

# Report from the Gutenberg Galaxy (Blaker)

z(oo)m + – books in motion

Wolfgang Ernst:

Digital Textuality: The Implicit (Re-)Turn  
of the Gutenberg Galaxy p. 6

Constant (Active Archives):

Eleven Orderings p. 13

Guttorm Guttormsgaard et.al.:

1 & 2 p. 16

No. 1



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FRITT ORD

## FIRST REPORT

This Report from the Gutenberg Galaxy is the first in a series of publications to be released in connection with the exhibition project *The Gutenberg Galaxy at Blaker* (2013–2015). The report is based on the project's pilot show *z(oo)m + – books in motion* (Blaker gml. meieri, June 1–16 2013).

*The Gutenberg Galaxy at Blaker* takes as its point of departure the so-called archive of the artist Guttorm Guttormsgaard, a collection of tens of thousands of objects he has collected with the intention of “documenting necessary impulses to keep one’s spirits up.” The archive is located in a former dairy in Blaker, a village 40 km northeast of Oslo.

Coincidentally, Guttorm Guttormsgaard shares initials with the Gutenberg Galaxy, Marshall McLuhan’s designation for the era of print’s hegemony as a medium of storage and transmission. This is a remarkable coincidence because Guttormsgaard has referred to the printed book as a model for his own artistic practice, because he over a period of several decades has excelled as an original maker of books, and because his archive includes a very rich collection of printed matter and printing equipment.

The title *The Gutenberg Galaxy at Blaker* refers to these riches, while alluding to the fact that new media have displaced the Gutenberg technologies from their previous centrality in our culture (Blaker is a small village at a peripheral location).

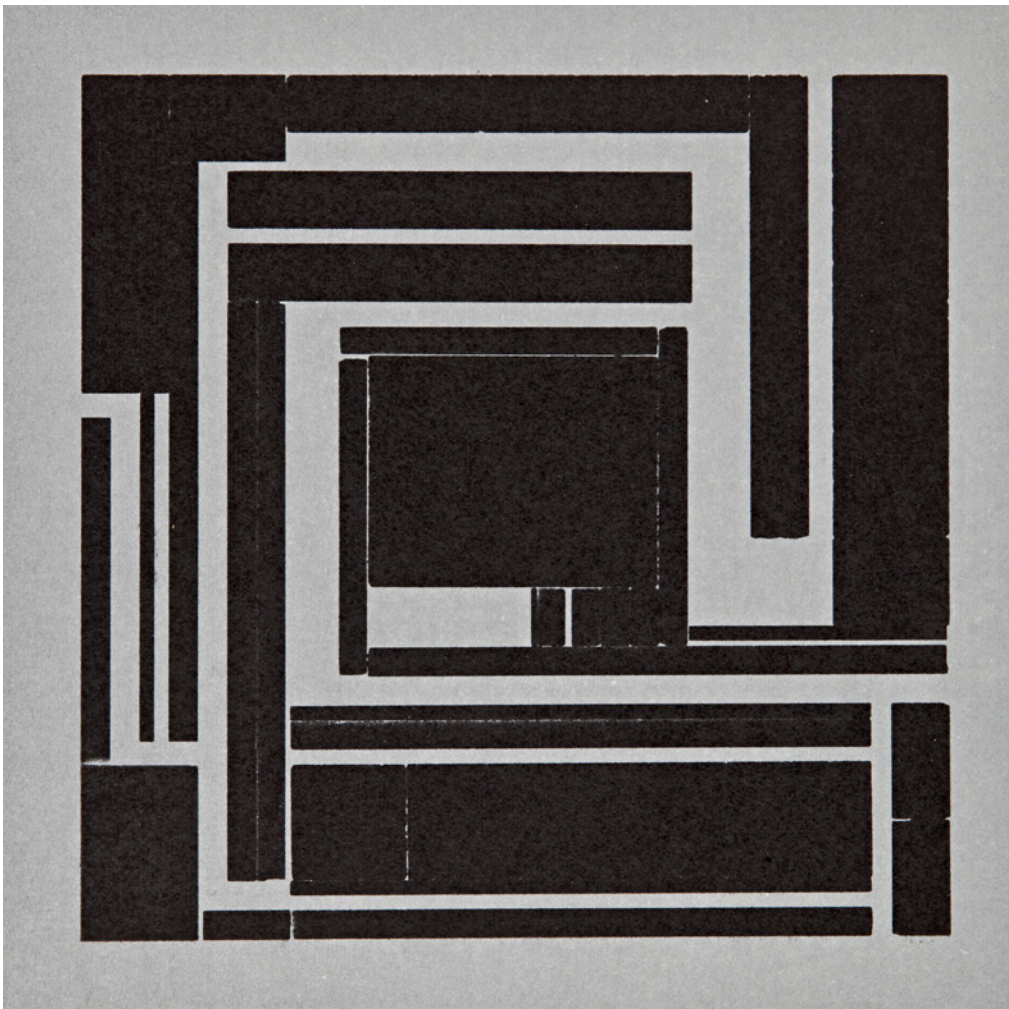
This development has, however, created new environments where books may function in new ways. Such an insight informs McLuhan’s own books, which he continued to produce despite his proclamation that the Gutenberg era was a closed chapter.

How can we reimagine the book today, its pasts and prospective futures?



In 1799 the meter was deposited in the Archives nationales in Paris. The standard measure of the Gutenberg Galaxy is archived in Blaker: 23.566 mm at 16.25 °C.<sup>1</sup>

1. While print in various ways contributed to the “standardization” of culture, very precise standards for letterhead printing were developed. In the first centuries after Gutenberg invented movable type, the height of the types varied from printing house to printing house. In fact, a unique type height was an effective insurance against theft, as other printing houses would be unable to use the printing material. When the printing houses ceased to produce their own types, this variation became a practical problem for the foundries, leading to standardization. The measure deposited in Guttormsgaard’s archive specifies a German standard corresponding to an official measurement registered on October 22, 1904: 23.566 mm at 16.25 °C. Deviations up to 0.015 mm were deemed acceptable. The measure was based on the Berthold-Didot system, which became the European standard (excepting England, where the system was based on the foot), and replaced systems like the Leipziger measure (24.82 mm). So while the inscription on the measure in the archive indicates that it was produced in Leipzig, it must by no means be confused with the Leipziger standard.



*Mellomrom – Space Between* – is a good place to start. The print is produced with what in Norwegian is referred to as “blind material”, i.e. the material that in letterhead printing was used to create space between and around the letters (the typographic blanks). Leaving no visible marks, these elements nevertheless structured the printed page. With Guttormsgaard's imprint of the blind material, the background becomes figure – a metaphor for going behind the surface effects of print culture in order to foreground the technical, cultural, and social preconditions for the printed book.

The image may also serve as a figure for Wolfgang Ernst's media archaeology, which seeks to analyze the “techno-epistemological configurations” underlying mass medial surfaces. In his archaeology of knowledge, Michel Foucault designated the “archive” as the historical *a priori* – the overall system conditioning that which can be said and seen. Ernst extends this idea, adding that the archive – in this metaphorical sense – is in crucial ways determined by the prevalent media technologies.

More and more people experience alphabetic texts not in printed books but on electronic screens. While in scripture- and print-based culture the text was readable for human eyes in its material immediacy once the brain had acquired the alphabetic code, the electronic text is not what it looks like but a function of a transformation of electric impulses inside the computer – an uncanny version of Heideggerean *aletheia*. Any direct deciphering of a HTML source code of a text on the World Wide Web reveals that what looks like textual form is just a data format, a function of a much more complex hidden structure. Unless phenomenologically implemented on a computer screen, the text is unreadable for humans. A sublime existence: something is imminent but not yet concretely represented.

Like Marshall McLuhan's seminal *Understanding Media* from 1964, Friedrich Kittler's *Gramophone, Film, Typewriter* (1986)<sup>1</sup> became a corner stone of subsequent media studies. The varying relation between signal-based and symbol-based (thus technological) media is a recurrent theme in Kittler's work. Let us rearrange the title of his book into a slightly different media-chronological order: *Alphabet, Gramophone, Computer*. The early phonetic alphabet was like a culturally engineered gramophone<sup>2</sup> (writing phonetic speech in discrete characters: *grammata*). This symbolic regime would later be radically challenged by signal-based recording media such as the gramophone.



Now, however, we realize the extension of the symbolic regime into new forms, as alphanumeric code. Symbolic writing returns alphanumerically inside the computer.

Here, code becomes a pre-text, hidden behind the visual interface. Even if there is still a lot of text to be seen on the monitor, communication is governed by a textuality of a second order. The dissimulation of such alphanumeric textuality is even more illusive with what humans perceive as computer sound and digital images.<sup>3</sup> Because of this, textual studies need to be extended to textual forensics, taking the analysis of the physical embodiment of texts on paper and in books further to their new media archaeological situations. The structuralist extension of textuality to all forms of media once blurred the difference between symbols and signals. Today, circuitry, with the omnipresence of microprocessors (both electrotechnical and logical), is the new form of textuality, blurring the difference between signals and symbols in a new way. While Digital Signal Processing allows for the quantization and sampling of physical world objects into strings of bits and bytes (i.e. symbols), it is also the case that on the microelectronic level each symbol, be it a so-called “zero” or “one”, is a physical signal.<sup>4</sup>

### The media archeological approach

Media archaeology is generally associated with the discovery of the cultural and technological layers of previous media – an approach that remains on the familiar terrain of historical discourse. Some authors take the term *media archaeology* at face value as referring to the “digging out” of machinic visions of the past, visions of media that never materialized or that are simply forgotten today (baroque media, for instance). The archaeological metaphor is difficult to resist and has sometimes led to fatal misunderstandings of Michel Foucault’s notion of an *archaeology of knowledge*. In my understanding, however, media archaeological research should be conceived of as an alternative to the supremacy of media historical narratives. Equally close to disciplines that analyze material (hardware) culture and to the Foucauldian notion of the “archive” not as an institutional repository of public records but as the set of rules governing the range of what can be verbally, audiovisually, or alphanumerically expressed at all, media archaeology is both a method and an aesthetics for practicing media criticism, a kind of epistemological reverse engineering, combined with an awareness of moments when media themselves become active “archaeologists” of knowledge. This implies that when media archaeology deals with prehistories of mass media, this “pre-” is less about temporal antecedence than about the technoepistemological configurations underlying the discursive surface (the monitors and interfaces) of the media.

### The current state: digital retroaction

In its electromagnetic existence as storage on the hard disk drive (or in flash memories nowadays), the text is as latent as a xerox copy in the intermediary state of the inbetween image (the electrostatic “latent” image).

Traditionally, storage of memory is based on literal inscription: “There must be a writing means by which the information to be stored is introduced into the device.”<sup>5</sup> Contrary to this, storage devices based on electromagnetic latency such as tape for audio and video recording reveal their memory content only within the spatio-temporal dynamics of the electromagnetic field itself: memory by induction. Electrotechnical storage media take place in a sphere which is technologically different from the scriptural regime of the classical archive. In technomathematical machines the archival

regime unexpectedly returns – not as literary textuality though (narrative, prose), but as command lines and matrixes (bit-maps in hex-files) on the level of alphanumeric codes, an “operative symbolism”.<sup>6</sup>

This re-turn (a “Kehre” in Heidegger’s sense)<sup>7</sup> performs a recursive loop – a temporal figure which cannot be reduced to the linearity of cultural history. Computer culture retroactively transforms cultural analysis into non-discursive configurations of events. New technologies of information and communication call for new methods of inquiry.<sup>8</sup> Turing Machines have no sense of history at all, just discrete memories of present states and Markov predictability dependent on past states. That is why the archaeological approach is needed, as opposed to historical narrative, in order to uncover what stays operatively embedded in microchip architectures to be dynamically (which today means: algorithmically) unfolded.

### Return of textuality: Integrated circuits and the alphanumeric code

Ernst Cassirer defined culture as a principally symbolic order. Let us take this literally: culture indeed operates upon symbols. Cultural analysis should be turned into knowledge of the technical operations of culture, cultural engineering (“Kulturtechnik”).<sup>9</sup> The relation between texts and the surrounding world is not just aesthetic or social but, on the “archaeological” level, a machinic one, a relation which is part of the symbolic order.<sup>10</sup>

Library catalogue entries, even if alphanumerically coded, cannot act algorithmically by themselves, this capacity is reserved for programmable hardware. It has always been the desire of symbol-based textuality to transcend its read-only character towards algorithmic self-executing.<sup>11</sup> But, such a text has to be implemented in media-active matter to become processual. In order to become poetic it has to take place *in the world*, meaning *in time*. The electronics of a computer sets an implemented algorithm *into being*. Executability is not yet the real event but depends on an operative technical medium in order to happen. Classical textuality in its cultural form as “literature” has always lacked the operative dimension which differentiates technological media from cultural hermeneutics: neither the handwritten nor the printed text may execute itself but depend upon the human reader to process the linear succession of characters into meaningful statements. However, with the Turing Machine the reading mechanism is also a writing mechanism which, on the basis of pre-formulated symbolic tables, performs operations not upon the traditional page format but upon paper reduced to one dimension, the endless tape. In 1962, Marshall McLuhan proclaimed the displacement of the Gutenberg Galaxy by electronic media. Nowadays we witness the return of the symbolic order of letters, this time as symbols inside the trans-electronic medium of the computer. This reentry is not an historical figure of temporal progress but rather a form of recursion, a Leibnizean fold.<sup>12</sup>

### Re-turn to Foucault (with Kittler)

Foucault, who studied mainly in libraries and from printed publications, restricted his breathtaking discourse analysis to realms such as law, economics, and theology – all of which remain within the domain of classical textuality. But, if we (metaphorically) open the computer and look at its symbol-operative level, Foucault’s suspicion can be affirmed in a new way: all power emanates from and returns to the *techno-mathematical archive*.

Foucault’s analyses “end immediately before that point in time at which other



media penetrated the library's stacks. Discourse analysis cannot be applied to sound archives or towers of film rolls."<sup>13</sup> Beyond such signal-based "analog" recording and transmission media we witness the return of the symbolic order. The archival formation of the Gutenberg Galaxy was significantly reconfigured by the audiovisual, which displaced the role of the textual. What writing was to Foucault's archive, sono- and videography was to the electronic mass media age: it was its technological condition and its logic of operation. "This reconfiguration entails a profoundly different concept of the archivable; the audiovisual archive is designed to store precisely that which cannot be properly archived by writing",<sup>14</sup> thus giving rise to new kinds of affective sensation with all their traumatic implications (all of a sudden voices of the dead could be made present again through phonographic replay). Media archaeology offers a non-historical interpretation of this process: no ending (and replacement) of the Gutenberg Galaxy with signal-based analog media, but rather a de-placement of modalities ("Umschichtung" rather than "Geschichte", in German). New media do not annihilate but rather displace former media.

Kittler himself now posthumously figures not just in texts but in audio and video files as well. This kind of transliteral representing is uncanny (cf. the double sense of "medium"). Accessed *online*,<sup>15</sup> Kittler's voice and image do not return as the analog, signal-based alternative to the symbolic code of his textual publications. Instead, such audio-visual files represent a recursive re-turn of the alphabetic code in a "secondary alphabet", as extended and reduced to the alphanumeric code of hex-files or even to its most basic binary bit level. A dialectic reconfiguration of media-cultural time



unfolds: texts (thesis) were once replaced by sound and images in the form of signals (anti-thesis) and are now being sublated into alphanumeric code (synthesis). Audio-visual Kittler thus reappears as an algorithmically moved text. This re-turn cannot be explained in the terms of history.<sup>16</sup>

### Navigating inside the sub-textual archive

New options for searching and retrieval emerge with archives that are no longer simply alphabet-based, but also signal-based, and include holdings such as phonographic records or electronic video images on magnetic tape. Once digitized, the electronic image is available for similarity-based image retrieval. The traditional architecture of the archive is based on classifying records by inventories. In digital media culture, this order is being replaced by order-in-fluctuation: stochastic dynamics. This algorithmically ruled processuality creates a new type of “moving” archive.

Humans almost inevitably interface to images in an iconological way, to sound in terms of music, and to texts in a hermeneutic mode. But there is a kind of knowledge which can be uncovered from within the visual, acoustic or textual endo-data by entering the digitized record itself. Such data immersion is being performed by algorithmic machines of information processing rather than by human perception. *Informatized* organization of knowledge generates diagrams, which, incidentally, is also Deleuze’s term for the Foucauldian new *archive*.

In the Turing Galaxy of digital addressability, it is possible to navigate through large amounts of textual and audio-visual data beyond verbal tagging and obtain immediate access to character strings, sound and image signals, unfiltered by key-terms. Texts, images, and sounds thus become calculable by pattern-recognition algorithms. Such procedures will not only media-archaeologically “excavate” but also *generate* unexpected statements and perspectives from a bit-based archive that can, for the first time, organize itself not just according to logocentric metadata but according to proper mathematical and physical criteria – endogeneous memory in its own medium. The notion of “excavating the archive” in terms of media archaeology is not meant as a metaphor.<sup>17</sup> What is being digitally “excavated” by the computer is a number of information patterns which human perception perceives as “text”, “sound” or “images”. Contrary to traditional semantic research hermeneutics, an active, audio-visual, coded archive will no longer list text, sound and image sequences according to their authors, subjects, and metadata only. Instead, algorithmically driven digital data networks will allow verbo-audio-visual sequences to be systematized according to genuinely signal-parametric notions (mediatic rather than narrative *topoi*), revealing new insights into their informative qualities and operative aesthetics.

This seems to be what the work of Constant with Guttormsgaard’s archive aims to practice. Constant’s “probing” of the visual archive is exactly what experimental media archivology should be all about – with the proviso that the latter approach does not aim at “telling a story”. On the contrary, algorithmic listing is a critique of narrative order.<sup>18</sup> Sorting digital “images” by ID, pseudo-random hashes etc. reminds human “reading” of different orders of knowledge. In an almost Pythagorean way, world relations turn into number ratios again – with the notable difference that with computing such ratios dynamic become themselves. There is rhythm in such textualities.

1. Kittler, Friedrich. *Gramophone, Film, Typewriter*. Translated by Geoffrey Winthrop-Young and Michael Wutz (Stanford: Stanford University Press, 1999).
2. See Barry Powell's *Homer and the Origin of the Greek Alphabet* (Cambridge, MA: Cambridge University Press, 1991).
3. Below any cultural semantics of iconology, the digital image is an aggregate of independently addressable, numerical values. See Vilém Flusser, *Ins Universum der Technischen Bilder* (Göttingen: European Photography, 1994). See also Ketil Jakobsen, "Anarchival Society", in *The Archive in Motion: New Conceptions of the Archive in Contemporary Thought and New Media Practices*, edited by Eivind Røssaak (Oslo: Novus, 2010), 127–154.
4. See Matthew Kirschenbaum, *Mechanisms: New Media and the Forensic Imagination* (Cambridge, MA: The MIT Press, 2008), 11f.
5. Ira M. Sage, "Making Machines Remember," *Product Engineering* vol. XXIV (1953), 141.
6. A term introduced (in opposition to "ontological symbolism") by Georg Trogemann in his "Code und Material", in *Code und Material: Exkursionen ins Undingliche*, edited by Georg Trogemann (Vienna and New York: Springer, 2010), 15.
7. Heidegger's term is a direct derivative from skiing: see Dieter Thomä, "Kehre. Was wäre, wenn es sie nicht gäbe?", in *Heidegger Handbuch. Leben – Werk – Wirkung*, edited by Thomä (Stuttgart: Metzler, 2003), 135.
8. This was the working assumption of "Digital Retroaction: a Research Symposium", UC Santa Barbara, September 17–19, 2004 (cf. conference draft).
9. See Horst Bredekamp and Sybille Krämer (eds.), *Bild – Schrift – Zahl* (Munich: Fink, 2003).
10. See Kittler, "Die Welt der Symbole – eine Welt der Maschine", in *Dracula's Vermächtnis* (Leipzig: Reclam, 1993), 58–80.
11. See Florian Cramer, *Exe.cut[up]able statements. Poetische Kalküle und Phantasmen des selbstausführenden Texts* (Munich: Fink, 2011).
12. See Ana Ofak and Philipp v. Hilgers (eds.), *Rekursionen. Von Faltungen des Wissens* (Munich: Fink, 2010).
13. Kittler, *Gramophone, Film, Typewriter*, 5.
14. Amit Pinchevski, "The Audiovisual Unconscious. Media and Trauma in the Video Archive for Holocaust Testimonies", *Critical Inquiry* vol. 39 (2012), 165.
15. See Thomas Groh's blog for the relevant links: <http://filmtagebuch.blogger.de/stories/1914671>
16. "Das 'Narrative' eines formalen Algorithmus ist nicht das eines diskursiven Erzählens". George Steiner, *Von realer Gegenwart. Hat unser Sprechen Inhalt?* (Munich: Hanser, 1990), 155.
17. For Foucault the term archaeology does explicitly not "relate analysis to a geological excavation." Foucault, *The Archaeology of Knowledge*, trans. A.M. Sheridan Smith (New York: Tavistock, 1972), 129.
18. See Wolfgang Ernst, "Telling versus Counting: A Media-Archaeological Point of View", in *Digital Memory and the Archive*, edited by Jussi Parikka (Minneapolis and London: University of Minnesota Press, 2013), 147–157.

aaaaaaaaa

eeeeeeee

efffggg

hhhhhhh

kkllllll

nnoooo

pprrrrrr

sssstttt

tttttttt

wwyyyz

aaabccd

eeeeeee

ggggggg

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ooooooo

rrrsssss

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## CONSTANT (ACTIVE ARCHIVES)

### Eleven Orderings

The archives of the Gutenberg Galaxy were paper-based. When public as well as private archives today are supplemented with or replaced by digital solutions, this has crucial implications for what it means to store something for future usage. The ongoing work with the building of a digital database for Guttormsgaard's collection takes these issues into the heart of his archive, for which the printed book – until now – has served as the primary “storage medium”.

This encounter between the medium of the book and the digital database makes Guttormsgaard's archive a unique laboratory for an investigation of a book culture in motion. The displacement of the archive's media technological foundations implies a radical redefinition of what the archive is, how it works, and how it may be used. As part of *The Gutenberg Galaxy at Blaker* Michael Murtaugh and Nicolas Malevé of the Brussels-based collective Constant is developing digital approaches to Guttormsgaard's archive. The results of their first probings into the archive, “Eleven orderings”, contrast computer vision with our own ways of seeing and shows us, so to speak, the “blind material” of the digital database: the technical processes and the human labor involved in the construction of the database and its provision of a seemingly direct access to the archive.

One of the first steps one makes to understand a series of objects is to order them. Beyond the sense of control it gives, each ordering tells a different story of the archive. Listing all the elements by ID reveals the internal index the database maintains to keep track of the information. The ordering by ID also talks about the human labor of “feeding the system”. These elements were introduced one by one, by one or more people when they were available to them. And the succession of IDs reflects the succession of inserts in the database.

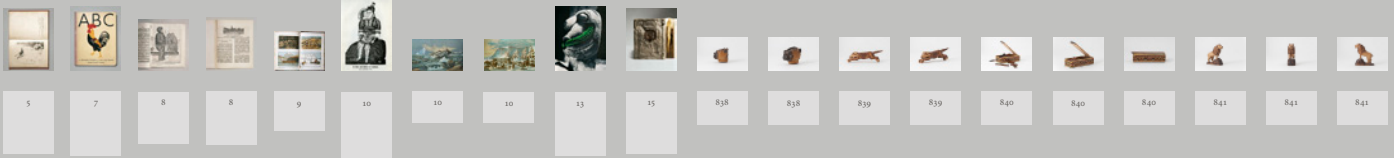
If we align the elements by the time the photos were taken, we get to see other dimensions of the human labor: the time it took to capture all the objects, the gaps between the shots, what items were photographed together. We can imagine the body of the photographer, if he or she was far from the object, the slowness of taking these precise images, the time it takes to adapt the setup for the next object, the care and patience.

Focal length and aperture give us detailed information about the technical configuration of the camera for each photograph and these measures remind us that the various objects each have required a different form of attention (some of them were pale and contained shapes and colors with low contrast, others were clearly distinct from the background).

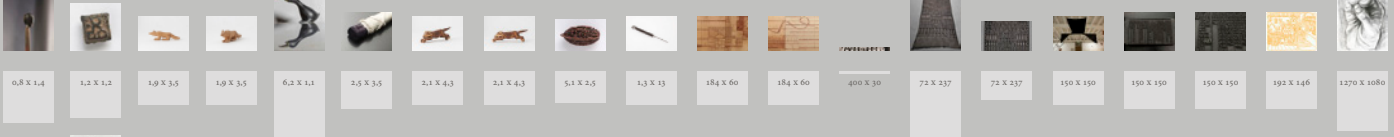
Orderings tell us a story about dimensions. Which are the salient items when we measure the physical objects and which ones come first when we look at the heaviest file sizes?

The digital images are made of pixels rich in color information, but how can one “order” by color? What is significant color information? Contrarily to human intuition, for a computer, a white image is an image saturated with red, blue and green. To find the images that look the most blueish, that appear the most red or green we counted only the color values that were superior to the others by a certain threshold. For

Database id of the depicted object (reflecting order of entry into the database)



Object's dimensions (as recorded in the database)



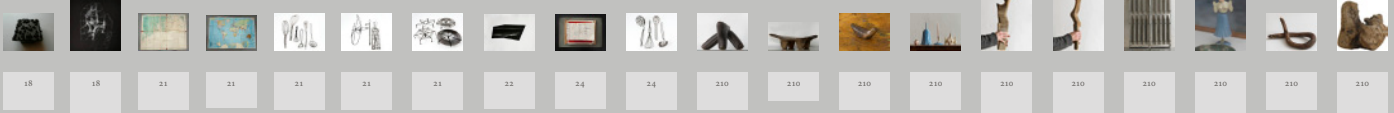
File size of the image of object



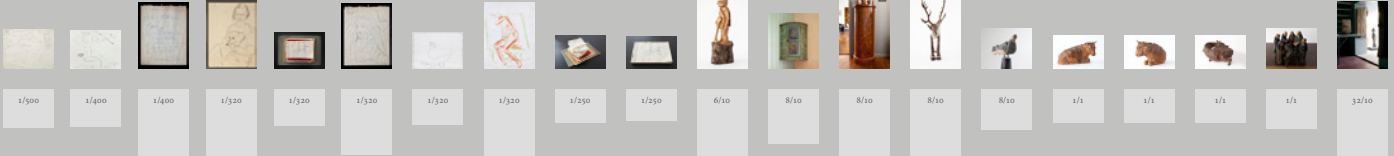
Date & time the image was taken according to the camera metadata (exif)



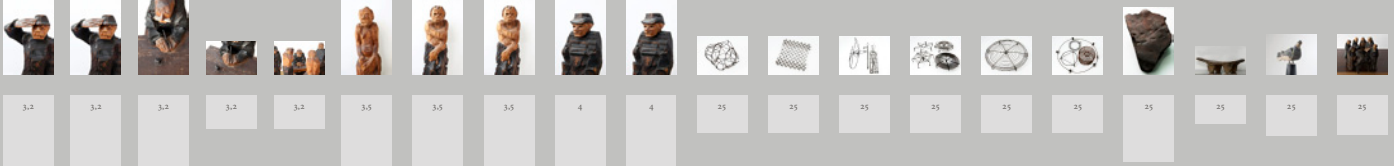
Focal length of the camera photographing the object (exif)



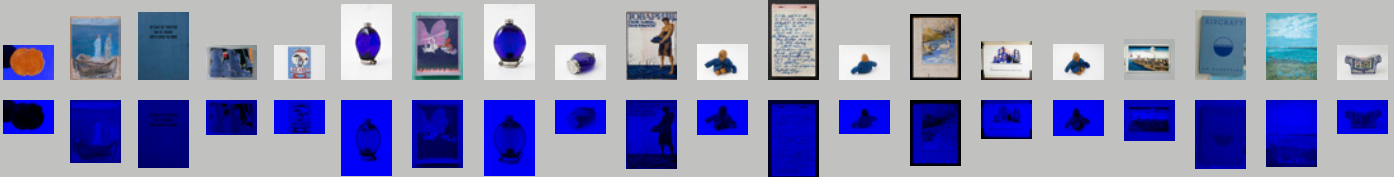
Focal length of the camera photographing the object (exif)



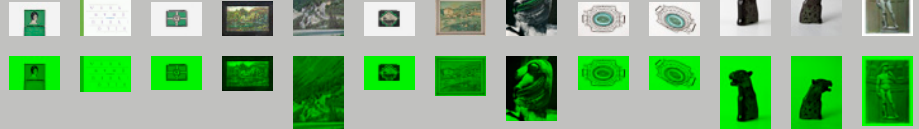
F-number / Aperture value of camera (exif)



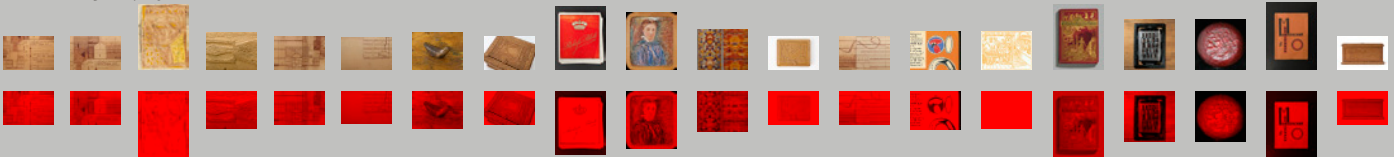
Relative amount of significantly blue pixels in the image based on its RGB data



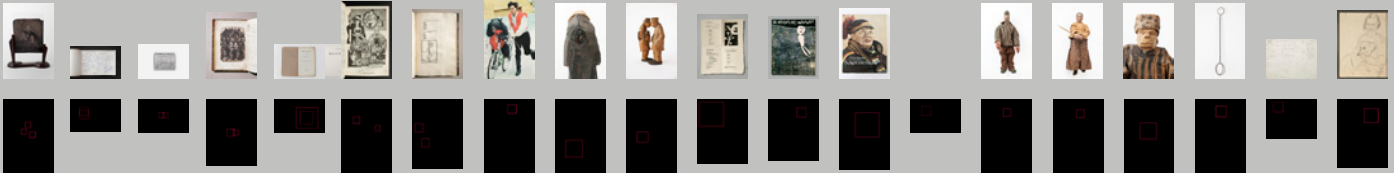
Relative amount of significantly green pixels



Relative amount of significantly red pixels



Count of "frontal faces" (according to Haar-Cascade feature detection trained on a standard corpus of images)



instance, we recorded blue information value only when it was significantly higher than the red or green channels values. Ordering is then not only about following the raw values coming from the digital objects but about transforming them in dialog with a certain understanding of human perception.

Different orderings reveal that we have no direct access to the archive and its objects. We only access it through a dialog with interlocutors. Different orderings make the interlocutors speak to us. Interlocutors can be human or software agents like computer programs installed on a server or embedded in a camera. The work of creating, maintaining, and transporting the archive inevitably includes glitches, misunderstandings, and misplacements. These are inescapably part of the reality and identity of the archive. Each ordering suffers from its own deficiencies, has its own glitches, holes, and blindspots. A different photographer, a different camera, an error when uploading a folder, an expired license in a software package. An error in the transcription of measurements appears at the end of the "item's dimensions" ordering: the modest drawing becomes a giant hand. Three images are duplicated, but their file size varies. Which one is the proper reference? The blindspots threaten to distort one's understanding of the archive. At the same time, the "cleaning up" of missing or broken data introduces its own blindspots, a revisionism that aims for a completeness that doesn't exist. Taken together the imperfections of the orderings can (hopefully) convey something of the richness and complexity of the whole.

When counting the faces present in the pictures, our interlocutor, a computer vision program implementing the Haar Cascade algorithm, sometimes misinterprets an image and detects a face where there is none. It creates a false positive. But the very reason for its weakness (being too eager to recognize as a face a shape that contains features with a strong symmetry) is also the reason for its strength as it allows the algorithm to distinguish a face in a dadaist collage or in a hastily drawn sketch. The interlocutor doesn't have the truth about the archive, but along the conversation it opens our eyes and speaks to the part of us that looks at the clouds and sees faces.



GUTTORM GUTTORMSGAARD

with Thomas S. Hansen, Anna Prestsæter and Ellef Prestsæter


1&2



*1 & 2* is either a poster or a book, but never both at the same time. The letters are printed in pure CMYK-colors (cyan, magenta, yellow and black). While CMYK is a system for color printing, the RGB-system (red, green and blue) is used in electronic color representation. In theory, a mixture of equal amounts of cyan, magenta, and yellow should produce black, while maximum values of the three colors in the RGB-system yield a shiny white. Try holding *1 & 2* up against your reading lamp, or mounting it in a window: an alphabet of colors appears.



Consider the bases of a book.  
numbers.




5

a full sheet of paper (cut or not)



28

filled with cyan magenta yellow



29

and with this black line of thought under—




4



bok og plakat  
er laget og utgitt av  
gutorm gutormsgaard  
i samarbeid med  
ellef prestseter  
thomas s. hansen  
anna prestseter  
trykket av zoom  
opplag 200+200  
blaker mars 2013

and overwriting the message.



59

We are told that books are just thin,



38

linear, its geometry one-dimensional. Yet not all lines




12

are straight and some of the most widely used books are




12

not read in a linear fashion at all (think of the telephone



20

dictionary, the Bible, or the dictionary).



13




printed lines, one. The initials of incunables were often



54



painted, a figure for the pictorial origin of the printing




9

press (Gutenberg's movable types were designed to compete



24

with the look of handcrafted manuscripts).




17

In the beginning of the word was the image, El Lissitzky.




16

used the blanking out material (the elements used by




47

typesetters to create the space around the types, their



50

ground) to connect images of letters for the sake of his




55

friend Miyakobsky. And in the book, you're reading now




42

the ground of the message is a series of literal figures.

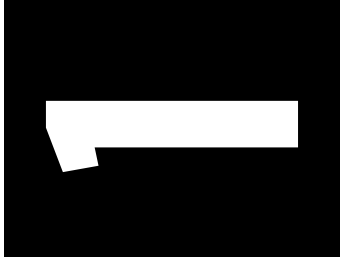



8

But even if the image between the words were blanked out,



25



the text as image would still be part of the book's message.



85



to fail. The L need not be a dancer to have a body.

**E**

37

The book form is the arch of the GG Archive; the key

**P**

60

to its command. The Archive's books outline a variety

**E**

61

expanded and labyrinthine field of graphic art, beyond

**S**

36

**&**

the illustration, the signets, and the frontispiece.

**U**

30

Stepping on an old footprint means a wholly new pattern.

**I**

27

Do you follow me? Like a duck, chasing the rabbit,

**K**

6

**A**

44

the book and poster will never marry without divorce.

**O**

53

("Tänk om ändå kula vort kula, og kula kula vort vort sama.")

**M**

52

Dom kula laga unger, så li två var det samma.")



**R**

14

Comedies and tragedies are written with the same letters.

**V**

19

but you are going to need more Es than Bs.

**D**

22

In other words, a set of Gutenberg's lead types



**O**

41

was a letter frequency analysis, a kind of counting which

**I**

56

is key to the decoding of encrypted writing.

**D**

49

Caption may be good for cryptography.

**L**

48

but also for information retrieval. Think of pagination.



**D**

18

In the present case, a table of contents would spell it all out.

**I**

23

but here I am, straggling out and overlooking the message.

**T**

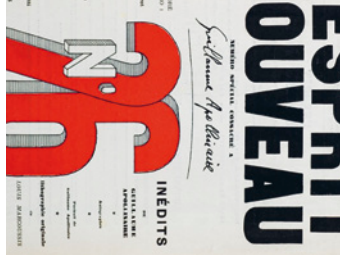
10

Come closer. Like what you see?

**F**

07

Bend over. No peeking!



**Z**

**Z**



**=**

13

Figure. Turn the page, but don't turn off.



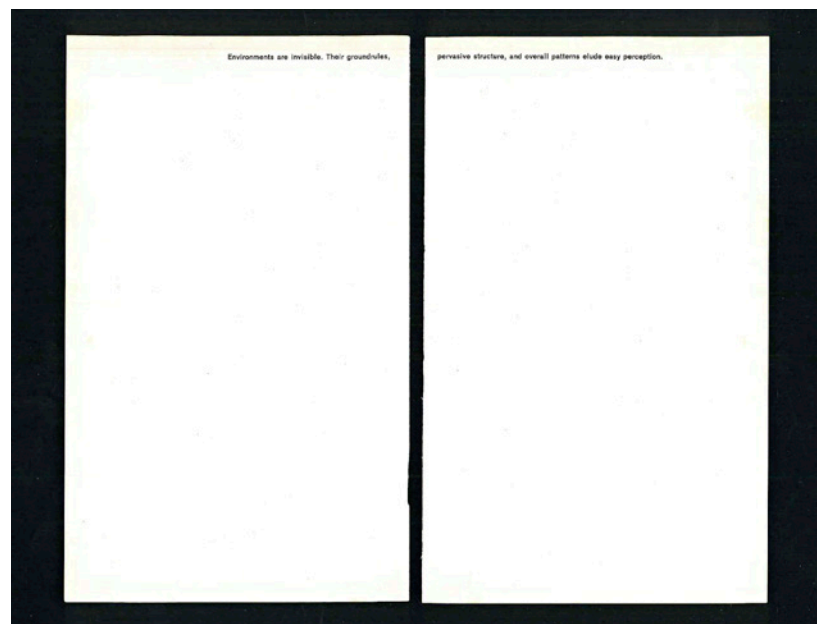
**I**

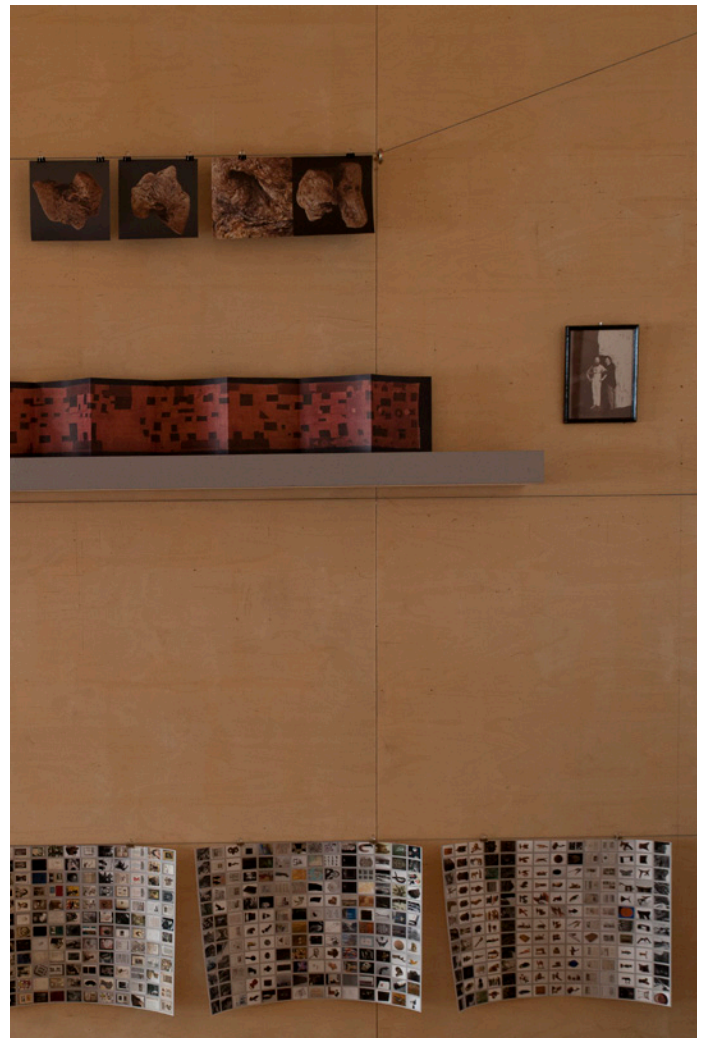
7

For an overview of the book look



Environments are invisible. Their groundrules, pervasive structure, and overall patterns elude easy perception.





"The movement *into* the image is, for me, precisely the same as travelling out *into* the world. Zooming and travelling are two sides of the same coin. It's a question of seeing through the conventions, of seeing one's own culture from the outside – or of trying to go as far as possible into it."

Guttorm Guttormsgaard

*z(oo)m + – books in motion* launched the archive's new website, an online database allowing the public to access the archive through high resolution images and video. On [www.guttormsgaardsarkiv.no](http://www.guttormsgaardsarkiv.no) you can zoom in and out, study details and get an overview. The exhibition tried to pull the extremes of the database (from the isolated RGB pixel to the image base as a whole) as well as the zooming functionality of the web site into the concrete space of the dairy. Some of the biggest and smallest objects of the archive were on display, side by side with their respective reductions and enlargements.

ATTO

Ne però fatto no cumento, anzi utile;  
 Che sei stata cagion, che maritata la  
 Figliuola ha in sì ricco, e nobil giouane;  
 Quant'egli stesso haria saputo eleggerfi.  
 LE. Gli la dara pur per moglie. ME. Già datagli  
 L'ha. Si sono accordati egli & Hilario  
 In due parole. LE. Anchor, che questo misero  
 Vecchio mi sia piu, che le serpi in odio;  
 Pur ho piacer d'ogni ben di Licima.  
 ME. Se tu perseverassi in questa collera;  
 Saresti Lena la piu ingrata femina  
 Del mondo. Egli con tutto, che giustissima  
 Cagion haria di far tutto il contrario;  
 Pur non puo star, che non t'ami; e nascondere  
 Non po la passion, che dentro il cruccio,  
 Di non pentirsi de le dispiaceuoli  
 Parole, c'hoggi hebbe teo; che giudica  
 Che t'habbia spinto a fargli questa ingiuria.  
 Et m'ha detto, che quando vdi da Hilario,  
 Che tuo marito t'hauea con quel giouane  
 Trouato; fu per affanno a pericolo  
 Di cader morto; & che poi ritrouandosi,  
 Com'era a punto il uer; che caricatula  
 Hauea colui non a te, ma a Licinia;  
 Tutto resto riconsolato; & parueli  
 Risuscitar. Hor vedi, se c'è dubbio,  
 Che teo presto non si riconcili,  
 Messimamente; che gli torna in utile  
 Quest'error tuo. LE. Faccia egli pure, & pigli la

QVINTO

Come gli par. Se fara il medesimo  
 Verso me, ch'egli suol; me la medesima  
 Verso se trouara, che suoi. ME. Hor uoglioti  
 Dir Lena il ver, A te mi manda Fato;  
 Ilqual è tuo, come fu sempre; & pregati,  
 Che tu anchor sua similmente uogli essere,  
 Et questa sera inu tu te, & Pacifico  
 A nozze; & intende, che non sol Licima,  
 Et Flauio questa notte sposi siano.  
 Io son per far quanto gli piace. Hor diteci  
 Voi Spettatori; se grata, & piaceno; e;  
 O se noiosa è stata questa fabula.

IL FINE.

In Vinegia appresso Francesco Bindone e Mas  
 pheo Pasini. M D XXXV.  
 Il Mese di Maggio.



Size matters: in the postwar period, the paperback increasingly took market shares from hardcover books, until the dollar turnover of paperbacks surpassed that of hardbacks in 1960. While some celebrated the paperback as a democratization of forms of culture and knowledge which had until then been reserved for well-off elites, others lamented its vulgarizations. In 1959, Hans Magnus Enzensberger complained that the U.S. paperback packaged the Bible and Homer in exactly the same way as it packaged Superman or the detective novels of Mickey Spillane. Marshall McLuhan took a different position when he commented on the paperback revolution in *Understanding Media* five years later. According to McLuhan, the "phenomenon of the paperback, the book in 'cool' version," manifested television's transformation of book culture into "something else". And, against the claims of a "vulgarization" of culture, he asserted that the paperback "can be as readily concerned with profound matters as with froth."

The paperback revolution was not without precedent. In Venice, the publishing house of Aldus Manutius (1449–1515) printed portable, affordable books in large editions, represented above by an edition of Ludovico Aristo's *Il Negromante* from 1553 (9 x 15.3 cm). To save space, the entire book was set in italics.



The Modulator Man was the result of Le Corbusier's efforts to develop a universal scale of proportions and a system of measurement anchored in the proportions of the human body. His new standard was intended to create global harmony in a world split between two nearly incompatible systems: the metric system and the so-called "imperial" system of feet and inches. Le Corbusier regarded it an advantage of the latter that it referred to human proportions and believed that the abstract metrical system had made architecture lose touch with its purpose: to contain people. As long as the Modulator Man measured 1.75 m, Corbusier and his partners had great trouble converting the standard into inches. A paperback reading colleague provided the solution: "The values of the "Modulator" in its present form are determined by the body of a man who is 1.75 m. in height. But isn't that rather a *French height*? Have you ever noticed that in English detective novels, the good-looking men, such as the policemen, are always six feet tall?" When the Modulator Man grew into this height (182.88 cm), the conversions fell into place. The principles were presented in two well-proportioned books: *Le Modulor* (1948) and *Le Modulor 2* (1955).

**“BLAST the printed b(oo)k  
moth-eaten STRAIGHT-JACKET  
of the Western mind”**

**Marshall McLuhan (“Counterblast”, 1954)**

**“McLuhan is surely great, but his  
biggest inconsistency is that he still  
writes books.”**

**Nam June Paik (“Utopian Laser Television”, 1966)**



“There might have been some advantage in substituting the word ‘galaxy’ for the word ‘environment’. Any technology tends to create a new human environment. Script and papyrus created the social environment we think of in connection with the empires of the ancient world. The stirrup and the wheel created unique environments of enormous scope. Technological environments are not merely passive containers of people but are active processes that reshape people and other technologies alike. In our time the sudden shift from the mechanical technology of the wheel to the technology of electric circuitry represents one of the major shifts of all historical time. Printing from moveable types created a quite unexpected new environment – it created the PUBLIC. Manuscript technology did not have the intensity or power of extension necessary to create publics on a national scale. What we have called «nations» in recent centuries did not, and could not, precede the advent of electric circuitry with its power of totally involving all people in all other people.”

Marshall McLuhan, *The Gutenberg Galaxy*





McLuhan's pamphlet "Counterblast" (1954) took its cue from Wyndham Lewis' magazine BLAST (1914–1915). When "Counterblast" was revised and redesigned in 1969, McLuhan wrote:

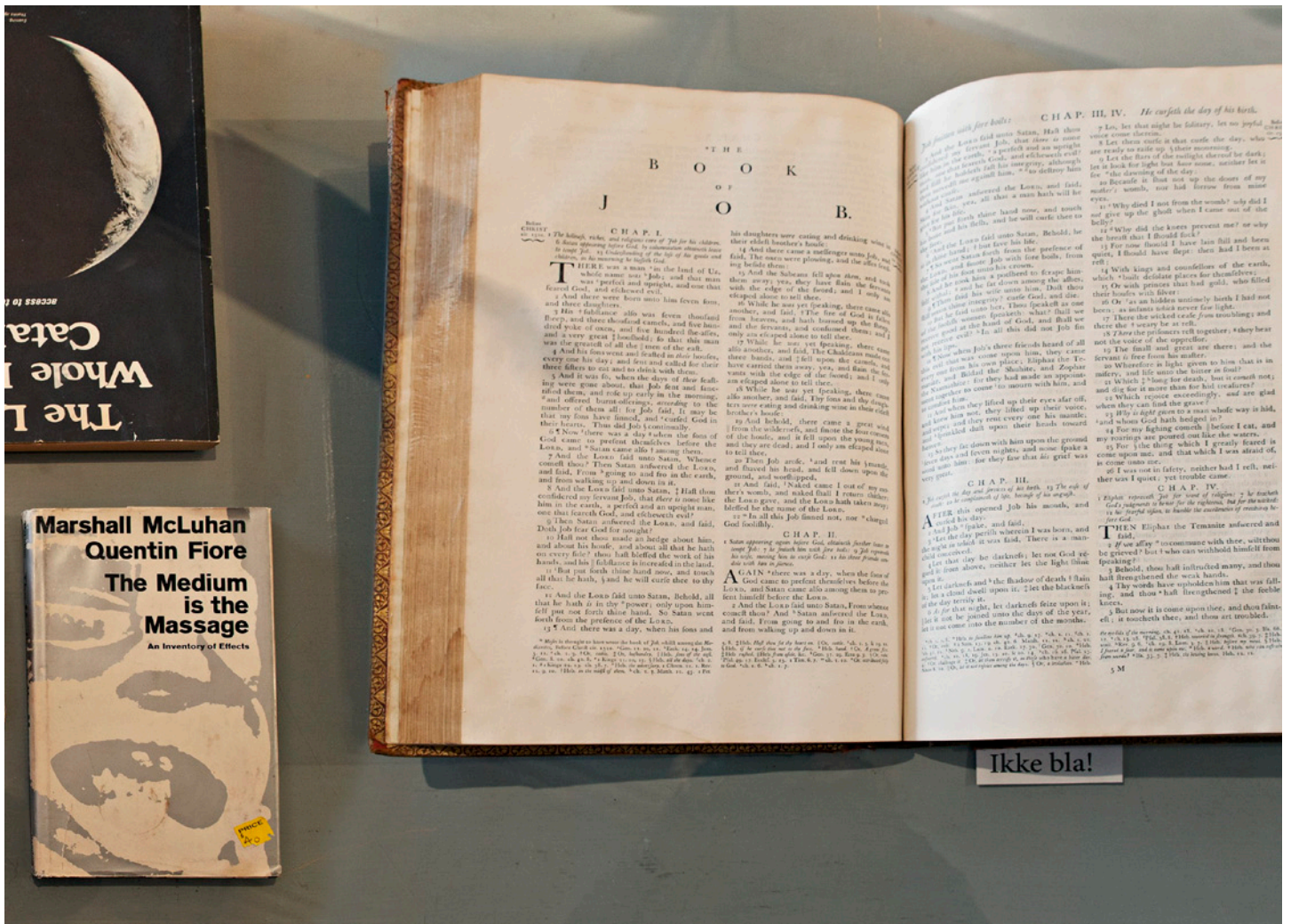
"The term COUNTERBLAST does not imply any attempt to erode or explode BLAST. Rather it indicates the need for a counter-environment as a means of perceiving the dominant one. Today we live invested with an electric information environment that is quite as imperceptible to us as water is to a fish."

The idea of a counter-environment is perhaps even more apposite as a description of McLuhan's *The Medium is the Massage: An Inventory of Effects* (1968), where the paperback format functions as an experimental platform for the study of a period characterized by great cultural and media technological changes.



On the cover, both McLuhan and designer Quentin Fiore are named as authors, while Jerome Agel is credited as “producer” in the colophon. In 1969 McLuhan/Fiore/Agel followed up with *War and Peace in the Global Village: An Inventory of some of the Current Spastic Situations that could be Elimnated by More Feedforward.*

With both publications, then, “inventory” served as a genre designation. The two books are of particular interest in a time when the database, according to some commentators, has replaced storytelling as culture’s most significant form. The term “inventory” indicated that the books were more about mapping overall structures or patterns than telling stories. Rather than organically structured stories (with a beginning, middle, end), each book appears as a continuous stream of information that the reader must navigate his way through. Fiore and Agel’s cooperation with Buckminster Fuller – *I Seem to Be a Verb* (1970) – is like a two-way, four-lane *information superhighway*. With a term borrowed from the cybernetic theory of the time, Fiore even described the book as an “experiment with feedback in printed form.”



The experiments of *The Medium is the Massage* went so far that it came to be considered a “non-book”. Still, the success of the publication was arguably due to the fact that its makers' futuristic eagerness to experiment was based on an intimate knowledge of the history, craft, and functionality of the printed book.

“I was always interested in simple technologies, hand technologies.”

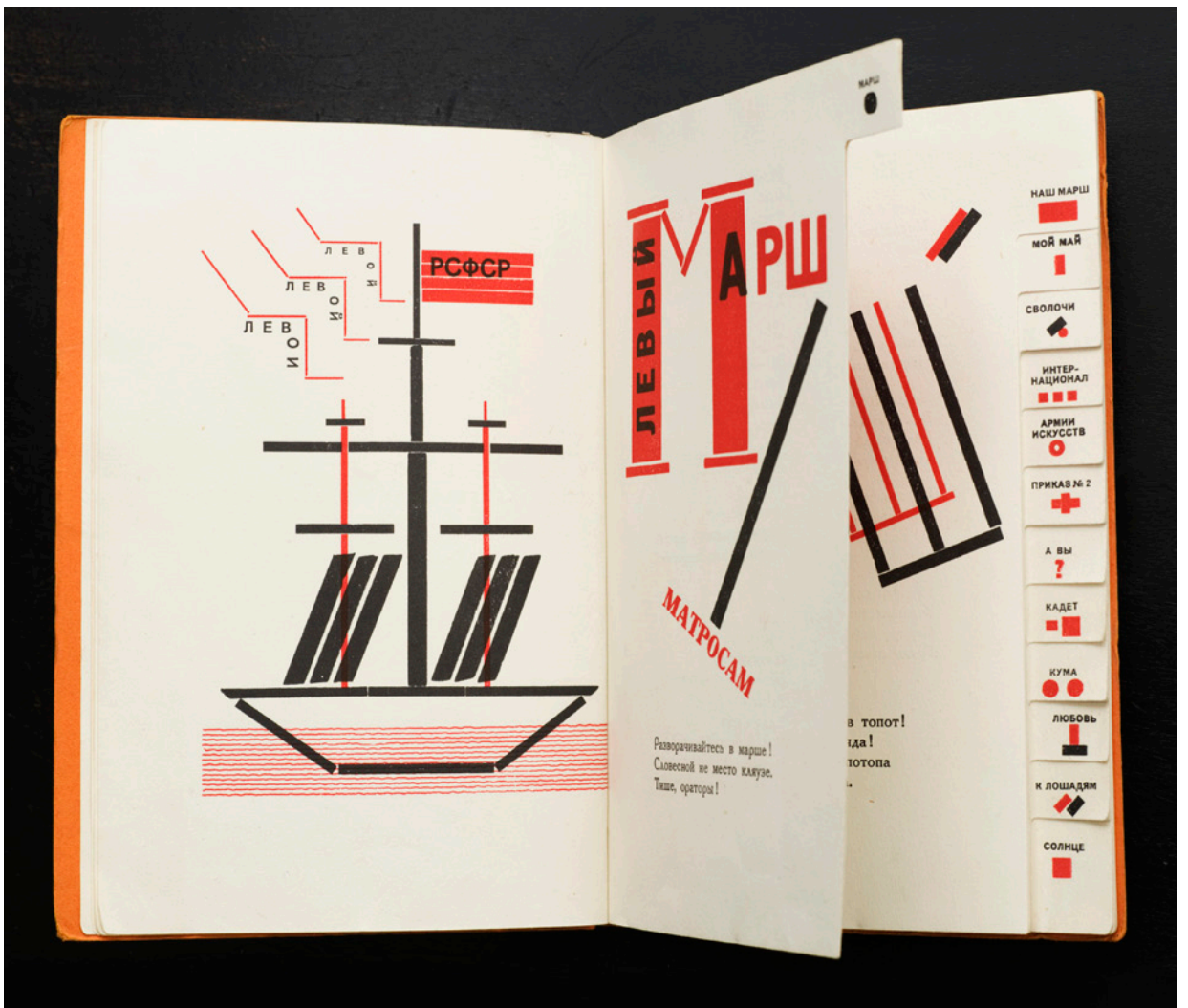
Quentin Fiore, who in 1958 produced a pamphlet about the manufacture of paper by hand.



Along with books such as poet Blaise Cendrars and artist Fernand Léger's *La Fin du monde*, filmée par l'ange N.-D. (The End of the World, filmed by the Angel of Notre-Dame) from 1919 and Vladimir Mayakovsky and El Lissitzky's *Для голоса* (For the Voice) from 1923, *The Medium is the Massage* is among the twentieth century's most notable collaborations between a writer and a designer. Fiore drew on avant-garde experiments in typography and photomontage as practiced, among others, by El Lissitzky and Piet Zwart. In Kurt Schwitters' journal *Merz* in 1923, El Lissitzky advocated what he called a "bioscopic book" whose pages would form a contiguous sequence ("bioscope" – an instrument for the observation of life – referred to the itinerant cinemas common in amusement parks in the decades before World War I). In the same text he launched the term "electro-library", referring to future books that would transcend the printed page.

One of the spreads in *The Medium is the Massage* recreates an image from Lazlo Moholy-Nagy's *Vision in Motion* in which a man has got an ear for an eye. In *Malerei, Fotografi, Film* (1925), Moholy-Nagy claimed that the linear structure of Gutenberg's typography could not capture modern life. However, new techniques of photographic reproduction made possible what Moholy-Nagy termed "typofoto", which would break with linear typography and bring print culture up to date with film and electrical signs.

*Piet Zwart's Het Boek van PTT* (The PTT-book) from 1938 can be seen as a precursor for *The Medium is the Massage*. The book explained to children how the Dutch postal and telephone system worked (PTT = Posterijen, Telegrafie en Telefonie). The original idea Behind *The Medium is the Massage* was, in fact, to make a McLuhan book for children, an ABC for the new media.





In *The Medium is the Massage* the book is put into motion by way of what McLuhan described as the means of TV advertising: “abrupt zooms, elliptical editing, no story lines, flash cuts.” Some of the images in the book extend across several pages; one has to turn the page to take in the entire picture. The scarce pagination and the absence of chapter divisions as well as a table of contents create the effect of a black and white televisual flow connecting to contemporary events, recycling images from the past, and fleeting into an open future.

A crucial point in McLuhan’s media theory was that media are extensions of the human sense apparatus, a point he expands over 16 pages in *The Medium is the Massage*. The sequence makes evident that the body is a site for media technological effects. Fiore zooms in and out on body parts: a foot running across five pages, an eye extended across a double-page spread, half a naked woman. In only one instance is the human body reproduced in life-size, namely the spread where a book is held open by two thumbs: “The book is an extension of the eye.” These spreads seemingly illustrate the idea developed by McLuhan in *The Gutenberg Galaxy* that Gutenberg’s invention of movable type brought with it a one-sided emphasis on vision. But here, by foregrounding the tactile connection with the reader’s body, the visual hegemony of the Gutenberg-galaxy is, rather, subverted (in accordance with McLuhan’s description of the paperback as “a tactile, rather than a visual, package”). The reader’s entire sense apparatus is drawn into the flow of the book.



Random House published a hardcover edition of *The Medium is the Massage* (1967) in a bigger and slightly taller/narrower format compared to the original paperback published by Bantam Books (measured in inches: 4.125 x 7 vs 6.375 x 11). Whereas in the paperback the double-page spread with the two thumbs was crucial in the way it grounded the book's information flow in the bodily proportions of the reader, the hardback gives us a sense of being Lilliputian readers. In other words: the massage is paperback specific.

Another spread, where an electronic chip "enlarged several hundred times" rests on a fingertip, renders visible the fact that new media technologies relate differently to the human body and its proportions than do books, and that they entail processes that are not necessarily registered by a human sense apparatus.

The above account of the experimental paperback partly builds on Jeffrey T. Schnapp and Adam Michaels' *The Electric Information Age Book. McLuhan/Agel/Fiore and the Experimental Paperback* (Princeton Architectural Press, New York: 2012).

**'t make it, neither will you."**  
—Advertising headline.

With our present, large vocabulary inheritance, we squander meanings on unworthy causes and communicate little that needs to be said. "Shazam." "Now, off with these clothes." "What goes up must come down."

President Nixon said at his first press conference that he would not submit "a laundry list" of proposals to the North Vietnamese at the Paris peace talks.

He can go right on leaving his fate to his hooses Utopia, he must initiate an enorm—immediately, if not sooner.

stated is a problem well on its way to

# LIVION. ALL THE FUNDAMENTAL PRO GOING THROUGH BE TOTAL MAN MAY

We should stop kidding ourselves. We should let go of things that aren't true. It's always better with the truth. The principal truth: Don't wait for George to do it, because he won't.

"I'm 100 per cent behind him. I think he's a terrific kid. He's lovable. But I'm all mixed up."—Mother of Mark Rudd, 21-year-old chairman of radical Students for a Democratic Society, Columbia University.

"There are still some bugs to be ironed out."

Utopia was impossible when people thought that there was only enough for a minority to live in comfort. But Utopia is, inherently, for all or for none. Because invisible technology can do much more with much less, Utopia is now possible for the first time. Bodily needs must precede metaphysical contentment.

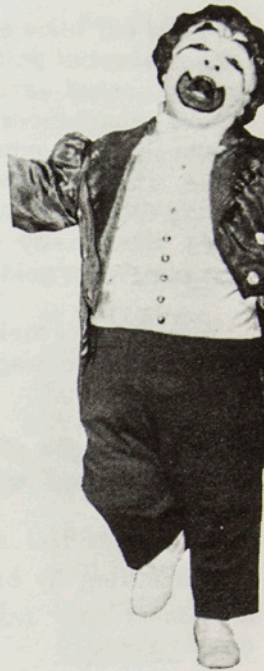


**"Make America a better place. Leave the country."**

—Peace Corps enlistment poster.

"I have always been very lonely and have had to face many things and make many decisions on my own."

—King Hussein, on eve of his marriage to the typist Toni Avril Gardiner.

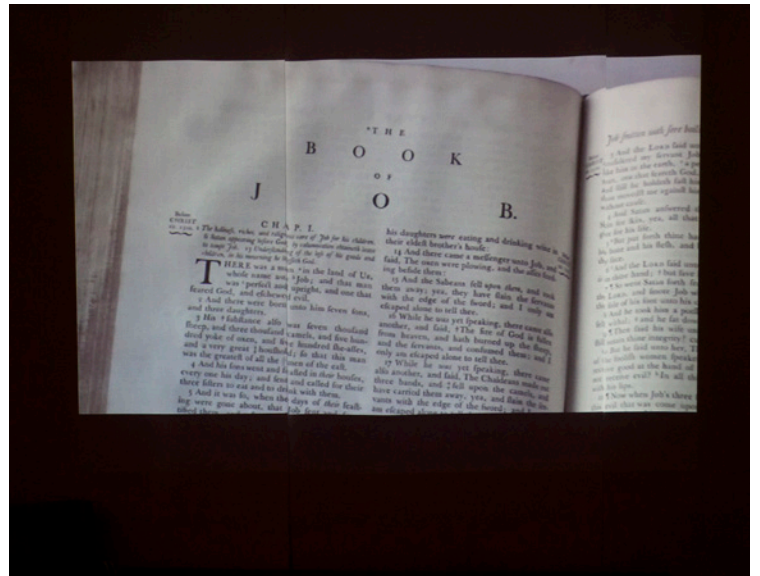


"I don't think a ✓ should become Miss America just because she's a Negro."—Miss America, 1969.  
The word is out that none of us have to die after 21 if we don't want to. I can talk like that to the kids, but who's going to tell the parents?"—DONOVAN.



Buckminster Fuller, *I Seem To Be A Verb* (1970)





We are often told that books are linear. But not all lines are straight, and some of the most widely used books are not read in a linear manner at all. Think about the phone book or the bible. Or *The Whole Earth Catalog* – a publication which between 1968 and 1971 knit together a network of counter-culturalists, hippies, and cybernetic researchers. In a supplement to the catalog, author Ken Kesey wrote about the bible as a tool: “just cut in here and there now and then – you’ll dream like Milton”. Different bibles may, however, reflect very different ideas about functionality. Compare the Ethiopian Coptic bible which doubles as a backpack with John Baskerville’s monumental folio bible from 1763.



The Book House next to the dairy is designed for displaying books. Its construction evolved out of a “potato boiler” used to produce pig fodder for the local farmers.





In the digital database ([www.guttormsgaardsarkiv.no](http://www.guttormsgaardsarkiv.no)), “Arkiv” (Archive) is the name of a specific book (with database ID GA\_000124) as well as a category. The database, then, not only archives the book Arkiv, but also the particular selection of objects included in that book. The same applies to *Lysten og hemmeligheten*, Guttormsgaard’s book on print culture. In the database, the book is catalogued with its own database ID (GA\_LH\_00037) while it is also the basis for one of the categories of the archive. This way of sorting illustrates that there is no general, hierarchical ordering system in Guttorsgaard’s archive. Moreover, it indicates how Guttormsgaard has used the book form as a tool for ordering the archive. The orderings have a local and preliminary character and are the results of the archivist’s subjective choices. As he put it in *Lysten og hemmeligheten*: “The selection is personal, for the most part passionate.”



During *zoom + – the book in motion* all the original books which were presented in *Lysten og hemmeligheten* were displayed on a shelf in the Book House in the exact same order as in the book. The display provided a snap shot of the diversity in the archive's book collection, of the various formats and materials. Some of the largest books had to lie on the shelf in order not to be damaged. Between each of the exhibited books were two Penguin paperbacks with their backs against the wall. High and low book culture on the same shelf.

“Books – the printed word and image – are the most important things of all for me. Every time I pick up a book, even if it’s only a common ‘flea-market book’, it’s as if it buzzes with the voices that have contributed to forming it: some people made paper, fonts and printing machines, others were designers, reproducers, typesetters and bookbinders. Even though only one person normally gets his or her name on the title page, there is a whole orchestra of inventors and craftsmen who have made the book possible.

In my artistic practice the book has constantly been a resource. Not the book as a book, but as this buzzing orchestra.”

Guttorm Guttormsgaard

