ae43-b31dc363c3bfstory.html.

[148] Zak, "'Printing Out the Internet'"

[149] Franco, "Imprime, Que Algo Queda"

[150] Orit Gat, "To Bind and to Liberate: Printing Out the Internet," *Rhizome*, May 1, 2014, https://rhizome.org/editorial/2014/may/1/printing-out-internet/.

Fig. 53. *Printing Out the Internet*, exhibition curated by Kenneth Goldsmith at Labor Gallery in Mexico City, 2013. Photo: Labor



Gmail - There is an online petition to stop Kenny G from printing out th... 5/31/2013 4:17 PM

Justin Colletti <justin.colletti@gmail.com> Fri, May 31, 2013 at 2:56 PM
To: Kenzo <kenzo@counterfolk.com>
Cc: WFMU gab <gab@wfmu.org>

....Also: How would he get full access to everyone's Facebook page? Would he have to friend the entire internet? That sounds like an art project in and of itself. (Hacking Facebook's friend limit would be difficult. But maybe he can get a mole on the inside....)

Justin Colletti
Audio Producer and Journalist
justincolletti.com
914.886.3586

*Need something fun to do? Read this month's issue of **Trust Me, I'm a Scientist**, enter to win free pro audio gear at **SonicScoop**, or join me in supporting local arts, music and culture at **Vaudeville Park**, **WFMU** or **WNYC**.*

PS - If you like social media, find me via Twitter, Facebook or RSS.

[Quoted text hidden]

Chris T. <ct@wfmu.org> Fri, May 31, 2013 at 3:09 PM
To: Justin Colletti <justin.colletti@gmail.com>
Cc: Kenzo <kenzo@counterfolk.com>, WFMU gab <gab@wfmu.org>

I'm hardly an expert at this "conceptual art" but isn't this just that, a concept? And not something he actually plans to do?

At the risk of stating the incredibly obvious, that is.

All best,
Chris
[Quoted text hidden]

Kurt Gottschalk <kcgottschalk@gmail.com> Fri, May 31, 2013 at 3:12 PM
To: "Chris T." <ct@wfmu.org>
Cc: Justin Colletti <justin.colletti@gmail.com>, Kenzo <kenzo@counterfolk.com>, WFMU gab <gab@wfmu.org>

um, yeah. the internet generates faster than you could print it. it's obviously a goof (tho i'm not saying kenny won't try).
[Quoted text hidden]
[Quoted text hidden]

Fig. 54. *Printing Out the Internet*, 2013, detail of one of the documents sent for the exhibition. Photo: Labor

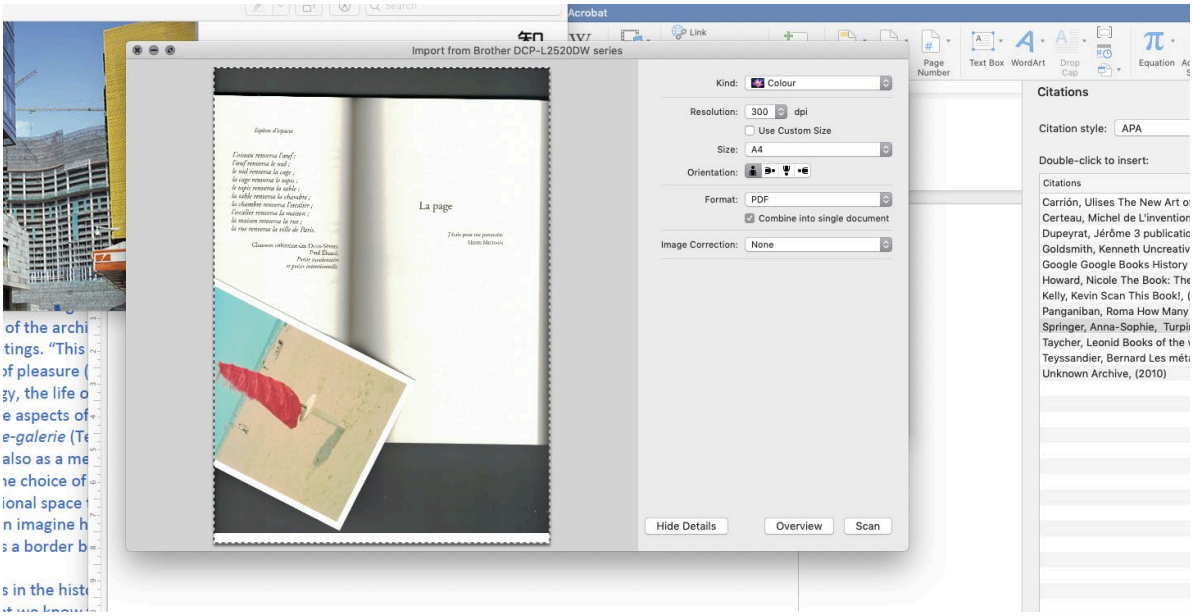


Fig. 55. Screenshot of a scan of Perec's chapter of "La Page" in A4 PDF format.

space. Indeed, they are mostly A4 and US Letter[151] size paper sheets.

The A4 size is one of the most ingrained infrastructures there is for the printed space. Perec used this format to cover the lake Trasimeno[152], Harwood and Walker predicted that it would take 68.1 billion and 136 billion pages of A4 paper to print all the webpages from the Internet. If we wanted to print the last article we read online; odds are that we can save it as PDF or print it both in an A4 size format. The same applies to our scanners.

Whether we are to translate digital spaces back to paper or the other way around, when transforming print into digital, the A4 size is a universal language.(see fig. 56) Indeed, it is an official metric standard: the ISO 216. This standard specifies the dimensions of the A-series of paper, of which the A4 is part of. The base of all the sizes in the A series is the A0 which equates to exactly 1m2 of paper (measuring in at 84.1cm x 118.9cm)[153], and goes down up to A8. The ratio between the length and width of each paper size always √2-to-1. This means that each size is half of the size of the previous one when folded parallel to the shorter lengths.

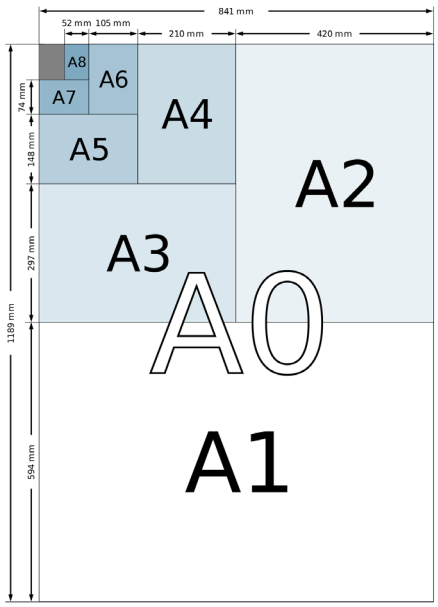


Fig. 56. A size illustration by Bromskloss

As a worldwide standard, almost any scanner and printer in the world will at least accept an A4 size paper sheet. Typographer Robin Kinross tells us that printing, as a process of mass-production, encourages norms and standards in its materials. Thus, printing has been a substantial factor in stabilizing and standardizing the way we write our texts (orthography, grammar, sizes, typography, colors, and inks).[154] To this respect, Lewis Mumford wrote:

> Printing was from the beginning a completely mechanical achievement. Not merely that: it was the type for all future instruments of reproduction: for the printed sheet, even before the military uniform, was the first completely standardise product, manufactured in series, and the movable types themselves were the first example of completely standardized and interchangeable parts.[155]

As the exact size that we use today (21 by 29.7 cm), the A4 was first adopted in Germany in 1918. The ends of the war was the perfect timing to propose a

[151] Brian Forte, "A4 vs US Letter," *Between Borders - Notes from Felicia* (blog) (Wordpress, September 3, 2002), http://betweenborders.com/wordsmithing/a4-vs-us-letter/.

[152] Perec, *Species of Spaces*, 10.

[153] Jane Stengos, "A Brief History of the A Series Paper Size," *Kwik Kopy* (blog), May 27, 2014, https://www.kwikkopy.com.au/blog/a-brief-history-of-the-a-series-paper-size.

[154] Robin Kinross, *A4 and before. Towards a Long History of Paper Sizes* (Wassenaar: NIAS, 2009), 15.

[155] Lewis Mumford, *Technics and Civilization* (1934; repr., Chicago: The University Of Chicago Press, 2010), 135.

new standard format. It was called the DIN 476 and over time would end up becoming global. The oldest known mention of the advantages of basing a paper size on an aspect ratio of √2 is found in a letter written on 25 October 1786 by the German scientist Georg Christoph Lichtenberg to Johann Beckmann.[156] However, Kinross proposes that the founding document of standard paper sizes is the Bologna stone, dated from the end of the 13th century. This stone was displayed in a public space and presented four different sizes. (see fig. 57 & 58) It is almost certain that they regulated the production of paper in the republic of Bologna, and maybe other parts of Europe in the early modern period.[157]

Again, we can see that systems that have been defining our writing, since a very long time ago, are very much influencing the new spaces that exist in print and even online.

Fig. 57. The Bologna Stone in 2019 in the lapidarium of the Museo Civico Medievale, Bologna, Italy. Photo: Donald Farnsworth

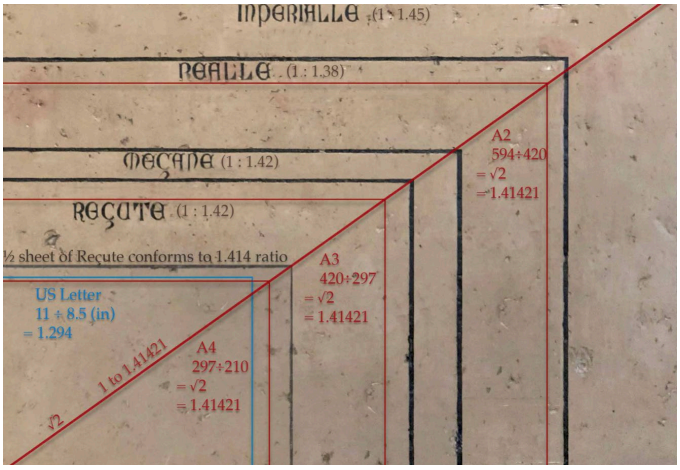


Fig. 58. A rearrangement of the four paper sizes on the Bologna Stone comparing them to a 1 : 1.41421 ratio and to modern A2, A3 and A4 paper sizes. Shown in blue is the rather awkward-looking and ill-fitting US Letter dimension proposed by Magnolia Editions. Photo: Donald Farnsworth

[156] Kinross, *A4 and before*, 7.

[157] *Ibid.*, 13.

How curating the gallery/book has changed in the 20th - 21st centuries

The container (book, gallery space, page, box) has been an important concept for the construction of spaces in architecture, media, and new media. The 20th century was a period of significant technological transitions that touched largely upon architecture, information, and documentality. All of these changes have had significant repercussions on our social objects. Thus, we can also correlate them with the surge of new curatorial forms and discourses. In this second chapter, we will further explore how these changes have modified the way artists, curators, editors, and architects curate the space of the gallery-book in between digital and print. Moreover, how they have also created a blurred border between publishing, architecture, design, and curating.

Today, it is widespread to see the book as the object of exhibitions and not just as mean of research. They can be linked to an exhibition, the object of the exhibition, or the space for an exhibition itself. As Springer mentions in her essay: "within art history the research on the book as an artistic site has been extensively researched, and it goes at least as far as the nineteenth century with Stéphane Mallarmé's *Un coup de dés jamais n'abolira le hasard*.[158]

The livre d'artiste originated in France at the turn of the 20th century, and it is considered to be one of the main precursors of the contemporary artists' book. These books differentiated from others by the fact that pages not only reproduced artworks, but they were printed from a source created directly by the artist.[159] However, they were rare and often produced in limited editions, and were not yet conceived as substitute spaces for the gallery.

According to Antoine Lefevre, Mallarmé's poem is to be considered a precursor of the artists' book genre, as his work has been extensively commented, cited, and reappropriated by many artists.[160] Mallarmé's ideas might have been too ahead of his time, but they found a proper space in the 60s and 70s with the emergence of conceptual art. It is from this moment on that the book became further explored as an artistic site.

In 1962, Ruscha published the first edition of *Twenty-six gasoline stations*, which comprised 26 deadpan photographs of gasoline stations along Route 66 from Los Angeles to Oklahoma City, considered by Lefevre as the other key founding work for the development of the artist book[161]. The particularity of Ruscha's work is that he did not intend to reproduce pre-existing photographs; he conceived the entire book as an artwork on its own.[162]

Since then, the book and its adjacent spaces have experienced intense transformations, and even more so with the arrival of new writing technologies. In terms of artistic and curatorial practices, the space of the book has flourished, and it has also expanded into the digital sphere. In

[158] Springer, "The Library as Curatorial Space," 5.

[159] Victoria and Albert Museum, "What Are Artists' Books?," *VAM*, August 12, 2011, http://www.vam.ac.uk/content/articles/a/books-artists/.

[160] Antoine Lefebvre, "Portrait de l'artiste en éditeur. L'édition comme pratique artistique Alternative" (Doctoral thesis, Université Paris I Panthéon-Sorbonne, 2014), 131.

[161] *Ibid.,* 131.

[162] Victoria and Albert Museum, "What Are Artists' Books?"

regards to curating, Duchamp's *Boîte en-valise* (see fig. 59) from 1941, might be a significant object in understanding the book as a portable gallery space. Already from this moment, Duchamp proposed a portable miniature museum in a suitcase that acted as a book, a collection of objects, an archive, and a gallery space in itself. Inside a grey cloth-covered cardboard box enclosed in a valise of cloth-covered wood, he gathered sixty-nine small reproductions of some of his most famous artworks. La *Boîte-en-valise* can unfold and expand with pull-outs and infinite possibility of (re) arrangement.

Fig. 59. Marcel Duchamp, *La Boîte-en-valise*, 1936 - 1941, carboard, wood, paper, and plastic, 40 x 37,5 x 8,2 cm, Centre Pompidou, Paris. Photo: Georges Meguerditchian -Centre Pompidou, MNAM-CCI

The "neutral" containers: the gallery, the cube, and the page

> Not even the exhibition space is neutral; you have to get there through corridors, doors, buildings, streets, the city, the country. Everything affects the work. There's no such thing as self-referential art.[163]

A blank page, even on a screen, is a pre-established fixed architecture that holds and molds the written elements it contains. Therefore, we should not see the blank page only as an empty and unaltered space. In this respect, Marie de Boüard says that the blank page is not a virgin space. When used as a printed exhibition space, it evokes the memory of past interventions like the white walls of a gallery do.[164] This takes us to talk throughout the following pages about the similarities of the white bounded page of a book and the white cube.

The white cube is an emblematic space associated with modernism, where all the walls are white, geometric, and the floor is of a sober and uniform color, very much like a typical white page from our printer. It is a neutral space, both physically and ideologically, that seeks to make visible the "essence of art." The encounter with works of art is generated through sobriety and

[163] Jorge Méndez Blake in María Muñoz, "Jorge Méndez Blake: Between the Visual Arts and Litterature," *Metal Magazine*, accessed May 11, 2020, https://metalmagazine.eu/en/post/interview/jorge-mendez-blake-between-the-visual-arts-and-literature.

[164] Marie de Boüard, "Les Espaces d'exposition Imprimés," in *L'Esthétique du livre*, ed. Alain Milon and Marc Perelman (Nanterre: Presses universitaires de Paris Nanterre, 2013), 213–226, https://books.openedition.org/pupo/1892?lang=fr.

outside of any historical, economic, and social context.[165] This aesthetic was institutionalized in 1936 with the exhibition *Cubism and Abstract Art*, curated by the first director of the MoMA (Museum of Modern Art, New York). Over time, changes in architecture became visible in the designs of the new spaces where 19th-century art would be presented around the world.[166]

We could say that this somehow happens to be the same for the book. The square format with a uniformed background color became the pre-established architecture for the books' spaces. Just let us take a look at our personal library, how many of our printed books are written on colored pages? How many of them are not square or rectangular? How many have text that goes outside of the margins? In the case of mine, none of the above happens that often (see fig. 60). Furthermore, when they do go out of these standards, they are often not considered to be a book anymore. Well, at least not by Ikea's bookshelf that cannot fit larger objects than 33 x 33 x 39 cm. Yet again, the book itself is moving to digital spaces, and these old standards sometimes get also extended to the digital spaces. Our printers only fit specific sizes, our PDF's (while it can contain more colors) still follow strict rules coming from print.

Fig. 60. Photo of some books in my bookshelf.

The *book-gallery*

The book is a space that is very much connected to architecture in more formal ways. A book is indeed a physical space, and its construction somehow comes from a particular transposition of the real world into a new form. We have inserted the vocabulary of the book in the construction of new digital textual spaces, such as text processors or other text and image editing programs (at least in its debuts). The same happened at some point in history with architecture and the printed book.

Bernard Teyssandier, a scholar, specialized in the history of the book, explains that the classic gallery rapidly "entered the book via specularity,"[167] both mimetic and metaphoric. As Dupeyrat resumes it:

> Teyssandier points out the in the 17th century the term of the gallery –used until that moment to designate a portico; in the

[165] Nikolett Erőss, "White Cube," *Curatorial Dictionary*, accessed March 6, 2020, http://tranzit.org/curatorialdictionary/index.php/dictionary/white-cube/.

[166] Abigail Cain, "How the White Cube Came to Dominate the Art World," *Artsy*, January 23, 2017, https://www.artsy.net/article/artsy-editorial-white-cube-dominate-art.

[167] Bernard Teyssandier, "Les Métamorphoses de la stoa: de la galerie comme architecture au livre-galerie," *Études Littéraires*, vol. 34, no. 1–2 (February 1, 2002): 71–101, https://www.erudit.org/fr/revues/etudlitt/2002-v34-n1-2-etudlitt694/007555ar/, 4.

> tradition of the ancient *stoa*[168]– would establish itself as a center place of the architecture used in palaces and town houses to host a painted décor or a collection of paintings. This space was simultaneously a place of movement (we walk through it; we move across it), of pleasure (it provides a space for aesthetic contemplation), and learning (taste, history, mythology, the life of great men and moral values, that paintings transmit).[169]

These three aspects (movement, pleasure, and learning) of the gallery architecture can also be applied to a book, or as Teyssandier defines it: the *livre-galerie*[170] (*book-gallery*). Not only in the construction of its appearance but also as a metaphor. In terms of its formal construction, Teyssandier says that, other than the title, the choice of the format is one of the things that testify of the transfer process from a tridimensional space to one without depth. The reader, by opening the front cover of a book, if he wants to, can imagine himself crossing the first threshold of a building through an in-between space that acts as a border between the real world and the artifact.

Teyssandier focuses on the history of the illustrated book of the 17th century and of the *book-gallery* as a sort of prototype of the exhibition. The exhibition catalog has been for a while the most important printed object linked to the gallery space. Since its origins, it has served as a trace of the existence of an exhibition. Initially, these catalogs served merely to document and list the artworks and artists presented in an art exhibition. It is in 1673 that we see the first printed booklet associated with the paintings exhibited at the French Salon. Nevertheless, as Springer notes it, "we have to wait until the mid-twentieth century to see more aesthetic and critical compendiums more ambitious in scope, size and scholarship approach to the exhibition catalogues."[171]

The *book-gallery*, as conceived by Teyssandier, is, of course, very different to today's' exhibition catalog. However, the idea of the *book-gallery* as having evolved from a stone-constructed space to a smaller one made out of paper is relevant if we want to understand the book not just as an object but also as a place of movement, of pleasure and of learning. Because of its formal and ideological qualities, the book has long experienced a significant interest for the artists in terms of experimental artistic projects. In the history of curating, the exhibition catalogs have also changed. They are nowadays often seen as the extension or the transposition of the events they refer[172], and more and more often going as far as to replace them entirely. A key figure in this evolution was the American curator and gallerist Seth Sigelaub. He is considered as the first curator to ever conceive the catalog as an exhibition in itself that could be distributed outside of the gallery world, and not as a publication tied to the presentation of artworks in a real physical space.[173] His first exhibition in a book form is *The Xerox Book* (1968). It presented the works of Carl Andre, Robert Barry, Douglas Huebler, Joseph Kosuth, Sol LeWitt, Robert Morris, and Lawrence Weiner. The 25 pages of work from each artist were conceived specifically for that particular photocopy format.[174]

While *The Xerox Book* is of great importance in the history of printed exhibitions —one that questions the notion of originality itself—, this exhibition on paper fails to act entirely as a *book-gallery*, even as described by Teyssandier's because it lacks some sort of curatorial agency.

---

[168] A *stoa*, in ancient Greek architecture, is a covered walkway or portico, commonly for public use. Early *stoas* were open at the entrance with columns, usually of the Doric order, lining the side of the building; they created a safe, enveloping, protective atmosphere.

[169] Jérôme Dupeyrat, "3 Exhibitions. A Specular Reading," *Revue Faire*, March 25, 2018.

[170] Bernard Teyssandier, "Les Métamorphoses de la stoa," 19.

[171] Springer, "The Library as Curatorial Space," 27.

[172] Jérôme Dupeyrat, "3 Exhibitions. A Specular Reading"

[173] Primary Information, "Seth Siegelaub (1941–2013)," *Artforum*, December 18, 2013, https://www.artforum.com/passages/primary-information-on-seth-siegelaub-1941-2013-44258.

[174] Primary Information, "Carl Andre, Robert Barry, Douglas Huebler, Joseph Kosuth, Sol LeWitt, Robert Morris, Lawrence Weiner AKA the Xerox Book," *Primary Information*, accessed May 11, 2020, https://primaryinformation.org/product/siegelaub-carl-andre-robert-barry-douglas-huebler-joseph-kosuth-sol-lewitt-robert-morris-lawrence-weiner/.

When it comes to the exhibition catalog, the catalog of a library bears some resemblance to the early exhibition catalog, "which originated as a simple list to carry as a reference while viewing the artworks in an exhibition."[175] As a list of items in a collection, the library catalog acts as an index of everting it holds, thus being the "central nervous system of the library's organization."[176] The library, this vast space for storing knowledge, has been —at least since its institutionalization—, very much related to the archive and the museum. As made evident by Springer, the archive, the museum, and the library "exist in order to collect, research, and make accessible objects that carry information in material culture."[177]

Architecture and design as curatorial infrastructure

Within contemporary art, the white cube, even though it has been vastly questioned, detoured, critiqued, is still the most dominant form of the exhibition within galleries and museums.[178] In part, as we have already mentioned, it could be explained by the fact that physical spaces change at a slower rate than human ideas do. In the case of an already existing museum with an already predefined architecture, it would be quite complicated to entirely go against the imposed structure, even if they wanted to. Often, changing the whole building might be a bit too complicated. Therefore, small changes are done little by little over time.

Fig.61.Centro Cultural Universitario, Mexico City

Today, these 20th-century architectural ideologies are still visible and dominating. However, the critical discourse against the sacralizing aspect of white cubes —which by focusing merely on the objects, they tend to forget their audience—, is a very present theme. The criticism has affected both architecture itself and the conceptual organization of the museums, with new kinds of structures and alternative modes of/for exhibiting that do not cease to emerge in the 21st century. However, in terms of its architecture, many brand-new and self-defined post-museum projects, remain strongly influenced by the idea of creating neutral spaces. The question then becomes: how can we create a "neutral" space that does not want to focus merely on an object?

Fig.62. MUAC's outside view with vegetation and volcanic rock, 2010. Photo: Edgar

In order to further explore this question, it could be interesting to analyze the construction of a new museum's building after the rise of the Internet. We will take as an example the MUAC (Museo Universitario de Arte Contemporaneo) in Mexico City. This museum was conceived in 2007 by the architect Teodoro González de León as a space that welcomes and adapts to the new visual arts that are produced in our contemporary society. The MUAC project was presented in 2008 by Graciela de la Torre, general director of Visual Arts at UNAM, as a post-museum; because its actions were not only focused on presenting works to the public but rather wished to give equal importance to knowledge and education.[179]

The MUAC is located in the south of Mexico City. It is part of the Centro Cultural Universitario (CCU), a huge cultural complex of the Universidad Nacional Autónoma de México (UNAM), and of the Ecological reserve of El Pedregal de San Ángel. (see fig. 61) The terrain where the museum sits was a product of the eruption of Xitle's volcano more than 2000 years ago. (see fig. 62) The rapid cooling of basaltic lava formed a rough ground of volcanic rock. It provided rich minerals that helped to the development of large biodiversity.

[175] Springer, "The Library as Curatorial Space," 27.

[176] *Ibid.*

[177] *Ibid.*, 7, 9.

[178] Erőss, "White Cube"

[179] Carlos Rojas Urrutia, "Inaugurará La UNAM El Museo de Arte Contemporáneo," *El Universal*, November 24, 2008, https://archivo.eluniversal.com.mx/notas/557717.html.

The CCU was originally planned in 1975 to give a new space to the artistic disciplines in vogue at that time in Mexico —music, theatre, dance, literature, and sculpture. The construction of this cultural complex developed in several stages through the years (see fig. 61). However, resulting from a rapid-growing contemporary art scene, the University's board felt the need for a" new place where the emerging Mexican visual art could come meet its national public and host its international peers." The MUAC was commissioned in 2003, but it is not until 2004 that Teodoro González de Léon's proposal was chosen as the one that would come to complement and modernize this cultural complex.

Fig.63. MUAC hall, back entrance. Photo: MUAC

Fig. 64. Aerial View of the MUAC building. Photo: Marco Mijares

If we look closer at the architecture's design, we notice that far away from removing the white cube, the white cubes have been inserted into a circular form.[180] (see fig. 64) González de León visited many in the world and found his major inspiration in the 21st Century Museum of Contemporary Art museum in Kanazawa (Japan) (see fig. 65) Just like a classic book, de León's architecture is composed of several square-spaces, clearly delimited. Yes, the pages come in different sizes, but they are still bounded together by an overall enveloping structure.

These traditional exhibition spaces are cut by corridors, patios, and windows, from where the visitor can create a direct relationship with the real world —the volcanic rock is even inside it. In some places of the building, it is almost part of it. (see fig. 62) However, the ideology of the white cube is still there. The gallery cubes are very much isolated from the exterior, aside from some occasional window opening inside the exhibition spaces (see fig. 67). Instead, the change comes in the modularity of space. The cubes act as some sort of containers that could, theoretically, become interchangeable. (see fig. 64 & 66)

The MUAC organizes itself a mini-city, as a public space where specific encounters and experiences can take place. By placing all the exhibition rooms on one single floor and connecting them through patios and inner streets, the visitor is free to create his on the way. This spatial organization refers clearly to the 21st Century Museum of Contemporary Art in Kanazawa (Japan). González de León visited around 30 museums in the world and found his primary inspiration in this place.

If we take a closer look at the museum's architectural plan, these containers feel more like flat pages inside a rounded book, and in some way, they do act as such. As thought by the architect, each of these exhibition cubes could either be an individual exhibition or be one chapter of a bigger whole. However, within its walls, it filtrates out whatever it does not contain. As a book, "a museum is not an object in the world but a mechanism to keep the world out, an elaborate filtration system."[181] This does not mean that they cannot talk to or about the world, but it means that they become appropriated spaces where a new itinerary is built, at a human scale.

Overall, the building does give a little bit more freedom for creating different kinds of lectures. It also opens up a little bit more to the exterior. However, it remains in the line of a sacral, passive, and contemplative way of viewing art. The pre-existing forms and material of the white cubes from the last

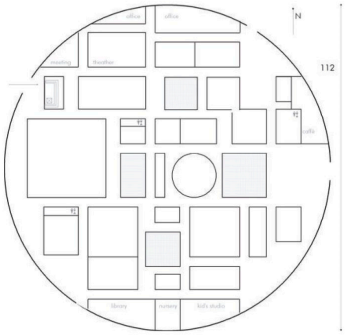


Fig.65. SANAA, The 21st Century Museum of Contemporary Art, Kanazawa, 2005. Photo: herearchitecture.

The Japanese museum was built in 2008-2004 by SANAA, the architectural firm of Kazuyo Sejima y Ryue Nishizawa established in 1995.

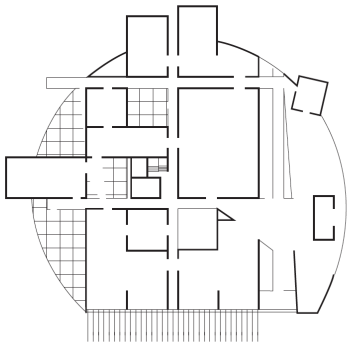


Fig.66. Teodoro González de Léon, Museo Universitario de Arte Contemporáneo, Mexico City, floor plan of the first level.

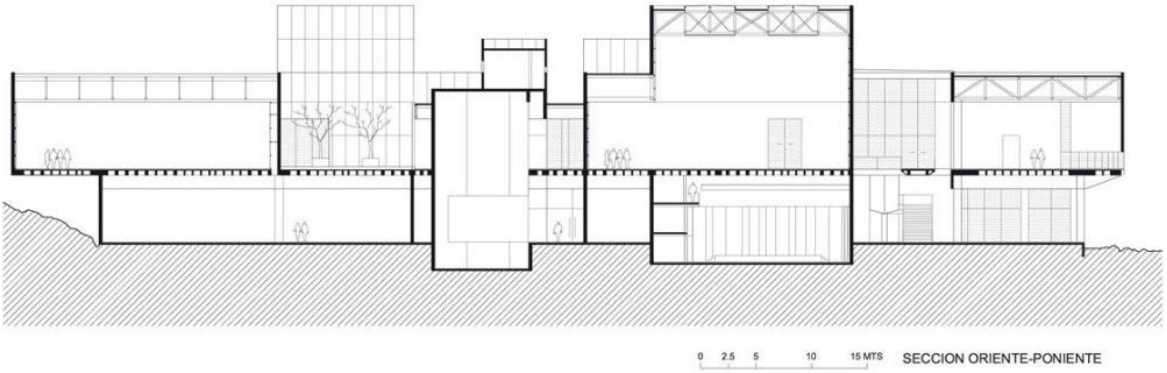


Fig. 67. West- east cross plan section of the MUAC.

[180] The museum is structured on a north-south axis that connects two different entrances, a small one in the north and a second one on the right side of a 45° inclined facade in the south. The building adds a total of 13,947 square meters of construction on two levels, of which around 3,300 constitute the exhibition spaces.

[181] Mark Wigley, "The Secret Life of the Gallery Wall," in *Rita McBride. Oferta Pública / Public Tender*, exhibition catalog (Barcelona: MACBA, 2012), 177–84, https://img.macba.cat/public/uploads/publicacions/RitaMcBride/wigleyeng.pdf, 177.

Fig. 68. MUAC's exterior view.

decades are forced into a circular container. Nevertheless, the building does change, and a new kind of museum seems to want to come out of the shell, even if it still has not quite come out yet.

The example of the conception of this building as it treats design directly takes us to another point: graphic design as infrastructure. As Michel de Certeau said: "(...) to read is to wander through an imposed system (that of the text, analogous to the constructed order of a city or of a supermarket)."[182] This is not too different from what happens in a gallery exhibition, where discourse and spatial design play a crucial role in the way an exhibition is read. As we saw with the architectural design of MUAC's museum, the way a building is constructed creates specific imposing configurations.

The written discourse and the spatial dispositions of any exhibition play today a crucial role when it comes to curating, but how language and its visual elements (size, format, typography) occupy spaces —whether on the walls of the gallery, on paper or online— should also be a major question. To illustrate this, we can quote Kenneth Goldsmith on talking about Matt Siber's *Untitled Project* series:

> By removing the language, we become aware of its layout as well as its prevalence and ubiquity, a fact we are blind to in our daily lives. We see how language in the city is ruled as much by the grid of architecture as the streets are: when the words are displaced on to a blank sheet of paper, the ghosts of architecture remain visible, enforcing its structure onto the words. Architecture, generally front and center, is demoted to a secondary role as a page for words; the buildings feel empty and forlorn without them. If we examine the types of language on the white panels, we become aware of its varieties, tonalities, and clusterings. We also see how bland and banal most of the public language is surrounding us.[183]

In *The Untitled Project* series[184], Matt Siber transforms images —from scenes of the underground to snapshots of products in a drugstore— made within the traditional documentary style by stripping away all visible text from the

[182] De Certeau, *The Practice of Everyday Life*, 169.

[183] Goldsmith, *Uncreative Writing*, 42-43.

[184] To see all the images from the Untitled Project series, refer to Matt Siber, "The Untitled Project (2002-2010)", Matt Siber art, accessed May 9, 2020, https://siberart.com/the-untitled-project.

Fig. 69. Matt Siber, *Untitled #19*, 2003

original picture, and digitally reconstructing it in an adjacent frame (see fig. 69). As said by the artist, the absence of the printed word draws attention to the role text plays within our daily landscape. It also emphasizes alternative forms of communication like symbols, colors, architecture, and company branding.[185] A very particular aspect of Siber's photographs is that he transforms a traditional documentary photography into a document.[186] He selects certain information from the picture, which in this case was text, to then translate it into a new visual arrangement. By doing this, he proposes a new way of reading the information contained in the original shot, thus creating a document directly from the photograph.

Through these "documents," we note that a building without text becomes notably silent, even lacking context at times. Once transposed into a white background, we are able to focus only on the text; we can see how the format of the text's original space (a building, a sign, a street, an advertisement) defines its structure and its limits. As Rancière said, "by drawing lines, arranging words, or distribution surfaces, one also designs divisions of communal space."[187] While these pictures reveal the imposing powers of capitalism in our current world, they also highlight the dominant role that text plays in today's visual landscape.

The white wall/page as sites for artistic intervention

> Even the evidence of filtration has to be filtered out. In the gallery itself, there are no visible wires, ducts, vents, or even light switches, just the works on smooth unmarked white walls.[188]

The white walls, as the white sheet of paper, is one of the most important interfaces between us, spectators/readers, and the artworks/texts. In respect to the white cube, the wall has been studied, critiqued, and diverted by artists and curators. They can hang artworks from the ceiling, spread them across the floor, turn the attention to other senses rather than the view, or move out of the gallery space altogether. However, the wall is just

[185] Matt Siber, "The Untitled Project"

[186] Matt Sibber in "Matt Siber by Alec Quig," *Bomb Magazine*, 2009, https://bombmagazine.org/articles/matt-siber/. "I love the documentary aspects of The Untitled Project because I'm not really taking away anything that was there. I'm only presenting it in a way that a straight photograph can't. (...) I'm not actually trying to challenge the notion of traditional documentary photography—I am interested in expanding this notion of document. For the record, I do make a distinction between "a document" and "documentary." The term documentary comes with a whole set of implications about an age-old photographic tradition that, although problematic at times, is still very important and relevant"

[187] Jacques Rancière, "The Surface of Design," in *The Future of the Image* (London: Verso, 2007), 91–107, https://newsgrist.typepad.com/files/the-future-of-the-image-jacques-ranciere.pdf, 91.

[188] Wigley, "The Secret Life of the Gallery Wall," 177.

Fig. 70. Michael Asher, Untitled, 1973, installation view, Galleria Franco Toselli, Milan. Photo: Giorgio Colombo.

like a paper page. It is an infrastructure of the gallery/book and a space on its own.

In this respect, we could reference Michael Asher's historical exhibition at the Toselli gallery in Milan (1973), where he removed all the traces of white paint that had accumulated over the years on the gallery's walls. This, in order to expose and establish the continuity between the floor, the ceiling, and the walls. Through this radical act, he raises questions about the function of these white walls and how they affect and constraint the information that we put on them.

Fig. 71. Coating color being sprayed onto an elastic roll which then transfers the coating film to the paper web. Photo: Video still of Process Making of Paper by Sappi

Asher's work makes us notice that through a polished layer of white painting, the wall's original function —to set limits in space— is pushed even further. It becomes invisible so that we can purely focus on the artwork. From a certain point of view, this system is effective, as the fewer visual elements we have on them, the easier it for us to concentrate on the displayed elements. Making a stronger parallel to a white sheet of paper, the color and format of these white pages have the same role as the white walls in a gallery. In order to acquire their whiteness, the paper sheets also have to be polished and painted with a thin layer of paint.[189] Thus obtaining that neutral aspect which is not inherent to the original raw materials of paper. (see fig. 71)

Also, at a more structural level, the page is a place on top of which "a text is built upon."[190]. Whiteness, like blackness, are systems that somehow give an impression of an infinite floating surface that can continue somewhere else. Lefevre tells us that according to Broodthaers, many artists after the 60s finally realized that there was something around their paintings and sculptures, and that txhis space must be invested. Just like how Mallarmé had already realized in 1987 with *Un coup de dés jamais n'abolira le hasard* that there was a page and a book around the block of monolithic text that had defined the poem until then.[191]

In *Un coup de dés*, Mallarmé was concerned with the physicality of words on a page and the way they can transform our perception of the space of the page. He proposed a layout corresponding to the subject of the poem: a ship caught in the storm.[192] He abandoned the text as block centered in the middle of the page and invested it all, even the margins. Then, the white spaces became as important to the construction of the text as the black letters did in any regular poem, just like the walls of the gallery in Asher's exhibition. (see fig. 70)

Now, with the new types of pages, as Wigley points out: "The gallery no

[189] Sappi, "The Paper Making Process," video.

[190] De Certeau, *The Practice of Everyday Life*, 134.

[191] Lefebvre, "Portrait de l'artiste en éditeur," 142.

[192] *Ibid.*, 139-140.

longer knows limits. Entering a museum starts at home or in a plane or in a tweet. The logic of the white wall flourishes in the cloud. The ever-strange life of the floating surface continues."[193]

Curating in between architecture and bits

As we have already mentioned in the first part of this thesis, the structure of the book as a codex presented the advantage to be able to hold more information, more text in within. It was smaller but yet had a more rational organisation as it offered a real architecture to the text. It made the movement through the pages easier, but it order to make its navigation easier, an infrastructural system became essential: sequences, hierarchies, and indexes. All of which are still essential elements of any "serious" written text in any printed publication, but not only. In fact, these elements are still giving a basic structure to all of online pages that we read/see. through the Hypertext Markup Language. The first-ever webpages on the Internet used the most basic elements of the printed book's organization (head, body, paragraphs, headings) through the HyperText Mark-up Language, which was developed by the inventor of the Word Wide Web, Tim Berners-Lee. This first HTML was based on the SGML (Standard Generalized Mark-up Language)[194]. The real addition to it was the inclusion of the hypertext[195], a new element for organizing information that became the new way of bounding electronic pages.

Through Berners-Lee's idea, the architecture of the book became, for the first time, a scroll and a stack of pages at the same time. "For the last five centuries, ever since Gutenberg's printing press made book reading a popular pursuit, the linear, literary mind has been at the center of art, science, and society"[196], until the hypertext. Systems that were once incompatible — volumen and codex— are now both part of our daily lives.

Today, when we read, we are continually passing from a linear-type of reading (horizontal/vertical) to a transversal one (through volume). Scrolling is what helps us to move inside a page (which can be as long or as short as it has information on it, while the hyperlinks help us navigate through pages, through a volume. Moreover, besides having to navigate through and within various digital layers, we are also hoping from ink to bits daily. Our minds are now having to deal with so many more different systems all at once.

The ability of fluidity, translation, and compatibility are also becoming central when writing a text within any context. Through the following chapter, we will focus on how curatorial practices have also developed new modalities of navigating through different ways of writing and reading. We will explore projects that situate in between the Web and the printed matter.

Aspen magazine: a *proto-hypertext*

As we have already mentioned, with the development of conceptual art, books as a site for artistic interventions became relatively common. Periodicals also experienced substantial artistic development in the early 1960s. As an example of the complex relationship between analog and digital, it seems relevant to explore one of the many loose-leaf magazine

[193] Mark Wigley, "The Secret Life of the Gallery Wall," 184.

[194] Standard generalized markup language features the following characteristics: Descriptive Markup and Document Types. Descriptive markup involves the use of markup code that identify how various portions of a document should be interpreted. For example, the code may identify one portion as a paragraph, another as a footnote and still another as a list or an item in a list.

[195] A software system allowing extensive cross-referencing between related sections of text and associated graphic material (Wikipedia definition)

[196] Carr, *The Shallows*, 10.

ventures before the Digital Age: *Aspen: The magazine in a box*.

This publication managed very interestingly to play with the expository qualities of the printed format and of new media. *Aspen* magazine was published in ten issues between 1965 and 1971[197] with each issue running around 15,000 to 20,000 copies. They were instead linked together through a cardboard box. Inside of each boxed-issue were contained all kinds of objects ranging from advertisements, reproductions of artworks, brochures, posters, foldouts, postcard, phonograph records, discs, films, to objects specifically conceived for the magazine by renowned artists. (see fig. 72) Its contributors' list was extensive, some of them included Brian O'Doherty, John Cage, Timothy Leary, J.G. Ballard, Jack Smith, Ossie Clark, Yoko Ono, Kate Millet, Susan Sontag, Dennis Oppenheim, and many others.

Fig. 72. *Aspen. The Multimedia Magazine in a Box*, no. 7, The British issue, 1970, graphic work (editions), 132 x 102 cm, MACBA Collection, Barcelona.

In the first volume of this publication, Phyllis Johnson, the creator of the magazine, attached a letter describing its objectives and motivations:

> This is the first issue of *Aspen, the Magazine in a Box*. In calling it a "magazine," we are harking back to the original meaning of the word as "a storehouse, a cache, a ship laden with stores." That's what we want each issue to be. Since it comes in a box, our magazine need not be restricted to a bunch of pages stapled together. We can do what editors have wanted to do since Benjamin gave his name to Franklin Gothic—we can put in all sorts of objects and things to illustrate our articles. And each article can be designed as a separate booklet with the size, format and paper dictated by the article itself.[198]

As Johnson describes it, the magazine was a medium that sought to "store" inside a box different type of content without having to follow a pre-imposed page format. By being unbounded, it could contain many different type of objects that could be freely arranged and rearranged by the reader. The format, also allowed to construct a very different object from the previous issue depending on each topic. The "storehouse" qualities of the magazine, and the box, for that matter, provided further freedom for content and form.

[197] For a comprehensive documentation of all the issues, see "Aspen: Index", *Ubu Web*, http://www.ubu.com/aspen/siteIndex.html.

[198] Phyllis Johnson, "Aspen No. 1, Item 8: A Letter from Phyllis Johnson", *Ubu Web*, accessed May 9, 2020, http://www.ubu.com/aspen/aspen1/letter.html.

In a certain way, we may see this publication as a premonition of today's websites and social media platforms (blogs, online magazines, online forums…) where anyone can publish and curate content that can include at the same time images, videos, audios, and texts. This magazine acted as a technological hybrid of two eras: a world that was no longer storing information "with the same matter, and in the same manner"[199]. Instead of just paper, it was now being written with new technologies, those of audio, film and, photography. *Aspen* had not yet encountered the new digital revolution that would arrive in the 21st century. Nevertheless, it already provided a glimpse of the coming transition in the ways we read, write, and produce documents.

As Ferraris and Martino tell us: "The documedia revolution does not coincide temporally with the invention of the web and the use of smartphones but it is an event that can be dated back to about fifteen years ago."[200] The revolution is not only happening in the architecture of the book, the magazine or the newspaper, but it expands further into the other layers of the stack. It is modifying that entire way society structures itself. It influences the way we built our cities, our archives, our museums (as we have seen it through the example of the MUAC). In an attempt to transcend the physical building, the new architecture of the gallery wants to be plural, (re)assemblable, and mobile. It wants to provide more than just one way of entering it, while still using the container form to achieve this. (see fig. 73)

Coming back to *Aspen* magazine issue 5+6 from 1967 (see fig. 74 & 75) is an excellent example of these new emerging ways of curating. In 1966, Brian O'Doherty was approached to be the guest editor-designer of an issue of *Aspen*, which he chose to transform into a mailable mini-museum.[201] O'Doherty saw in the box format an opportunity to challenge the form of both the white cube and the magazine. Many artists had already undertake this approach by then, but here, the novelty is that the editor positions himself as a curator of content, and not just as an artist or a designer.

Fig. 73. Kazuyo Sejima + Ryue Nishizawa/ SANAA, 21st Century Museum of Contemporary Art, Kanazawa, 2002-2004, FRAC Orléans Collection, Orléans

This museum was built in the heart of Kanazawa in 2004, a city with a long and rich historical tradition of temples and gardens. (…) The architects took full advantage of a site close to a major intersection with easy access from every direction and surrounded by a famous Japanese garden, buildings and a small canal. Aimed mainly at inhabitants, the museum is also designed to foster the redevelopment of local artistic creation. SANAA proposed a "miniature city" that opens in several different directions. Its circular plan, 112.5 m in diameter, houses a set of parallelepipeds and independent cylinders. The circulations flow freely, running from the exterior perimeter, along which the open public access elements of the program have been placed between the parallelepipeds, toward the core of the building, where the museum proper is located. The 19 exhibition galleries which make up the museum do not communicate directly with each other. By implementing an intermediate space – corridor, courtyard, garden – SANAA sought to encourage visitors to move about the galleries without any predetermined itinerary. Visitors compose their own path from one gallery to the next, from a gallery to one of the gardens or from one of the four interior courtyards. - Nadine Labedade

[199] Hugo, *Notre-Dame de Paris*.

[200] Ferraris and Martino, "What Is Documediality", 21.

[201] Maarten van Gageldonk, "Multimedia in the PreDigital Age: Aspen Magazine (1965 - 1971) and the Digital Magazine Revolution", *TS:> Tijdschrift Voor Tijdschriftstudies*, vol. 1, no. 27 (2010), https://www.researchgate.net/publication/47630909MultimediainthePre-DigitalAgeAspenMagazine1965-1971andtheDigitalMagazineRevolution, 56.

Fig. 74 & 75. *Aspen. The Multimedia Magazine in a Box*, no. 5 + 6, The Minimalism Issue, 1967, 132 x 102 cm, MACBA Collection, Barcelona

Very much in line with Duchamp's portable museum, inside a white box, O'Doherty envisioned a self-contained collection of various interconnected artistic contributions. All of which revolved around three themes: time (in art and "history"), silence and reduction, and language.[202] Inside this double-edition box were stored: 1 book, 4 films, 5 records, 8 boards, and 10 printed data.[203] (see 74 & 75) From the contents' sheet, we also learn that O'Doherty dedicates this volume to the French poet Stéphane Mallarmé who, as Lucy Cotter reminds us, "dealt, not only with words, but with the spaces between and around them"[204]. O'Doherty goes as far as to includes a three-dimensional paper version of an actual artwork: *The Maze* by Tony Smith. It came with its own set of instructions in order to be (re)built by the reader. *The Maze* —originally designed for the exhibition Schemata 7 at Finch College Museum in 1957— functions like a 3D printed model archive of a sculpture (here reduced to a human-portable scale), or as a downloadable artwork that the artist let us (re)produce.[205]

book	essays	The Death of the Author / Roland Barthes / trans. Richard Howard
book		Style and The Representation of Historical Time / George Kubler
book		The Aesthetics of Silence / Susan Sontag
record	fiction	Text for Nothing #8 / Samuel Beckett / read by Jack MacGowan
record		Nova Express / excerpts / William Burroughs / read by the author
record		"Now the shadow of the southwest column" from Jealousy / Alain Robbe-Grillet / read by the author
record	music	Fontana Mix-Feed / John Cage / realized by Max Neuhaus
record		The King of Denmark / Morton Feldman / Max Neuhaus (percussion)
boards	sculpture	The Maze / Tony Smith
film	films	Rhythm 21 (1921) / Hans Richter
film		Lightplay: Black-White-Grey (1932) / Laszlo Moholy-Nagy (excerpt)
film		Site (1964) / Robert Morris / Stan VanDerBeek (excerpt)
film		Linoleum (1967) / Robert Rauschenberg (excerpt)
record	interview	Merce Cunningham
record	documents	The Creative Act (1957) / Marcel Duchamp / read by the author
record		Some texts from A L'infinitif (1919-20) / Marcel Duchamp / read by the author
record		Four poems from Phantastische Gebete (1916) / Richard Huelsenbeck / read by the author
record		The Realistic Manifesto (1920) / Naum Gabo / Noton Pevsner / read by Gabo
print		The Russian Desert: A Note on Our State of Knowledge / Douglas MacAgy
record		Space, Time and Dance/Merce Cunningham / read by the author
print	poetry	Conditionnement / Michel Butor / trans. Michael Benedikt
print		Poem, March 1966 / Dan Graham
print	data	Serial Project #1 / Sol Lewitt
print		Seven Translucent Tiers / Mel Bochner
print		Structural Play #3 / Brian O'Doherty
print		Drawings for The Maze / Tony Smith
print		Score for Fontana Mix-Feed / John Cage / Max Neuhaus
print		Score for The King of Denmark / Morton Feldman
print		Translation of Jealousy (recorded excerpt) / Alain Robbe-Grillet / trans. Robert Howard

Fig. 76. Screenshot of a section of the web's adaptation in Ubu's website of the content's sheet included in *Aspen. The Multimedia Magazine in a Box*, no. 5 + 6, The Minimalism Issue, 1967

Original format: Single sheet, 17-5/8 by 8 inches, folded twice to 8 inches square.

[202] Ubu Web, "Aspen No. 5+6, Item 2: Contents", ed. Brian O'Doherty, *Ubu Web*, accessed March 11, 2020, http://www.ubu.com/aspen/aspen5and6/contents.html.

[203] Ubu Web, "Aspen No. 5+6: The Minimalism Issue", *Ubu Web*, accessed May 9, 2020, http://www.ubu.com/aspen/aspen5and6/index.html. As stated in the editor's description (included in this issue) of the items in the box. Its original format was a single sheet, folded twice to 8 inches square.

[204] Lucy Cotter, "Between the White Cube and the White Box: Brian O'Doherty's Aspen 5+6, An Early Exposition," in T*he Exposition of Artistic Research Publishing Art in Academia*, ed. Michael Schwab and Henk Borgdorff (Leiden University Press, 2014), 220–36, https://www.researchcatalogue.net/profile/download-media?work=143998&file=143999, 224.

[205] Ubu Web, "Aspen No. 5+6, Item 22: Drawings for 'The Maze'," *Ubu Web*, accessed May 9, 2020, http://www.ubu.com/aspen/aspen5and6/mazeDrawings.html. "The models have been scaled down to fit in this box. The models may be set up standing free on neutral ground. They should be set up in accordance with the plan indicated in the drawing. Those who wish to reproduce the work in its original dimensions (in metal or wood) may do so."

The publication does not follow a linear structure; therefore, we can —physical and conceptually— access/exist the collection from any of the documents. Yet, despite the plurality (in form, content, and medium) of the objects (see fig. 75), all of the documents inside *Aspen*'s issue 5+6 can be associated with al least one of the main themes proposed by O'Doherty[206]. Through inter-referencing, all kinds of media are all linked together, very much like any given website today:

> The result is a subtle and intricate web of inter-referencing that is difficult to capture in writing. Indeed, as we shall see, it is precisely the limits of linear text that inspired O'Doherty's sequence of juxtapositions. Aspen 5+6 goes towards answering the question of how to deal with embodied and material knowledge in a manner that holds its own alongside the textual.[207]

Through a portable device, O'Doherty transforms the gallery experience, offering new ways of physically engaging with the artwork[208], the archive, and the museum. As noted by Cotter, "the format of this exhibition/book anticipated its editor's critique of the conventions of the modernist white cube[209], while also reusing its formal qualities."[210]

Inside a box, an exhibition takes the form of a publication, transforming the gallery into a white cube made out of cardboard. (see fig. 77) Starting from its visual design, O'Doherty explored the possibilities of the infrastructure of the gallery and the book, both as interfaces and as physical spaces/objects. He designed "a two-part white monolith, constituting a Minimalist sculpture in its own right."[211] Still, more than just a sculpture, the box was also a transformable system of display. The two box halves allowed for different modes of (re)arrangements, adding a new level of interactivity to the packaging.[212]

This Minimalism issue, became the closest approximation to a *proto-hypertext*[213], which is challenging our conception of the book and the page in our current interconnected copy-paste world. Like a hypertext, O'Doherty does not fix one single configuration for the reader-viewer, Rather, he

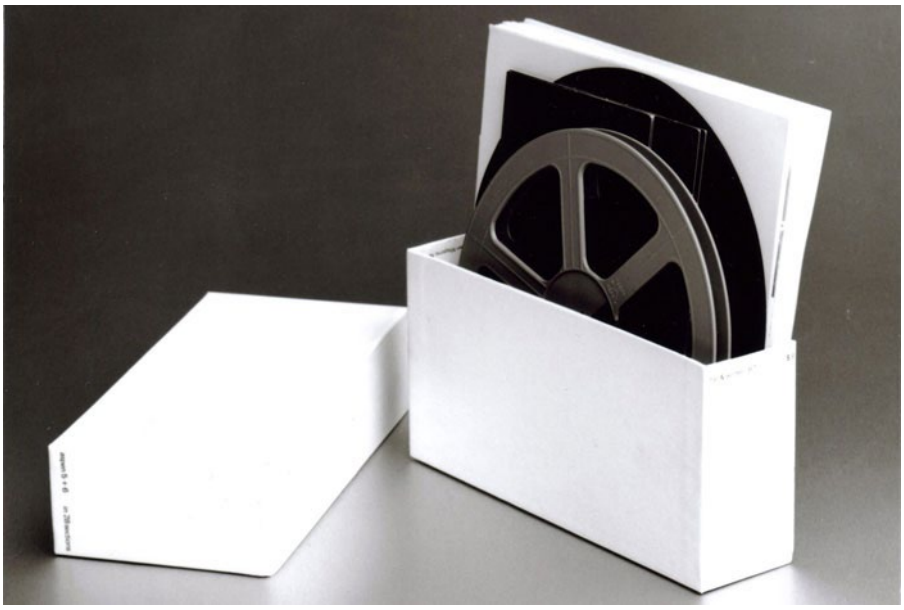


Fig. 77. *Aspen* magazine, The Minimalism Issue, 1967.

[206] Ubu Web, "Aspen No. 5+6, Item 2: Contents"

[207] Cotter, "Between the White Cube", 222.

[208] *Ibid.*

[209] A reference to the famous series of essays by O'Doherty titled *Inside the White Cube* first published in *Art Forum* magazine in 1976.

[210] Cotter, "Between the White Cube," 223.

[211] Gageldonk, "Multimedia in the PreDigital Age," 58.

[212] *Ibid.*

[213] *Ibid.,* 56.

provides him/her with the possibility of multiple outcomes depending on the recombination of the publication's contents, making him/her an active part of the production of meaning.[214]

The website as exhibition

Something that we can get from the *Aspen*'s magazine example is the way that the surge of news mediums have challenged our conception of the book and writing, even before the advent of the Web. Curators and artists had already been engaging in new writing practices since before the Internet became global. The book —as Otlet suggests already in the early 20th century— had started taking up new forms with the advent of photography, radio, film, and other media technologies:

> The Internet, though it marks a radical departure from traditional media in many ways, also represents a continuation of the intellectual and social trends that emerged from people's embrace of the electric media of the twentieth century and that have been shaping our lives and thoughts ever since. The distractions in our lives have been proliferating for a long time, but never has there been a medium that, like the Net, has been programmed to so widely scatter our attention and to do it so insistently."[215]

Because of the multiplication of forms, it is evident than even in art, new fragmented forms of writing would emerge. A non-linear form of writing the document, which is now one of the many possibilities of the online book, is what O'Doherty already proposed with the *Aspen* no. 5+6, before we were even digitally connected.

Of course, with the new immediacy of connection, the Web has become the perfect space for experimentation and speculation. Just as Teyssandier defined the book-gallery as a metaphor of the gallery space, the online-text is most of the time built with the structure and logic of the printed space. However, many diverse projects —playing directly with these new formats— have been done online.

In terms of specific online curatorial projects, it would be worth noting the *One sentence exhibition* (OSE) by Kadist Foundation (see fig. 78). In 2015, they

Fig. 78. *One sentence exhibition* (OSE) webpage by Kadist Foundation at http://ose.kadist.org

The gray box only appears when hovering on top of number two.

[214] Cotter, "Between the White Cube," 228.

[215] Carr, *The Shallows*, 112-113.

launched an online exhibition project where the idea was to invite curators to select a single sentence and make each word a hyperlink to an image, video, or online text.[216] The last one being proposed by curator Xiaoyu Weng on February 1, 2019.

Even though each sentence has a different length and content, the final display is the same for every one of them. Each sentence gets one single webpage. Let us take Alexandra McIntosh's sentence from January 29, 2018[217] as an example:

A part[1] and[2] apart,[3] a[4] counterpart[5].

The written text —or sentence— occupies around 1/10 of the page and is positioned on the bottom part of the screen (like a footer section). (see fig. 79-82) The rest of the page acts as sort of embedded page that changes whenever we click on a letter. Every single letter is linked to something on the Web. The images, videos or online texts contained and displayed in this top space, exist one at a time. If we decide to click on the content, we then leave McIntosh's sentence. However, if we decide not to click on the content, we can scroll it and read without engaging with it, we can decide to jump to counterpart[5].

The top page changes from a CTVNews's article from September 26, 2017 about the hearing loss of David Hockney (see fig. 79) to a Vimeo video of a turning film projector positioned in the middle of a hexagonal room. Gray curtains cover all the walls. There is nobody in the room, but there is a low white squared-wall for the projection. On this wall, the figure of a girl dances to calm piano music on a black background. We can hear the loud sound of the projector. Then, the shot passes from a general view of the space to a close up of the film. Despite being concentrated on the video, we still see the sentence "A part[1] and[2] apart,[3] a[4] counterpart[5]." on the bottom of the page. We hover on the superscript no. 5, and a small note appears (see fx). Now we know what we are watching, it is an installation view of Jeremy Shaw's *Variation FQ* from 2013. The place is the Schinkel Pavilion in Berlin.

If we wanted, we could continue navigating through the different pages/words of the sentence, or we could just stop there. To do so, we are helped by the red color that indicates our position within the webpage/sentence. At the same time, the superscript numbers act as a sort of footnote or exhibition label of the piece it is linking to, these "notes" serve as a complementary information piece.

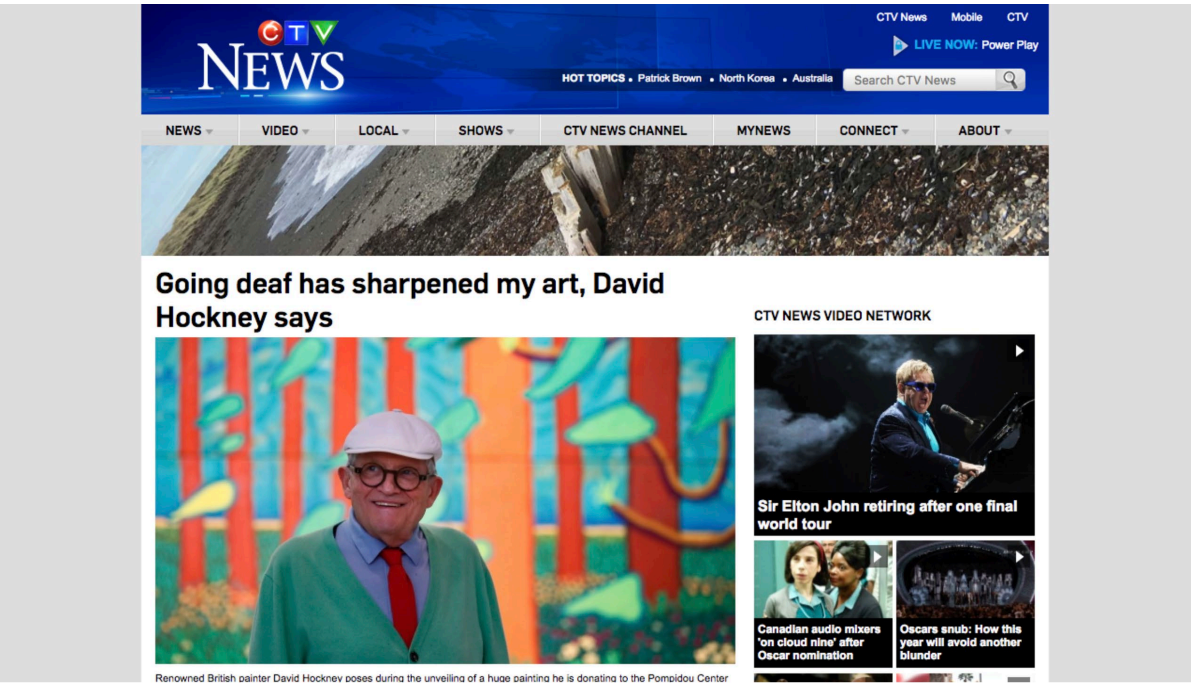
Just like O'Doherty's box exhibition, the departure/end to this OSE exhibition series can start from any of the individual documents, which in this case are words. Each word, through its hyperlink, creates a new door to another content. The association of those words in the form of a structured sentence creates a new configuration of interconnected elements. Kadist's domain acts as the container, as the interface through which we can access the information, just like the cardboard box, the book, or the gallery space. As Sarah Hotchkiss suggests, "each link within an OSE takes the viewer from a simple word to an unexpected destination —making the exhibition more like a treasure hunt than a walk through a gallery space."[218]

Today, creating new non-linear structures on the Web is easy. However, many art magazines, museum sand galleries still keep their digital spaces very much as the equivalent of bound pages. This can be, at the same time, positive and negative as the qualities of a website and the printed mediums are not the same. It is challenging to want to have two same formats within two different spaces. Therefore, proposing new modes of approaching the ways we write, produce, and consume information on the Web can also be a type of curating. As much as the gallery can be an exhibition, an interview, an essay, or a blog post, could also act like one. In Orit Gat's article, "How

[216] Kadist, "One Sentence Exhibition", *Kadist*, 2015, https://kadist.org/program/one-sentence-exhibition/.

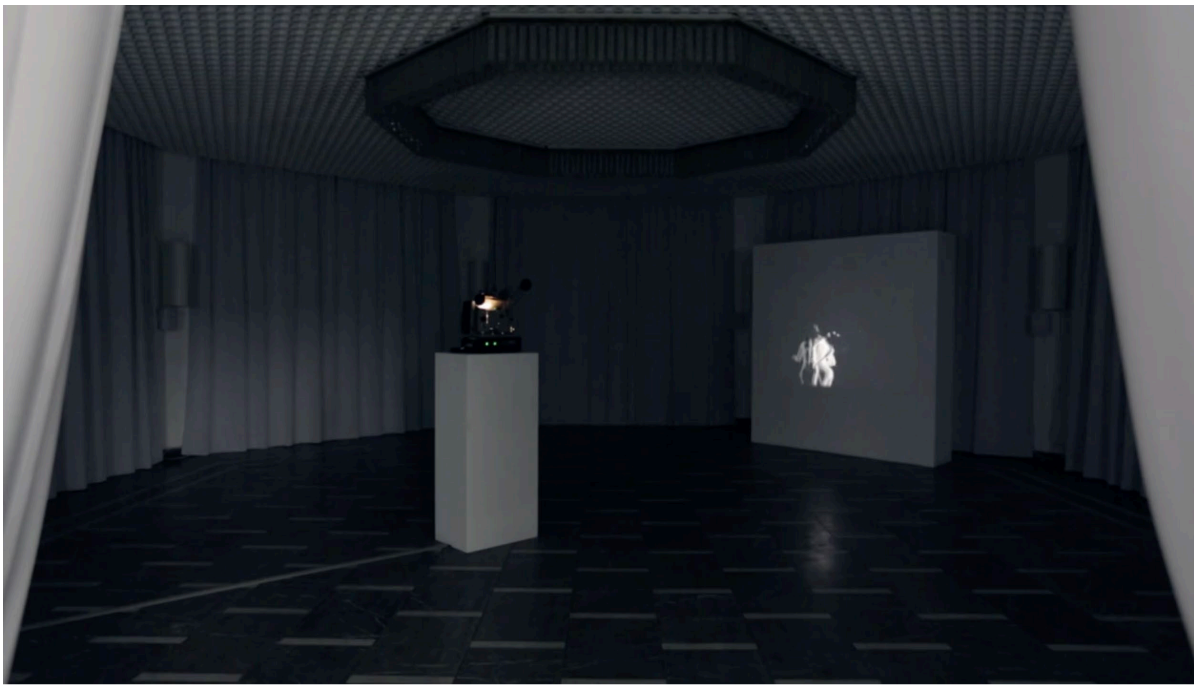
[217] Alexandra McIntosh, "A Part and Apart, a Counterpart.", *One Sentence Exhibition* (Kadist, 2018), http://ose.kadist.org/McIntosh/a-part-and-apart-a-counterpart#counterpart.

[218] Sarah Hotchkiss, "Finally! Online Exhibitions Worth Your Time," *KQED*, September 8, 2015, https://www.kqed.org/arts/10934611/kadists-online-exhibitions-link-to-deeper-art-experiences.



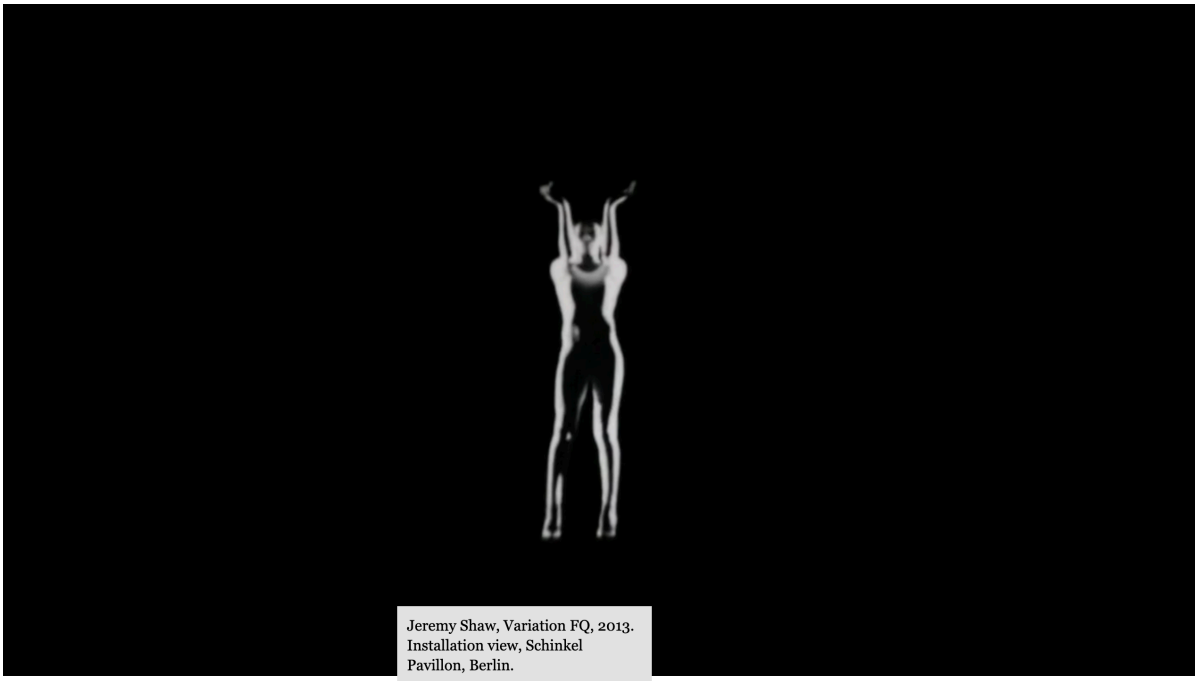
A part[1] and[2] apart,[3] a[4] counterpart[5].

Fig. 79. Screenshot of Alexandra McIntosh's *One Exhibition Sentence*'s sentence, January 29, 2018, accessed on April 2020.



A part[1] and[2] apart,[3] a[4] counterpart[5].

Fig. 80. Screenshot of Alexandra McIntosh's *One Exhibition Sentence*'s sentence, January 29, 2018, accessed on April 2020.

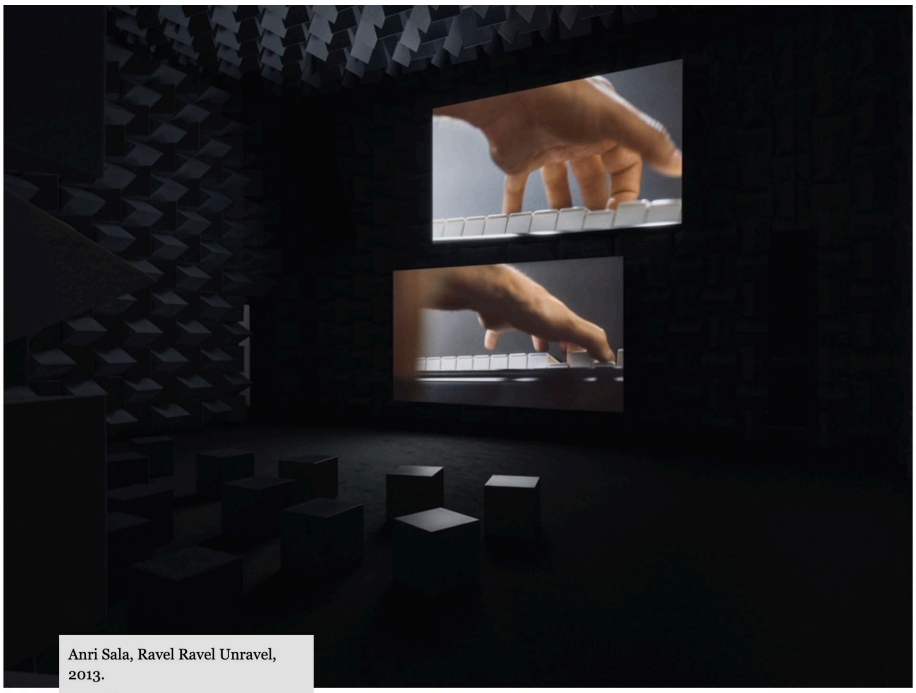


Jeremy Shaw, Variation FQ, 2013. Installation view, Schinkel Pavillon, Berlin.

A part[1] and[2] apart,[3] a[4] counterpart[5].

https://vimeo.com/75529871

Fig. 81. Screenshot of Alexandra McIntosh's *One Exhibition Sentence*'s sentence, January 29, 2018, accessed on April 2020.



Anri Sala, Ravel Ravel Unravel, 2013.

A part[1] and[2] apart,[3] a[4] counterpart[5].

https://ora-kadist-ose.s3.amazonaws.com/1760-sala.jpg

Fig. 82. Screenshot of Alexandra McIntosh's *One Exhibition Sentence*'s sentence, January 29, 2018, accessed on April 2020.

Do We Write When We Write Online?", she suggests that "online writing styles revolve around a number of familiar forms"[219]. Therefore, we should also focus on developing and exploiting new forms that have emerge online, like blogs or the recent long-form format.[220]

The impermanence of the hyperlink

The impression of infinity of the contents of the Internet gives us the illusion that access to them will be always possible if we are connected, until the information we were looking for "does not exist" (see fig. 83), or at least not anymore. All along the writing of this thesis, many links were broken. Information that was accessible maybe three months ago now was not accessible anymore.

This experience resonates a lot with the first *One Sentence Exhibition* proposed by curator Rudolph Frieling's: "A[1] voice[2] comes to one in[3] the[4] dark. Imagine."[221] When clicking in the final dot (."), a webpage reading "'millionsofcolours.wordpress.com is no longer available'. The authors have deleted this site." appears. Joseph del Pesco, Kadist director, thinks this is an inevitable thing that will happen with the links in the projects, they will sooner or later die up. To this respect, he says: "Maybe in a way it's recognizing the limits of the internet to accept that ending… and have a shelf life so to speak."[222] This makes us come back to Nicholas Carr, who remind us that digital text is not finite or permanent:

> Electronic text is impermanent. In the digital marketplace, publication becomes an ongoing process rather than a discrete event, and revision can go on indefinitely. Even after an e-book is downloaded into a networked device, it can be easily and automatically updated—just as software programs routinely are today.[223].

Electronic text provides us with more substantial opportunities for distribution, but it also makes our content less stable. Therefore, the question of whether to choose print over the Web or vice versa becomes very difficult to answer. Both spaces (print and digital) can produce projects with different and own particular qualities.

Also, in terms of their accessibility, the printed spaces are continuous. They exist physically and are accessible without the need for electricity. However, they are not as mass-distributable as an online link. When curating projects that situate in the border of digital and print, the infrastructures with which we have to deal increase, and therefore they become more challenging to maintain. One particular example we will refer to is the printed magazine *umool umool* by Na Kim, which defines itself as an alternative exhibition space to the gallery:

> It [*umool umool*] experiments on several ideas, such as the possibility go a white cube on printed material, an inversion of the designer's role as well as tension in hierarchy between form and content. Every issue presents its further narratives on the umool umool website.[224]

They proposed their website as an extension of this printed space. However, as of May 3, 2020, their website is no longer accessible, making it impossible to access further narratives as they propose. The contents of the Web depend

Fig. 83. *umool, umool*, 2, 3, 4, 5...,vol. 10, 2012. Photo: Charlotte Cheetham

In this issue around 13 people inflicted by various positions are invited to describe their collaborative processes.

[219] Orit Gat, "How Do We Write When We Write Online?," *OTDAC*, 2014, http://hdwwwwwo.otdac.org.

[220] *Ibid.*

[221] http://ose.kadist.org/Frieling/a-voice-comes-to-one-in-the-dark-imagine#a

[222] Sarah Hotchkiss, "Online Exhibitions Worth Your Time"

[223] Carr, *The Shallows*, 107

[224] Na Kim, ed., *Umool Umool*, vol.10 (Amsterdam: Na Kim, 2012), 5.

on the servers they are hosted. However, they also depend on the author/publisher who decides to keep the website up, on the payment of a domain, on the choice of our browser, and so many other decisions. On the contrary, for printed objects, their existence mostly depends on the individual that possesses a particular copy, just like an already downloaded file.

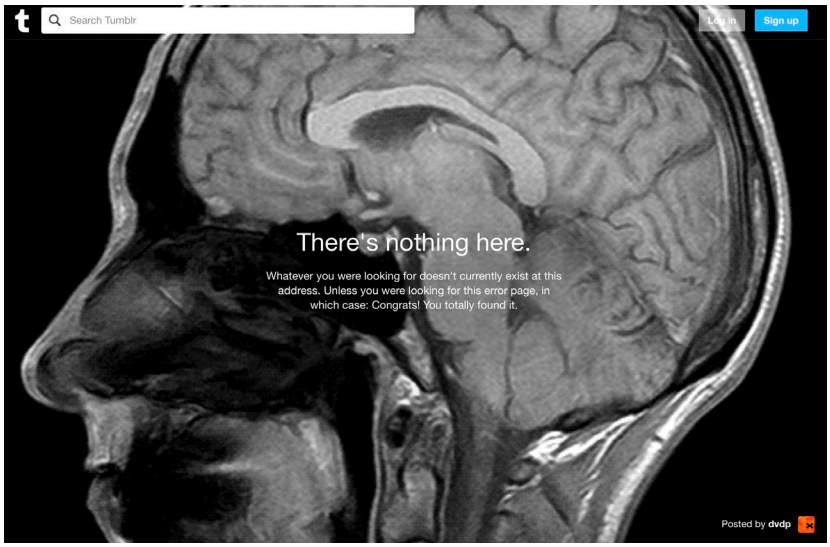


Fig. 84. Tumblr's 404 error page when searching for printingtheinternet.tumblr.com

Transforming the library/book: three examples of curating in print

We now come back to Springer's proposition of seeing opportunities for new methods of curating in the way information is collected, organized, and recollected. She proposes to see the library (the public place of reading) as "the hybrid site for performing the book" which situates somewhere in-between the book (the preferred medium for private consumption) and the gallery (the space for public exhibition).[225] If the curator already works vastly with books (that it is for research, for documenting, or as the artwork itself) and within the space of the gallery, why wouldn't it operate as well in between these two. As said by Springer: "a curatorial engagement with the library has the capacity to elicit additional physical models of reassembly."[226]

We have primarily explored the document/book —both in print and in bits— as space, and the gallery, the page, and the library as necessary infrastructures for recorded information. Therefore, we will now focus only on the printed space as an alternative space for curating. Print gives us the possibility to experience information differently than on screen. The characteristics of the paper make it possible to create spaces that can be easier to navigate, manipulate, and transform. They can connect more directly with real places as they situate on the border of the second and third dimensions. Also, because printed spaces are older than its digital counterparts, we better understand its infrastructure, thus providing us with broader possibilities for challenging them.

We will explore three concrete examples of curatorial projects that used the notion of (re)collection in order to propose new architectural possibilities for the printed gallery-book. Through these different examples, we will approach three different proposition of physical arrangement for a curated document in the XXIst century: intercalations: paginated exhibition, the folded encyclopedia, and the table as exhibition/the performing of paper.

[225] Springer, "The Library as Curatorial Space," 7.

[226] *Ibid.*, 39.

Intercalations: a paginated exhibition

> In the vocabulary of geology, the proper term for one type of rock being pushed in-between other stratified segments is an 'intercalation.'[227]

Intercalations is the first curatorial publication series that has emerged from the SYNAPSES network of curators.[228] Developed in collaboration with Anna-Sophie Springer and Etienne Turpin, these publications have been conceived as a series of six exhibitions in paperback format. Through the entire series, Springer and Turpin, the editors/curators, invited a selection of interdisciplinary thinkers —ranging from visual artists, curators, scientists, and writers— to contribute to each one of the exhibitions.[229] Moreover, they have also thought of the infrastructure required to sustain the publications in the current interconnected nature of the physical and the digital[230]; publishing them as well as an open access PDF version on the Web:

intercalations 1: Fantasies of the Library.

intercalations 2: Land & Animal & Nonanimal.

intercalations 3: Reverse Hallucinations in the Archipelago

intercalations 4: The Word for World Is Still Forest

We will concentrate on analyzing the first book, *Fantasies of the Library*, as it the one that poses the bases for the entire series and which essay was a fundamental piece for the construction of this thesis. This volume is made out of an interview, images, annotations, and an essay that altogether frame the processes of classification and arrangement as creative, interpretive endeavors in their own right. In terms of its design or of its architecture, "the two-dimensional space of the book is turned into a multi-layered exhibition space,"[231] expanding the classic form of the book challenging the way we read.

The reader is not just a reader but becomes a "reader as-exhibition-viewer," as the book turns into a "paginated exhibition."[232] In order to do so, the editors-as-curators devised a nonlinear organization, a new type of scenography, in which different texts intercalate with the others throughout the pages. The spinal cord of the paginated exhibition is Springer's essay "Melancholies of the Paginated Mind: The Library as Curatorial Space." It runs the full length of the book occupying only the right-hand pages only, and is only interrupted at the halfway point by Springer's visual essay "Reading Rooms Reading Machines" the book's full-color centerfold. The left-hand pages or even pages, features four interviews or conversations and a selection of works of Andrew Norman Wilson's *ScanOps* series, thus breaking with the linearity of the classic essay.

Within this construction, the numeration of the pages helps us navigate the space of the book. Pagination serves to alternate different spaces and to differentiate them from one another. As in most bounded books, these numbers are simple, but they represent crucial infrastructure for the organization and classification of the information contained. By only reading the index of the book, we can someone understand the previous stated structure:

	Melancholies of the Paginated Mind: The Library as Curatorial Space *by Anna-Sophie Springer*	1
2	The Library as Map *Megan Shaw Prelinger & Rick Prelinger in conversation with Erin Kissane*	
18	Andrew Norman Wilson: ScanOps	
32	Intensive Geographies of the Archive *Hammad Nasar in conversation with Anna-Sophie Springer & Etienne Turpin*	
	Reading Rooms Reading Machines *curated by Anna-Sophie Springer*	51
96	Building Blocks for Books: After the Proprietary Model *Adam Hyde in conversation with Charles Stankievech*	
112	The Ethics of the Book (Beyond Species Nostalgia) *Joanna Zylinska in conversation with Anna-Sophie Springer & Etienne Turpin*	
	Contributors	143
	Acknowledgements	147

Fig. 85. Index of *Fantaisies of a Library*, 2015.

[227] Anna-Sophie Springer and Etienne Turpin, eds., *Fantasies of the Library* (Berlin: K. Verlag, 2015), www.synapse.info/publications /intercalations, VI.

[228] Springer and Turpin, eds., *Fantasies of the Library*, VI.

[229] Megan N. Liberty, "Front to Back, Top to Bottom, a New Book Series Reimagines How We Read," *Hyperallergic*, April 20, 2015, https://hyperallergic.com/200518/front-to-back-top-to-bottom-a-new-book-series-reimagines-how-we-read/.

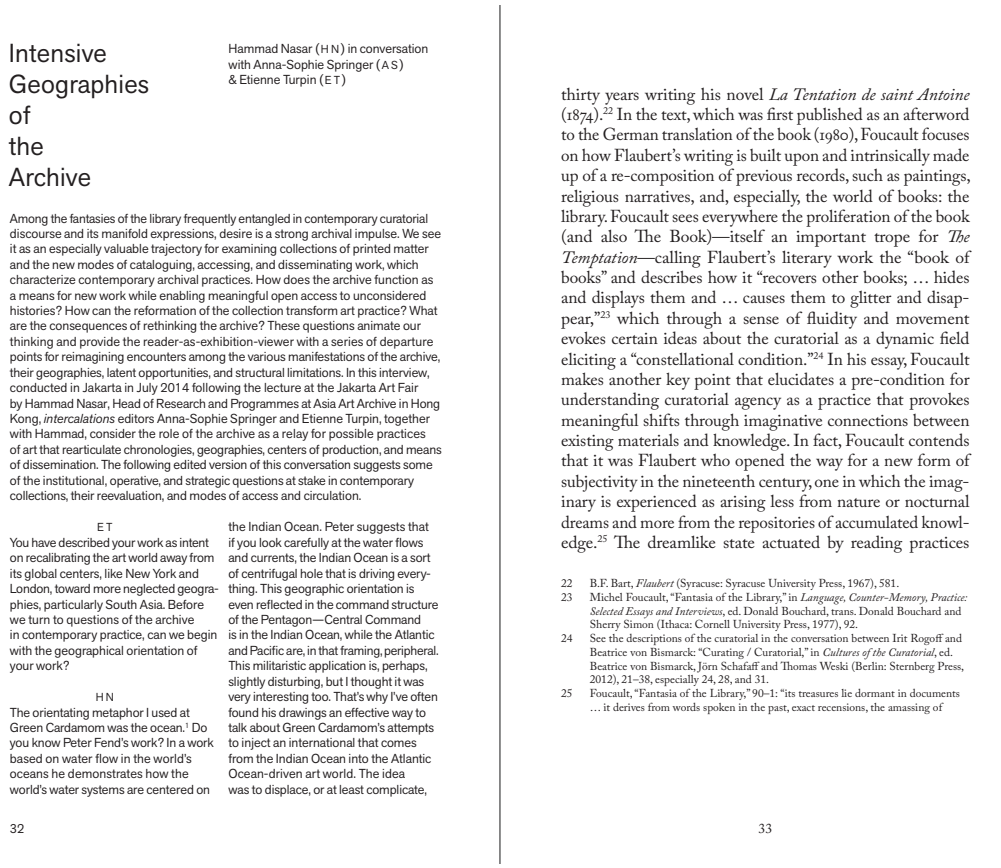
[230] Chelsea Gunn, "Book Review: Fantasies of the Library," *Contemporaneity: Historical Presence in Visual Culture*, vol. 6, no. 1 (2007), https://www.researchgate.net/publication/321403593FantasiesoftheLibraryAnna-SophieSpringerandEtienneTurpineds.

[231] Liberty, "New Book Series Reimagines How We Read"

[232] Springer and Turpin, eds., *Fantasies of the Library*

On one side, we have the curators, on the other (even-pages) we have the "invited texts". The page number becomes the our guide within the gallery-book. To visually —and metaphorically— differentiate Springer's essay from the other texts, the typeface was an important tool. The essay uses Caslon Pro, a serif typeface[233], that suits the style and form of the essay —as it automatically refers to a more classic construction of the printed books[234]—, contrasting with the sans serif type face, Akzidenz Grotesk[235], used for the even pages.

By using these varied systems, a particular subject, the library, is approached through a polyphonic recollection of different kinds of texts. As Liberty says, it is "a book about libraries that acts both as a library and curatorial space — selecting, arranging, and housing texts — aligns itself with printed matter in a very specific way."[236] Another interesting factor of this particular configuration is that it also works when reading in a PDF format on a screen. Even though it is not built for the digital space, it uses the possibilities of the Web for distribution and accessibility.



Intensive Geographies of the Archive

Hammad Nasar (H N) in conversation with Anna-Sophie Springer (A S) & Etienne Turpin (E T)

Among the fantasies of the library frequently entangled in contemporary curatorial discourse and its manifold expressions, desire is a strong archival impulse. We see it as an especially valuable trajectory for examining collections of printed matter and the new modes of cataloguing, accessing, and disseminating work, which characterize contemporary archival practices. How does the archive function as a means for new work while enabling meaningful open access to unconsidered histories? How can the reformation of the collection transform art practice? What are the consequences of rethinking the archive? These questions animate our thinking and provide the reader-as-exhibition-viewer with a series of departure points for reimagining encounters among the various manifestations of the archive, their geographies, latent opportunities, and structural limitations. In this interview, conducted in Jakarta in July 2014 following the lecture at the Jakarta Art Fair by Hammad Nasar, Head of Research and Programmes at Asia Art Archive in Hong Kong, *intercalations* editors Anna-Sophie Springer and Etienne Turpin, together with Hammad, consider the role of the archive as a relay for possible practices of art that rearticulate chronologies, geographies, centers of production, and means of dissemination. The following edited version of this conversation suggests some of the institutional, operative, and strategic questions at stake in contemporary collections, their reevaluation, and modes of access and circulation.

E T
You have described your work as intent on recalibrating the art world away from its global centers, like New York and London, toward more neglected geographies, particularly South Asia. Before we turn to questions of the archive in contemporary practice, can we begin with the geographical orientation of your work?

H N
The orientating metaphor I used at Green Cardamom was the ocean.[1] Do you know Peter Fend's work? In a work based on water flow in the world's oceans he demonstrates how the world's water systems are centered on the Indian Ocean. Peter suggests that if you look carefully at the water flows and currents, the Indian Ocean is a sort of centrifugal hole that is driving everything. This geographic orientation is even reflected in the command structure of the Pentagon—Central Command is in the Indian Ocean, while the Atlantic and Pacific are, in that framing, peripheral. This militaristic application is, perhaps, slightly disturbing, but I thought it was very interesting too. That's why I've often found his drawings an effective way to talk about Green Cardamom's attempts to inject an international that comes from the Indian Ocean into the Atlantic Ocean-driven art world. The idea was to displace, or at least complicate,

32

thirty years writing his novel *La Tentation de saint Antoine* (1874).[22] In the text, which was first published as an afterword to the German translation of the book (1980), Foucault focuses on how Flaubert's writing is built upon and intrinsically made up of a re-composition of previous records, such as paintings, religious narratives, and, especially, the world of books: the library. Foucault sees everywhere the proliferation of the book (and also The Book)—itself an important trope for *The Temptation*—calling Flaubert's literary work the "book of books" and describes how it "recovers other books; … hides and displays them and … causes them to glitter and disappear,"[23] which through a sense of fluidity and movement evokes certain ideas about the curatorial as a dynamic field eliciting a "constellational condition."[24] In his essay, Foucault makes another key point that elucidates a pre-condition for understanding curatorial agency as a practice that provokes meaningful shifts through imaginative connections between existing materials and knowledge. In fact, Foucault contends that it was Flaubert who opened the way for a new form of subjectivity in the nineteenth century, one in which the imaginary is experienced as arising less from nature or nocturnal dreams and more from the repositories of accumulated knowledge.[25] The dreamlike state actuated by reading practices

22 B.F. Bart, *Flaubert* (Syracuse: Syracuse University Press, 1967), 581.
23 Michel Foucault, "Fantasia of the Library," in *Language, Counter-Memory, Practice: Selected Essays and Interviews*, ed. Donald Bouchard, trans. Donald Bouchard and Sherry Simon (Ithaca: Cornell University Press, 1977), 92.
24 See the descriptions of the curatorial in the conversation between Irit Rogoff and Beatrice von Bismarck: "Curating / Curatorial," in *Cultures of the Curatorial*, ed. Beatrice von Bismarck, Jörn Schafaff and Thomas Weski (Berlin: Sternberg Press, 2012), 21–38, especially 24, 28, and 31.
25 Foucault, "Fantasia of the Library," 90–1: "its treasures lie dormant in documents … it derives from words spoken in the past, exact recensions, the amassing of

33

Fig. 86. Extracted page from the free PDF version of *Fantasies of a Library*, 2015.

MAP: the folded encyclopedia

> The map is also an interface, both a symbolic object which creates a feeling of belonging and recognition between those who master the codes, and a screen on which it is projected the encyclopedia of a society, its vision of the world, its memory, its

[233] For a short animated history of typography, see Ben Barret-Forest, "The History of Typography - Animated Short," YouTube Video, *Ben Barrett-Forrest*, April 28, 2013, https://www.youtube.com/watch?timecontinue=182&v=wOgIkxAfJsk&feature=emblogo.

[234] Orit Gat, "How Do We Write"

[235] For a lengthy recount on the origin of the history of Akzidenz Grotesque, see Dan Reynolds, "New Details about the Origins of Akzidenz-Grotesk," Klim Type Foundry, November 11, 2019, https://klim.co.nz/blog/new-details-about-origins-akzidenz-grotesk/.

[236] Liberty, "New Book Series Reimagines How We Read"

> axiology, and its very own organization.[237]

The *Manual of Architectural Possibilities* (MAP) publication is a great example that touches upon the idea of the page as a map, and thus of using its infrastructure as a system for curating the document. The map's use has expanded since Anaximander represented the inhabitable work on a tablet. Today, it not only serves to represent in a single place vast regions of the Earth. It also helps us to materialize abstract information, like how a population grows or how a building is structured. It regroups elements that do cannot physically fit tightly together, and it also allows to transform experiences and concepts into a single space.[238] Like the book, a map "not only stores and transmits information, but it also embodies a particular mode of seeing and thinking"[239].

On one side of the sheet, the page functions very much like a foldable encyclopedia: it tackles a single subject through a collection of data and research from multiple perspectives.[240] Its composing elements can take the form of texts, quotes, statistics, infographics, and images. All this information serves as a sort of topography that helps to think and respond with a new architectural project that occupies the other side of the A1 sheet. Peter Cook, one of the architects participating in the edition of the MAP publication, says:

> In such a moment as this, we can hardly leave our heads buried either in the sand or in our own armpits much longer. Not only are territory, food, air-time, building products, parking spaces or polar bears becoming scarce – but scarcer still is that old-school commodity: IDEAS[241]

The frontal page or the data page acts very much like a Wikipedia page, connecting information from different sources. However, one big difference is that it uses a single continuous physical space. We can have access to all the different texts and images in one single view when completely opened. This is something that would be impossible to do on a portable screen. Moreover, the use of diagrams makes the storage capacity to grow even

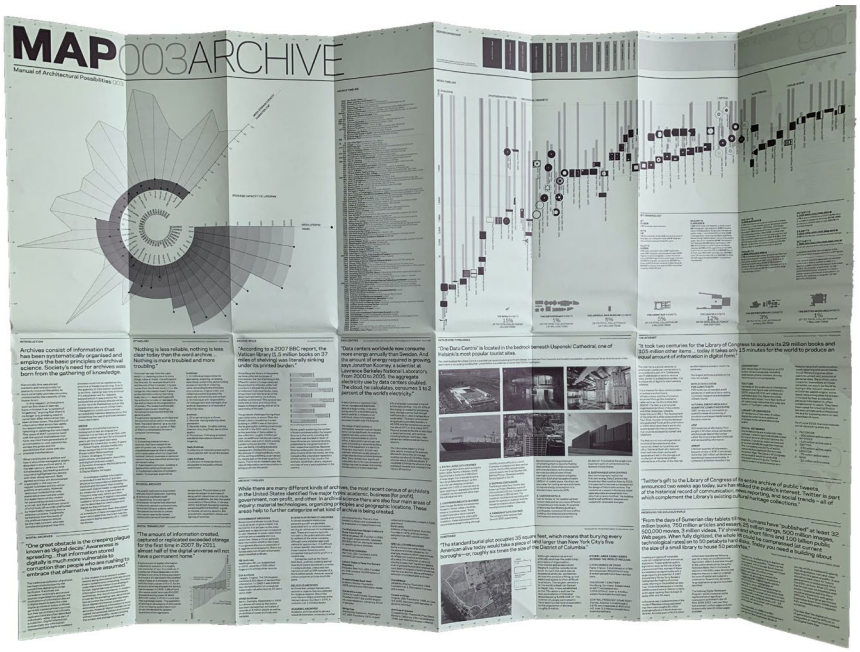


Fig. 87. Opened *Manual of Architectural Possibilities* (MAP), vol. 003

[237] Christian Jacob, "Quand Les Cartes Réfléchissent," *Espace Temps*, vol. 62, no. 1 (1996): 36–49, https://www.persee.fr/doc/espat0339-32671996num6213986, 37. Translated from the French: "La carte est ainsi une interface, à la fois un objet symbolique qui génère un sentiment de reconnaissance et d'appartenance entre ceux qui maîtrisent les codes, et un écran sur lequel se projettent l'encyclopédie d'une société, sa vision du monde, sa memoire, son axiologie et son organisation même."

[238] Carr, *The Shallows*, 39-40.

[239] *Ibid.*, 40.

[240] Peter Cook, "MAP: The publication," Map Architects, accesed on April 20, 2020, http://www.maparchitects.dk/page-templates/mappublication/.

[241] *Ibid.*

bigger. For example, on the *Archive* issue we can acces an entire media timeline of our writing technologies, and it is contained within a space that we can navigate. Through this diagram, we travel from 58,000 BC up to 2010, without having to leave the page.

Because all of the information is stored in one single page, pagination does not work for this space. Instead, a system of coordinates helps us to navigate the collection of information of the frontal page. For example, if you want to read the introduction you would have to go to 1° 11°. Furthermore, through the folding system and the use of the 1:√2 ratio, they have extended the reading possibilities. The space is divided into 1/2 page foldings, and the text has been inserted in these respective configuration (it neves go out from those margins). No matter in which folding position we are, the visible text in that configuration would be readable. Therefore, we can create particular associations, that depend on the way we fold and unfold our map. We can have the cover next to the Media Timeline (32° 3°), instead of having it in the back side when fully open (see fig. 88). Having a 2D space that has this transformative qualities is a very particular aspect of the possibilities of print.

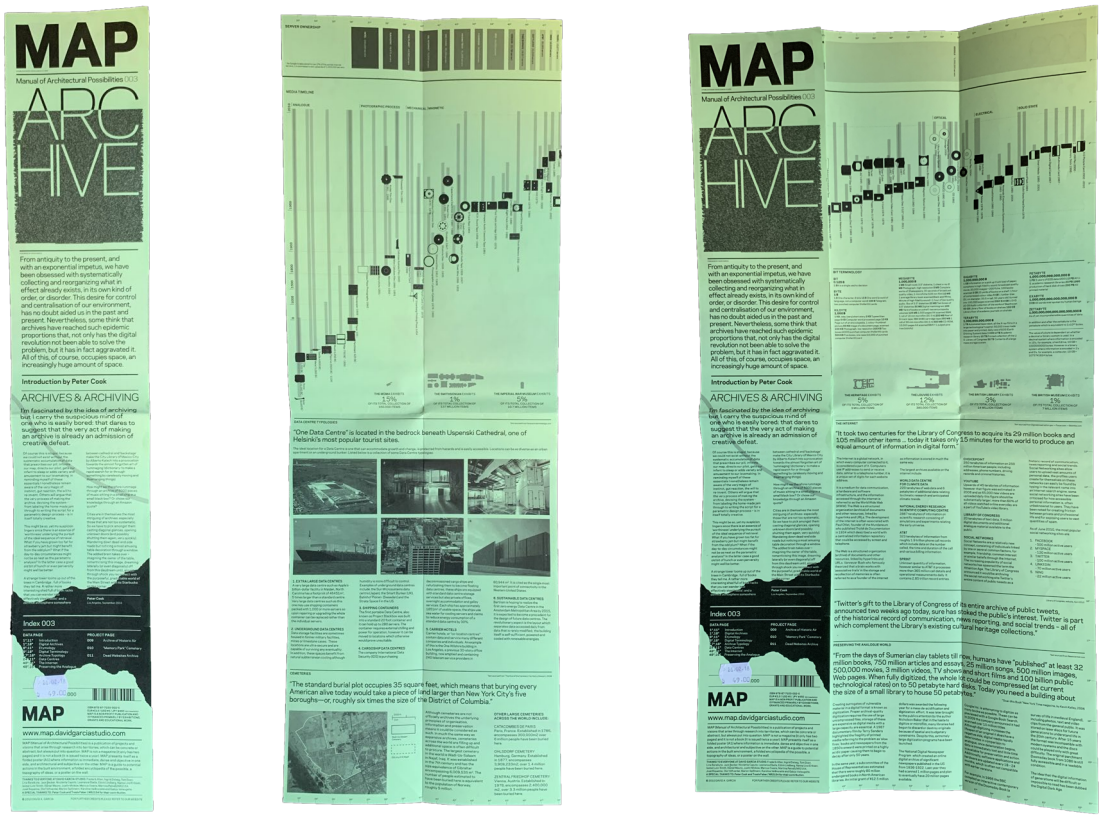


Fig. 88. Unfolding examples of the MAP publication

Carte(s) Mémoire(s): exhibition as activation

The last example that we will explore is the publication[242] *Carte(s) Mémoire(s)* (*Memory(ies) Map(s)*) by the French collective ExposerPublier formed by Caroline Sebilleau, Benoit Brient et Léo Coquet. Through their artistic practice, ExposerPublier focuses on exploring the book/document through research and experimentation in the field of academia, editorial, graphic and curatorial spheres; thus challenging the place of publication in the contexts of exhibitions. In their practice, the library is very much a source

[242] That we could also refer to as a book/exhibition/documentation.

for ideas, a place of gathering, as a place for research and production.

Dialogue, collaboration and sharing are essential elements in their artistic approach. Each of their projects starts from a particular experimental situation concerning a concrete place or context. Often resulting in the creation of rich and articulated printed objects. These objects are presented as much as documentation as real activatable works. The publication *Carte(s) Mémoire(s)*, inscribes in their practice as an exhibition, as a memory of an old project, as a documentation space, and as an active moment.

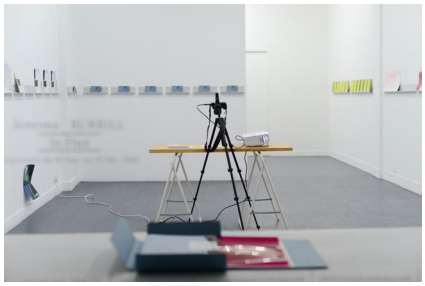


Fig. 89. ExposerPublier, *Mémoire Vive*, November 2016, Galerie Houg (Paris)

Carte(s) Mémoire(s) originated in 201 as a result of an editorial *carte blanche* by Aurélie Pétrel. The only guideline was to transcribe and archive the memory (sound an images included) of a cycle of 15 *carte blanches*—of which this publication would be an additional one— that had taken place at the Galerie Houg in Paris. The result is an edition that records the memories of this cycle. Yet, at the same time it can be activated and deployed onto space. Thus, producing at each new public reading a new exhibition or event called *Mémoire Vive* (*Living Memory*).

The edition consists of a sort of binder/box that contains 11 different elements.(see fig. 90) In 2019, Brient introduced us to the publication on top of a table in their studio.[243] (see next page)

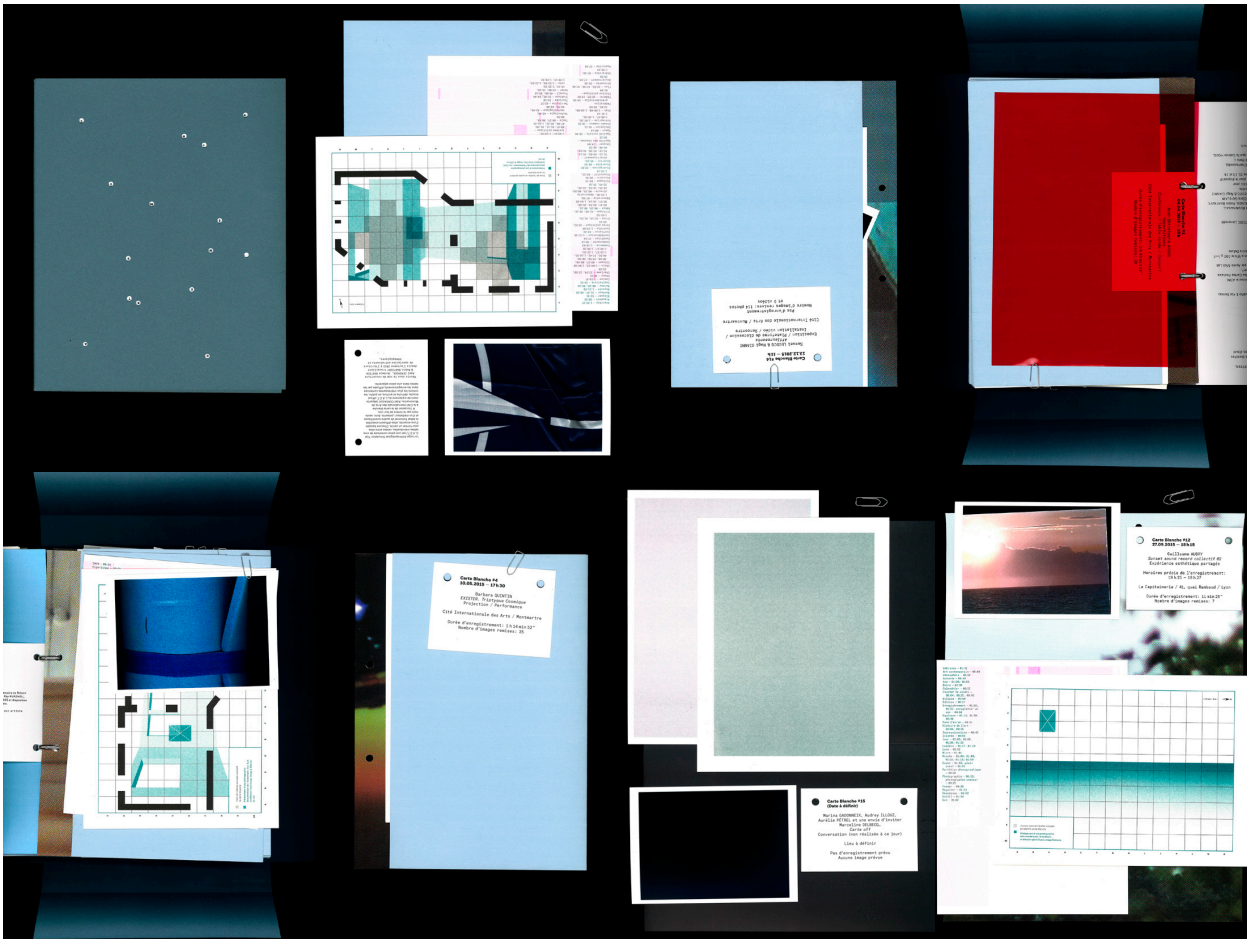


Fig. 90. Exposer Publier, *Carte(s) Mémoire(s)*, 2016. Photo: ExposerPublier

[243] Benoit Brient, video-recorded explanation during a studio by the author, June 26, 2019.

—The publication is closed—

Here, you can see some planets that appear through the perforated paper.

—He opens the publication—

This is the index or a constellation of planets representing the contents.

—He turns the page—

On the backside of the constellation, the masthead presents all the elements contained in the publication.

—He passes to the next page/document—

This is an envelop with an invitation written by Aurélie Pétrel in which she explains what this object is.

—He passes to the next page/document—

Next, we have a translucent red film that will help us read the sound cards.

—He turns the film—

This is the first *Carte Blanche*. For each of the 15 Carte Blanches we have an ensemble of 5 elements. For every one of them we have:

A descriptive label printed on the two sides. The front side has a reading orientation for the wall (horizontal). On the back side, with an editorial reading orientation (vertical). Its orientation will depend on wether you hang it on the wall or if you read it as a book.

—He opens a blue folded page—

Here we have a post card.

—Passes to the next document—

A typographic map.

—Passes to the next document—

A sound card, with different levels of reading (for which we need to use the translucent film)

—Passes to the next document—

Finally, the blue card, which by its formats folds and serve as a folder for all the other elements. This is the object that, *a priori*, would tend to be hanged on the wall.

—He closes the binder—

This logic repeats 15 times, and each time we treat the contents differently. For example, one particularity was the *Carte Blanche no. 6*, which was cancelled. Therefore, we did an actual *carte blanche* (blank page/white page) where all the textual elements are absent. This *carte blanche* is composed only of white.

Through Brient's description, we can see that the object is a recollection of memories transcribed into documents. However, accessing them implies a great deal of movement, manipulation, orality and physical space. As De Certeau said "in referring to writing and orality I am not postulating two opposed terms whose contradiction could be transcended by a third, or whose hierarchization could be inverted."[244] In the case of *Carte(s) Mémoire(s)*, the printed serves differently depending on the time and space its consultation. Like in the library, the book transforms with every new access by a reader. New meanings can emerge at each activation of the contents of a library's collection.

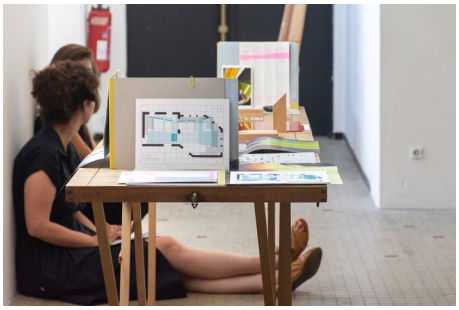


Fig. 90. ExposerPublier, *Mémoire Vive. no. 2*, 2019.

And just like the library is a public space, *Carte(s) Mémoire(s)* can transform into an exhibition act when there is public. Because its elements are not entirely bound together, they can be activated and transformed. For example, in 2016, when it occupied the Houg's gallery space: its walls, its volume. Through activation, the book can also become an oral act, an act of reading, like in its second activation in 2019, *Mémoire Vive. no. 2*, which was part of a conference's series day. This second *Mémoire Vive* used the table space of the table as an exhibition space, a sort of substitute of the gallery. The publication was read aloud and deployed on top of a portable table. The viewers/public gathered around this table, thus transforming the book into a real exhibition act, followed by an invitation to engage into a conversation around it.

This example, shows the complex relationship between the book, the archive, the museum, and the collection. It presents creative ways of curating a hybrid space. A space that can transformed, translated, (de) constructed and (re)constructed, producing new connections each time it is activated—whether in space or through orality. The curator is the graphic designer, the librarian, the editor, and the writer. The book is the document, the exhibition, the performance, the act, the memory.

The table on which the object is presented transforms into a place of exhibition(s); it becomes a support for proposals, actions and exchanges. The table becomes an alternate space for the gallery space. It become an interface between the visitor/reader and the exhibition/book. It serves to hold the elements, to reposition them and to permit new configurations. Like a hyperlink on the Web, *Carte(s) Mémoire(s)* can only become alive with the interaction with its public. The exhibition is a moment of activation.

Fig. 91. ExposerPublier, *Mémoire Vive. no. 2*, June 21, 2019. Second activation of *Carte(s) Mémoire(s)* during *Chrononhotonthologos* : une journée de l'exposition à l'édition* at Doc! (Paris), organised by the milo collective.

[244] De Certeau, *The Practice of Everyday Life*, 133.

Conclusion

By analyzing the infrastructures of the documents and its adjacent digital and analog spaces, this thesis has shown how the book, as a document, can be an alternative space for the gallery. We have approached the book as an object that connects deeply with architecture. Contrary to Victor Hugo's phrase of "The Book Will Kill the Edifice," we have come to assert that the book —as a constructed collection of words— continues to be deeply connected with its exterior world and its history.

As a physical space, we have seen how the book/document touches upon many other layers proposed in Bratton's model of The Stack, but also to many other layers of human history. Since the invention of writing, documents, as recording acts, have been one of the most important systems that have molded our social world as proposed in Ferraris's theory of documentality. The revolutions within the forms of the book have not modified their initial concept. Instead, they have further expanded into more varied ramifications: Webpages, Apps, forums, blogs, bound books, scrolls, and many other forms.

Moreover, neither a gallery, nor a book, nor a page is a "neutral" space. All of them are deeply informed by their social context, which means that they not only come from the author's mind, but they are interfaces, they are ideas, and they host content. Therefore, to exist, they need a reader or a viewer. For example, a webpage and paper book, even if they do not have the same physical qualities, both need to be activated in order to access its contents. Their production happens all across layers of the stack, and they depend on natural, social, political, and technological structures. Therefore, by acknowledging its operating systems, we can better build a new curatorial agency. Thinking about a books' design —the choice of its format, of its colors, of its typography — can reveal a great deal of the message it wants to convey to the reader. Moreover, creating content that can exist in both spaces but with different types of reading might also be an interesting approach to take upon.

It is important to stress that it does not imply that design is more important than the ideas, or vice versa. What we should emphasize is that, as edifices have a defining structure, so do books, and, very often, text invisibly adapts to those predefined structures. Nevertheless, it is precisely in this apparent invisibility that curators can also reveal or propose new configurations for information. This means that we can approach the book differently in every project by playing with its physical, theoretical, and structural capacities and constraints. In this sense, the library adverts an excellent model for (re)thinking collections (of texts, of information, of knowledge, of reproductions). Indeed, the book is not a fixed architecture; it can be modified, subverted, deconstructed, and reimagined.

Artists and writers, and more recently graphic designers, curators and editors, have used the codex-form in many inventive ways, drawing our attention to the assumptions about the book's fixity, authority, materiality, and permanence.[245] However, we must keep in mind that the book is just a technology, and like a Hard Drive or a bone, it is also subject to decay. The printed book can be burned, cut, destroyed, rearranged, and recycled like Irfan Hendrian did in his *Some Other Matter* exhibition. In our 21st interconnected world, facing surpluses of information, creating new

[245] Borskuk, *The Book*, chap. 4.

configurations for already existing ones can be an engaging way to approach curating.

Aspen no. 5+6, for example, showed us that a recollection of printed documents could create a hybrid and fluid space that permits us to expose new configurations. Just like any gallery exhibition, the printed gallery can only be temporary. It will only act as such when talking directly to its public. As an interface, the book, like a building, requires physical activation to be accessed. A book, like a gallery, implies movement. Thus, once it is no longer actionable, its status changes; it becomes an archive to preserve or, like in Hendrian's exhibition, an abandoned site with materials to be reclaimed. A question that can emerge for these document exhibitions is: when does an exhibition on a printed or digital page—or pages— ends, and when does it start?

Today there are many museums and temporary exhibitions that display paper exhibitions as rare untouchable sacralized objects. For example, *Aspen Magazine: 1965-1971* exhibition at the Whitechapel gallery in 2016 showed all the contents of the series under glass. Thus, altering its original conception: a mailable museum which contents' could be entered, exited, and recomposed directly by its reader-viewer. In this particular case, Ubu's online archive might be more faithful to the original printed exhibition as conceived by O'Doherty. Why? Because through the website, and thanks to the hyperlink, we can access all its contents (watch the films, hear the audio, read the texts). We can print them, we can consult them, and we can reuse them.

Whether in its original form, as a translated website version, or as an artwork, the book-as-exhibition situates in between a library, a document, an archive, a museum, a collection, and a building—all depending on how it is approached. But, overall, it remains a written trace that can be (re) activated, and which stored contents can be reconfigured as long as we can physically access it.

References

Afzal, Waseem. "Information Organizations." In *Management of Information Organizations*, 1st edition, 101–28. Cambridge: Chandos Publishing, 2012.

Alberro, Alexander. "Inside the White Box: Aspen 5+6." *Artforum*, 2001. https://www.artforum.com/print/200107/inside-the-white-box-aspen-5-6-1582.

Austin, Drew. "Cold Discovery." *Real Life*, December 10, 2018. https://reallifemag.com/cold-discovery/.

———. "Incipit as Infrastructure." Kneeling Bus, *You're Spoiling All the Paint Work* (blog), 2018. https://kneelingbus.net/author/kneelingbus/.

Barnes, Robert. "Cloistered Bookworms in the Chicken-Coop of the Muses: The Ancient Library of Alexandria." In *The Library of Alexandria: Center of Learning in the Ancient World*, edited by Roy MacLeod. London: I.B. Tauris & Co Ltd., 2004.

Berthier, Anne. "Du Volumen Au Codex." Edited by Bibliothèque nationale de France. *L'Aventure du livre*. BnF Classes. Accessed May 9, 2020. http://classes.bnf.fr/livre/arret/histoire-du-livre/premiers-supports/07.htm.

Berti, Monica, and Virgilio Costa. "The Ancient Library of Alexandria. A Model for Classical Scholarship in the Age of Million Book Libraries." In *CLIR Proceedings of the International Symposium on the Scaife Digital Library*, 2009. http://www.perseus.tufts.edu/publications/Berti-CostaAlexandriaKentucky.pdf. Preprint.

Bibliothèque nationale de France. "BnF L'aventure des écritures." YouTube Video. *Salle Christophe Colomb*, May 6, 2017. https://www.youtube.com/watch?v=EsWUuRl7UGk.

Boon, Marcus. *In Praise of Copying*. Cambridge: Harvard University Press, 2013. https://www.hup.harvard.edu/features/in-praise-of-copying/In-Praise-of-Copying-by-Marcus-Boon-HUP-free-full-text.pdf.

Borsuk, Amaranth. *The Book*. Kindle Edition. Cambridge: The MIT Press, 2018.

Boüard, Marie de. "Les espaces d'exposition imprimés." In *L'Esthétique du livre*, edited by Alain Milon and Marc Perelman, 213–226. Nanterre: Presses universitaires de Paris Nanterre, 2013. https://books.openedition.org/pupo/1892?lang=fr.

Cain, Abigail. "How the White Cube Came to Dominate the Art World." *Artsy*, January 23, 2017. https://www.artsy.net/article/artsy-editorial-white-cube-dominate-art.

Carr, Nicholas G. *The Shallows: What the Internet Is Doing to Our Brains*. Kindle edition. New York: W. W. Norton & Company, 2011. https://www.amazon.fr/Shallows-What-Internet-Doing-Brains/dp/0393339750.

Carrión, Ulises. "The New Art of Making Books." In *Second Thoughts*, 6–22. Amsterdam: VOID distributors, 1980.

Chung, Haemi, and Jean-Nicolas Lechat, eds. "Les Archéologies Mentales de Kim Yun

Soo." *Cahiers de Seoul*, Issue 2, 2019. https://cahierdeseoul.com/yun-soo-kim/.

Cotter, Lucy. "Between the White Cube and the White Box: Brian O'Doherty's Aspen 5+6, An Early Exposition." In *The Exposition of Artistic Research Publishing Art in Academia*, edited by Michael Schwab and Henk Borgdorff, 220–36. Leiden: Leiden University Press, 2014. https://www.researchcatalogue.net/profile/download-media?work=143998&file=143999.

Crawford, James. "The Life and Death of the Library of Alexandria." *Literary Hub*, March 13, 2017. https://lithub.com/the-life-and-death-of-the-library-of-alexandria/.

David A. Garcia, ed. "Archive." *MAP / Manual of Architectural Possibilities*. Copenhagen: David A. Garcia Studio, 2010.

Dupeyrat, Jérôme. "3 Exhibitions. A Specular Reading." *Revue Faire*, March 25, 2018.

Easterling, Keller. *Extrastatecraft: The Power of Infrastructure Space*. London: Verso, 2016.

Erőss, Nikolett. "White Cube." *Curatorial Dictionary*. Accessed March 6, 2020. http://tranzit.org/curatorialdictionary/index.php/dictionary/white-cube/.

Ferraris, Maurizio. *From Fountain to Moleskine: The Work of Art in the Age of Its Technological Producibility*. Leiden: Brill, 2019.

———. "Social Ontology and Documentality." In *Approaches to Legal Ontologies*, edited by Giovanni Sartor, 1:83–97. New York: Springer, 2011. https://doi.org/10.1007/978-94-007-0120-55.

———. *Where Are You?, An Ontology of the Cell Phone*. Translated by Sarah de Sanctis. Online Edition. New York: Fordham University Press, 2014. https://books.google.fr/books?id=uJKUDwAAQBAJ&hl=fr&num=14.

Ferraris, Maurizio, and Valeria Martino. "What Is Documediality and Why Traces, Documents and Archives Are Normative." *Law Text Culture*, vol. 22, no. 1 (2018): 21–30. https://ro.uow.edu.au/ltc/vol22/iss1/3/.

Fondation d'entreprise Hermès. "Exposition à Aloft at Hermès En 2019." F*ondation d'entreprise Hermès*, 2019. https://www.fondationdentreprisehermes.org/fr/projet/exposition-aloft-hermes-en-2019.

Forte, Brian. "A4 vs US Letter." *Between Borders - Notes from Felicia* (blog). September 3, 2002. http://betweenborders.com/wordsmithing/a4-vs-us-letter/.

Franco, Daniela. "Imprime, Que Algo Queda: Poeta Convoca Al Mundo a Imprimir Todo Internet." *Letras Libres*, June 26, 2013. https://www.letraslibres.com/mexico-espana/imprime-que-algo-queda-poeta-convoca-al-mundo-imprimir-todo-internet.

Gageldonk, Maarten van. "Multimedia in the PreDigital Age: Aspen Magazine (1965 - 1971) and the Digital Magazine Revolution." *TS·> Tijdschrift Voor Tijdschriftstudies*, vol. 1, no. 27 (2010): 45–61. https://www.researchgate.net/publication/47630909MultimediainthePre-DigitalAgeAspenMagazine1965-1971andtheDigitalMagazineRevolution.

Gat, Orit. "How Do We Write When We Write Online?" *OTDAC*, 2014. http://hdwwwwwo.otdac.org.

———. "To Bind and to Liberate: Printing Out the Internet." *Rhizome*, May 1, 2014. https://rhizome.org/editorial/2014/may/1/printing-out-internet/.

———. "Unbound: The Politics of Scanning." *Rhizome*, 2014. https://rhizome.org/editorial/2014/oct/9/unbound-politics-scanning/.

Goldbach, Philipp. "Via Lucis." Philip Goldbach's website. Accessed April 9, 2020. http://www.pgoldbach.de/vialucis1.html.

Goldschmidt, Robert. *Sur une forme nouvelle du livre : le livre microphotographique*. Bruxelles: Institut International de Bibliographie, 1906. https://iiif.lib.harvard.edu/manifests/view/drs:13788331$1i.

Goldsmith, Kenneth. *Uncreative Writing : Managing Language in the Digital Age*. New York: Columbia University Press, 2011.

Gray Area Festival, ed. "The Stack We Have and The Stack To Come | Benjamin Bratton | The 2016 Gray Area Festival." YouTube Video. *Gray Area*, April 18, 2018. https://www.youtube.com/watch?v=HRiAF6ILpxw.

Groppo, Pierre. "On The Road, Kerouac's Original Manuscript in Paris." *Vogue Paris*, May 23, 2012. https://www.vogue.fr/fashion-culture/fashion-exhibitions/diaporama/on-the-road-kerouacs-original-manuscript-in-paris-/11599.

Harwood, George, and Evangeline Walker. "How Much of the Amazon Would It Take to Print the Internet?" *Journal of Interdisciplinary Science Topics*, vol. 4 (June 3, 2015). https://journals.le.ac.uk/ojs1/index.php/jist/article/view/760/712.

Hotchkiss, Sarah. "Finally! Online Exhibitions Worth Your Time." *KQED*, September 8, 2015. https://www.kqed.org/arts/10934611/kadists-online-exhibitions-link-to-deeper-art-experiences.

Hovasse, Jean-Marc. "À Propos de l'œuvre." *Gallica*. BnF Essentiels, n.d. https://gallica.bnf.fr/essentiels/hugo/dame-paris/propos-oeuvre.

Howard, Nicole. *The Book: The Life Story of a Technology*. Google Books. Westport: Greenwood Publishing Group, 2005. https://books.google.fr/books/about/TheBook.html?id=4WwdMJKXzhEC&rediresc=y.

Hu, Tung-Hui. "The Shape of the Network." In *A Prehistory of the Cloud*, 1–35. Cambridge: The MIT Press, 2015.

Hugo, Victor. *Notre-Dame de Paris*. Translated by Isabel F. Hapgood. EBook. The Project Gutenberg, 2009. http://www.gutenberg.org/files/2610/2610-h/2610-h.htm.

Jacob, Christian. "Quand les cartes réfléchissent." *Espace Temps*, vol. 62, no. 1 (1996): 36–49. https://www.persee.fr/doc/espat0339-32671996num6213986.

Jaret, Émeline. "'Ce n'est Pas La Taille Qui Compte'. Nogent-Sur-Marne, Maison d'Art Bernard Anthonioz (Maba) – 13 septembre – 16 décembre 2018." *Marges*, vol. 28, no. 1, 2019. https://www.cairn.info/revue-marges-2019-1-page-144.htm.

Johnson, Phyllis. "Aspen No. 1, Item 8: A Letter from Phyllis Johnson." *Ubu Web*. Accessed May 9, 2020. http://www.ubu.com/aspen/aspen1/letter.html. Adapted for the web by Andrew Stafford.

Kadist. "One Sentence Exhibition." *Kadist*, 2015. https://kadist.org/program/one-sentence-exhibition/.

Kelly, Kevin. "Scan This Book!" *The New York Times*, May 14, 2006. https://www.nytimes.com/2006/05/14/magazine/14publishing.html.

Kinross, Robin. *A4 and before. Towards a Long History of Paper Sizes*. Wassenaar: NIAS, 2009.

Laulhère, Catherine, and Thierry Dubus. "Le Papier." In *La Fabrication. Les clés des techniques*

du livre, edited by Catherine Laulhère and Thierry Dubus, 41–56. Paris: Éditions du Cercle de la Librairie, 2012. https://www.cairn.info/la-fabrication--9782765410133-page-41.htm.

Lefebvre, Antoine. "Portrait de l'artiste en éditeur. L'édition comme pratique artistique alternative." Doctoral thesis. Université Paris I Panthéon Sorbonne, 2014.

Lelièvre, Valérie. "La page : entre texte et livre." In *Le livre et ses espaces*, edited by Alain Milon and Marc Perelman, 155–72. Presses universitaires de Paris Nanterre, 2007.

Maison d'Art Bernard Anthonioz, ed. *Ce n'est pas la taille qui compte* (exhib. catalog). Paris: Fondation nationale des Arts Graphiques et Plastiques, 2018. https://play.google.com/store/books/details/Fran%C3%A7oisHavegeerCenestpaslataillequicompt?id=zGxuDwAAQBAJ.

Martínez, Antonio Marco. "The Library of Alexandria (3): The Library of Alexandria Acquired Books in a Curious Way." *Antiquitatem: History of Greece and Rome. Anecdotes of Classical Ancient World* (blog), March 31, 2014. http://en.antiquitatem.com/library-of-alexandria-books-copy/.

McIntosh, Alexandra. "A Part and Apart, a Counterpart." *One Sentence Exhibition*. Kadist, 2018. http://ose.kadist.org/McIntosh/a-part-and-apart-a-counterpart#counterpart.

McLuhan, Marshall. *Understanding Media*. London: Routledge Classics, 2001.

Michel De Certeau. *The Practice of Everyday Life*. Translated by Steven Rendall. Vol. 1. Berkeley: University of California Press, 1988.

Mumford, Lewis. Technics and Civilization. 1934. Reprint, Chicago: The University Of Chicago Press, 2010.

Muñoz, María. "Jorge Méndez Blake: Between the Visual Arts and Litterature." *Metal Magazine*. Accessed May 11, 2020. https://metalmagazine.eu/en/post/interview/jorge-mendez-blake-between-the-visual-arts-and-literature.

O'Doherty, Brian. "The Minimalism Issue." *Ubu Web*. Roaring Fork Press, NYC, 1967. www.ubu.com/aspen/aspen5and6/index.html.

Otlet, Paul. "Le Livre et Le Document." In *Traité de Documentation*, 43–247. Brussels: Editiones Mundaneum, 1934. https://fr.wikisource.org/wiki/Trait%C3%A9dedocumentation/LeLivreetleDocument.

Panganiban, Roma. "How Many Books Have Ever Been Published?" *Mental Floss*, September 9, 2016. https://www.mentalfloss.com/article/85305/how-many-books-have-ever-been-published.

Perec, Georges. *Species of Spaces and Other Pieces*. Translated by John Sturrock. New York: Penguin Classics, 1998.

Primary Information. "Carl Andre, Robert Barry, Douglas Huebler, Joseph Kosuth, Sol LeWitt, Robert Morris, Lawrence Weiner AKA the Xerox Book." *Primary Information*. Accessed May 11, 2020. https://primaryinformation.org/product/siegelaub-carl-andre-robert-barry-douglas-huebler-joseph-kosuth-sol-lewitt-robert-morris-lawrence-weiner/.

———. "Seth Siegelaub (1941–2013)." *Artforum*, December 18, 2013. https://www.artforum.com/passages/primary-information-on-seth-siegelaub-1941-2013-44258.

Quig, Alec. "Matt Siber by Alec Quig." *Bomb Magazine*, 2009. https://bombmagazine.org/articles/matt-siber/.

Rancière, Jacques. "The Surface of Design." In *The Future of the Image*, 91–107. London: Verso, 2007. https://newsgrist.typepad.com/files/the-future-of-the-image-jacques-ranciere.pdf.

Rojas Urrutia, Carlos. "Inaugurará La UNAM el Museo de Arte Contemporáneo." *El Universal*, November 24, 2008. https://archivo.eluniversal.com.mx/notas/557717.html.

Sappi. "The Paper Making Process." YouTube Video. *Sappi Tube*, March 2, 2012. https://www.youtube.com/watch?v=E4C3X26dxbM.

Schor, Paul. "M Comme Microfilm." YouTube Video. *Paris Diderot*, January 30, 2017. https://www.youtube.com/watch?v=lCMafShkpM.

Shelton, Taylor, and Matthew Zook. "Geography of Information Society." In *International Encyclopedia of the Social & Behavioral Sciences*, edited by James D. Wright, 90–94. Oxford: Elsevier, 2015. https://www.sciencedirect.com/science/article/pii/B9780080970868720277?via%3Dihub.

Siber, Matt. "The Untitled Project (2002-2010)." Matt Siber Art. Accessed May 9, 2020. https://siberart.com/the-untitled-project.

Smith, Ernie. "The Strange History of Microfilm, Which Will Be With Us for Centuries." *Atlas Obscura*, June 20, 2016. https://www.atlasobscura.com/articles/the-strange-history-of-microfilm-which-will-be-with-us-for-centuries.

Smith, Isabella. "Philipp Goldbach's Meditations On Changing Technology." *Artsy*, February 4, 2016. https://www.artsy.net/article/artsy-philipp-goldbach-s-meditations-on-changing-technology.

Somers, James. "Torching the Modern-Day Library of Alexandria." *The Atlantic*, April 20, 2017. https://www.theatlantic.com/technology/archive/2017/04/the-tragedy-of-google-books/523320/.

Springer, Anna-Sophie. "Melancholies of the Paginated Mind: The Library as Curatorial Space." In *Fantasies of the Library*, edited by Anna-Sophie Springer and Etienne Turpin, 1-141 (unpair only). Berlin: K. Verlag, 2015. www.synapse.info/publications /intercalations.

——— and Etienne Turpin, eds. *Fantasies of the Library*. Berlin: K. Verlag, 2015. www.synapse.info/publications /intercalations.

Stengos, Jane. "A Brief History of the A Series Paper Size." *Kwik Kopy* (blog), May 27, 2014. https://www.kwikkopy.com.au/blog/a-brief-history-of-the-a-series-paper-size.

s-y-n-d-i-c-a-t. "Le Fonds international des objets imprimés de petite taille." *Fonds international*. s-y-n-d-i-c-a-t, 2019. http://fondsinternational.com/.

Taycher, Leonid. "Books of the World, Stand up and Be Counted! All 129,864,880 of You." *Google Book Search* (blog), August 5, 2010. http://booksearch.blogspot.com/2010/08/books-of-world-stand-up-and-be-counted.html.

Teyssandier, Bernard. "Les Métamorphoses de La Stoa: De La Galerie Comme Architecture Au Livre-Galerie." *Études Littéraires*, vol. 34, no. 1–2 (February 1, 2002): 71–101. https://www.erudit.org/fr/revues/etudlitt/2002-v34-n1-2-etudlitt694/007555ar/.

Thylstrup, Nanna Bonde. *The Politics of Mass Digitalization*. Cambridge: The MIT press, 2018.

Trunel, Lucile. "L'écran, la page aujourd'hui." *L'aventure des écritures*. BnF Classes. Accessed May 9, 2020. http://classes.bnf.fr/ecritures/arret/page/tablette/05.htm.

Ubu Web. "Aspen No. 5+6, Item 2: Contents." Edited by Brian O'Doherty. *Ubu Web*. Accessed March 11, 2020. http://www.ubu.com/aspen/aspen5and6/contents.html. Adapted for the web by Andrew Stafford.

———. "Aspen No. 5+6, Item 22: Drawings for 'The Maze.'" *Ubu Web*. Accessed May 9, 2020. http://www.ubu.com/aspen/aspen5and6/mazeDrawings.html. Adapted for the web by Andrew Stafford.

Unwin, George, and David H. Tucker. "History of Publishing." In *Encyclopædia Britannica*, April 2, 2020. https://www.britannica.com/topic/publishing.

viction:ary, ed. *Material Matters*. Vol. 04: Paper. Hong Kong: viction:ary, 2019.

Victoria and Albert Museum. "What Are Artists' Books?" *VAM*, August 12, 2011. http://

www.vam.ac.uk/content/articles/a/books-artists/.

Wark, McKenzie. "The Stack to Come." *Public Seminar*, December 28, 2016. http://publicseminar.org/2016/12/stack/#.WZVlWa0ZM18.

Wigley, Mark. "The Secret Life of the Gallery Wall." In *Rita McBride. Oferta Pública / Public Tender* (exhib. catalog), edited by MACBA, 177–84. Barcelona: MACBA, 2012. https://img.macba.cat/public/uploads/publicacions/RitaMcBride/wigleyeng.pdf.

Williams, Kirsty. "A History of Paper." *BBC radio*, January 26, 2016. http://downloads.bbc.co.uk/writersroom/scripts/A-History-of-Paper.pdf.

Worth, Josh. "The Infinite Scroll - Is the Web Messing with Our Sense of Time and Story?" *Josh Worth* (blog), June 19, 2015. https://joshworth.com/the-infinite-scroll/.

Xinying, Hong. "You'll Never Expect That Indonesian Artist Irfan Hendrian's Artworks Are Made of Paper." *Tatler Singapore*, September 23, 2019. https://sg.asiatatler.com/life/aloft-at-hermes-exhibition-indonesian-artist-irfan-hendrian-creates-artwork-with-paper .

Zak, Dan. "'Printing Out the Internet' Exhibit Is Crowdsourced Work of Art." *The Washington Post*, July 26, 2013. https://www.washingtonpost.com/lifestyle/style/print-this-web-page-mail-it-to-mexico-citys-labor-gallery-make-art/2013/07/26/534e2582-f320-11e2-ae43-b31dc363c3bfstory.html.

Zali, Anne, ed. *L'Aventure Des Écritures III: La Page* (exhib. catalog). Paris: Bibliothèque nationale de France, 1999.