

The Cut

The Cut

Written component master's thesis

Submitted in partial fulfillment of the requirements for the degree of
Master of Arts (MA) at the University of Applied Arts Vienna,
Institute of Fine Arts and Media

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REGISTRATION NUMBER: **11731982**

VIENNA, SUMMER SEMESTER 2023

PROGRAMME NUMBER: **S 066 776**

STUDY PROGRAMME: **ART & SCIENCE**

SUPERVISOR: UNIV-PROF. **VIRGIL WIDRICH**



di:'angewandte

Universität für angewandte Kunst Wien
University of Applied Arts Vienna

Abstract

When it comes to the reflection of personal knowledge systems in the digital age, we need to consider the key aspects that these systems are designed around, and the fundamental impact of our physical senses on the way we create and remember knowledge, which digital tools neglect in many levels. *The Cut* is a part of an ongoing research about how we generate ideas, and a statement on how these ideas must be collapsed from the state of superposition of configurations that constitutes them, if we are to communicate them with others. It focuses on physical techniques used for managing knowledge, including their characteristics, rationale, and impact on research. By exploring these aspects, *The Cut* manifests the intrinsic synergies within its subject matter.

Introduction

A master thesis Cut

The Cut represents the notion that ideas are clusters of associations in fluctuation and in state of superposition of configurations, fragile and undefined, and that it is necessary for us to collapse their cloud of possibilities into concrete states in order to be able to give them an outlet, communicate them to others and develop them further from these concrete bodies. All research is continuous, malleable and in constant mutation, and the production that results from it is a relation between significant decisions taken, and contingent a-significant conditionings. That is to say, the final form of a work is as much the result of the author's creative decisions as of the relationship of this work with the surrounding spatio-temporal situation.

The content that constitutes this thesis is an extract of an ongoing research, a body of meanings in perpetual transformation. This quest stemmed from an interest in investigating the creation and use of personal knowledge systems, and the dynamics both advantageous and counterproductive arising from the use of different tools, digital and analogue. Ultimately, I am interested in exploring whether the use of digital tools is changing the way we have ideas and, if so, in what ways. The research took an early turn towards understanding how we deal with knowledge physically and in analogue practices, and the effect our senses have on memory recording and retrieval flows, important issues in understanding how the digital tools we have developed do or do not adapt to our cognitive processes. From here the search expanded into the fields of cognitive science and neuroscience, and the exploration of systems such as Niklas Luhmann's *Zettelkasten* or Aby Warburg's library and panels, among others. In the process, the study of these systems generated own methodologies, which in turn were used in the process of the research itself, and pointed to intrinsic synergies of content.

The present is the thesis of these methods, an account of their qualities, a reasoning behind their dynamics and a record of their effect on the formation of the body of research. The full research is continuously collected in an ever-growing book whose chapters are bound together with metal rings—which we will call a tree-book. From it, certain segments are extracted and presented here in their current state, scanned from the original. This master's thesis is thus The Cut, the cut in the continuous growth of this book, which will be presented in its entirety in the exhibition before the jury.

This Master's thesis therefore focuses only on a selection of chapters from the book behind it, namely on those describing the methods used in the research:

- M** — Punchers
- M** — The Concept Map
- M** — Heat Maps
- M** — Index Cards
- M** — The Notebook

These topics are sufficient in themselves to discuss the methods *per se*. To assist the chapters on methods, the appendix *Growing a book* is also extracted, as it explains the system of formation and containment of all research, which is also, after all, one of the methods. To explain the relationship between The Cut and the tree-book already mentioned in this appendix, it is considered necessary to present the chapter on the concept of *The Cut* as well, and to give context to the topics covered, the foreword *Akhet, Peret, Shemu*, which names the different sections that encompass the research as a whole, and the chapter summarising the intentions of the research and the different topics covered, *The research*. Finally, the *Note to the reader* explains the citations in scanned format of the originals and the cross-references — which are the language of the entire tree-book.

Since all these chapters of the tree-book are scanned and presented in this thesis as they are in the body of the original book, scanned directly from it, the page numbers in them have no continuity between chapters —the original location of the extracted chapters can be seen in the table of contents on the next page. Similarly, cross-references in the text, which have the form —> [PAGE XYZ] sometimes refer to ghost pages that exist in the original book, but are not accessible in the Master's thesis. Some references however lead to pages that are present, as they are part of the extracted chapters. This is important within the concept of the work, which is explained in detail in the chapters on *The Cut* and *Growing a book*, as mentioned above. The reader will find that some concepts named in the text are not explained further, as they are introduced in earlier chapters of the original book, which are not included in this thesis. This is a conscious decision. Those references are however not necessary to understand or judge the content of the Master's thesis itself. Please see attached the complete table of contents of the tree-book, in which one can see which chapters are part of the Master's thesis.

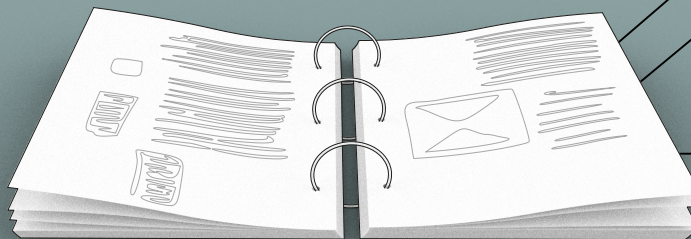


Figure by Maximilian Gallo

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syād-asti: 'somehow, it exists'.

syād-nāsti: 'somehow, it does not exist'.

syād-asti-nāsti: 'somehow exists and does not exist'.

syād-avaktavyah: 'somehow, it is not describable'.

syād-asti-avaktavyah: 'somehow, it exists and is not describable'.

syād-nāsti-avaktavyah: 'somehow, it does not exist and is not describable'.

syād-asti-nāsti-avaktavyah: 'somehow, exists, does not exist, and is not describable'.

अनेकान्तवाद

The anekantavada doctrine is one of the fundamental ideas of Jainism. It refers to the principles of pluralism and variety of viewpoints, the notion that truth and reality are perceived differently from different points of view and not a single point of view with absolute truth.

Etymology: scepticism, 'belief that there is no one end', where **an** = negative particle; **eka** = 'one only'; **anta** = 'final, objective'; **vāda** = 'discourse (doctrine)'. [wikipedia.com]



Note to the reader

Original quotations and translations

The quotations in this research are in many cases included in their original form, both in their language and graphically, obtained from their source of origin*. Support for this decision is found in multiple ideas throughout the development of the essay, which has its basis in arguments about the importance of the meaning emerging of the encounter between elements, the mnemonic qualities of physical sources, the communicative qualities of design and visual content as an entity independent from text, etc. This is even more so with the language in which a reader accesses certain ideas, which take shape in different meanings depending on whether this is the mother tongue of the author, the reader, both, neither, or which translator's version is accessed, —even depending on what the reader and the translator have read before. The manual tracing of the original annotations and underlines and their communicative qualities, as well as their relation to memory, are also maintained for equanimous reasons.

* 'Source of origin' refers to the edition accessed in the research process, not the first edition in the author's original language.

As Calvino, an advocate of the exact word, chooses to communicate a quotation in its original language together with the translation for the reader, so I have chosen to do the same sometimes. Thinking, in short, happens in this way, relating bits and pieces of different languages, remembering sources in their different forms. The format of the book is as important as its content, therein lies «the crux of the matter» that Calasso mentioned about the first edition of Pierre Bayle's *Dictionnaire historique et critique*. Both the message and the form of the book are directly generated by this network of connections; comments on this can be found in the appendix *Growing a book*.

Cross-references

Since the discourse is set out in circular order in its original format, and only has linearity in this binding version of the thesis, cross-references to contents of other chapters never mention time or order —“as we already said in the previous chapter”— but only use the present tense.

A photograph of a handwritten note on aged, yellowed paper. The text is written in dark ink in a cursive script. It reads: "Recherda nombrar en la nota preliminar sobre idiomas que el cuaderno —el pensamiento— ocurre de esta manera. idioma escrito". The word "idioma" is underlined at the end of the line.

Remember to mention in the preliminary note that the notebook —the thinking— happens in that same way



Akhet, Peret, Shemu

The ancient Egyptians divided their year into three annual seasons which they called—in the transcription we make into our Latin characters— Akhet, Peret and Shemu, whose division came from the changes in the flow of the river Nile. The identification of the exact dates of the beginning of each season and its duration in relation to our present calendar is complicated and the sources differ, but with respect to our subject it is sufficient for us to associate each season with its respective tasks.

During the months of Akhet, the flood season, the Nile would rise until it covered the fields on both sides, preventing the farmers from working in them. Instead, they had time to devote to caring for the state of their homes, tools and families. They also spent periods working for the government, constructing government or religious buildings, in exchange for discounts on their annual fees. When the Nile receded, leaving the land moist and nourished, ready for ploughing, the Peret season began, and farmers planted their crops. With the arrival of the more intense heat came Shemu, the season of harvesting, after which the Nile again prevented work in the fields with its flood.

This metaphor beautifully identifies the phases of a project or, in general, any process of ideation. Peret naturally represents the period of work during which effort and dedication are continually infused into a particular direction, adding content and labour without necessarily receiving any kind of gratification or result, in which the seeds are planted for what will be harvested only later. Shemu is not only that in which we finally reap the fruits of what we have sown, but in which, once our project is finished, we publish it, move it around different environments or position it in such a way that it can provide us with new opportunities in the future. A sort of fermentation of the collected food, to be recovered later as more complex combinations. But what initially attracted me to this system of three was its first station, Akhet. It is important to note that the year begins when the flood period starts. It is not a dead period in abeyance between two periods of performance, or a final rest that those modern pursuers of intense and unattainable productivity would like to find a way to avoid after the closure of a project. On the contrary, Akhet is the indispensable flooding process that generates the possibilities for future ideation. It is the time of not having a concrete goal, of being able to observe the surroundings without looking for anything, of paying attention to the complexities of an environment in which no con-

the word simply refers to a dynamic whereby we transport any kind of content or meaning—visual, sensory, auditory, linguistic, proprioceptive, interoceptive, or any combination thereof—from one place or thing to another. Etymologically, the word “metaphor” derives from two ancient Greek words, *meta*, which means to move over, across, or beyond, and *phoreo*, which means to carry over, and these roots indicate that metaphors are cognitive devices that people can use in many media and forms.

On the word ‘metaphor’ [Goldhagen, World, 73-75]

crete thread is followed. If being involved in a project gives us a filter through which we see, judge and separate what we identify as useful to our cause, Akhet is about freedom from that and all filters, about being open to finding what we are not looking for in all kinds of suggestions. It is also about having the time to introduce initiatives and endeavours we are not used to engaging in, which in many cases tend to impact on our practices later in unexpected ways. This is not to be understood as a period of inactivity, let us not think of ourselves as the farmers who are forced to neglect their fields; we are the Nile, working to nourish and revive the earth beneath us, while extending ourselves to other pursuits.

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
8-9	STORY WRITING	STORY WRITING	STORY WRITING	ADDITIONAL	STORY WRITING	
9-10	FOUNDER PRINCIPLE	TWO WEEKS	INDIVIDUAL PROJECTS	OF	TWO WEEKS	
10-11	PRODUCTS USING	CONCEPTS	FROM	TYPE	CONCEPTS	
11-12	LOCAL		LIST			
12-1	CREATING					
1-2		LOCAL FARM		EDIT	LOCAL	
2-3	CURATOR &	INNOVATION		TYPE FARM	CREATING	
3-4	ARTIST/LOGIC	DIGITAL	3RD WEEKEND	DIGITAL	INNOVATION	
4-5	INNOVATION	INNOVATION	INNOVATION	INNOVATION	INNOVATION	
5-6						

• DURING MONTH 10: 10 WEEKS INNOVATION • 1 YEAR = 45 WEEKS
 • 85% FLEXIBLE WITH PLAN • TIME CONSUMPTION IS FLEXIBLE (ONE YEAR PLAN AT
 • PLAN = OFF WITH PLANNING

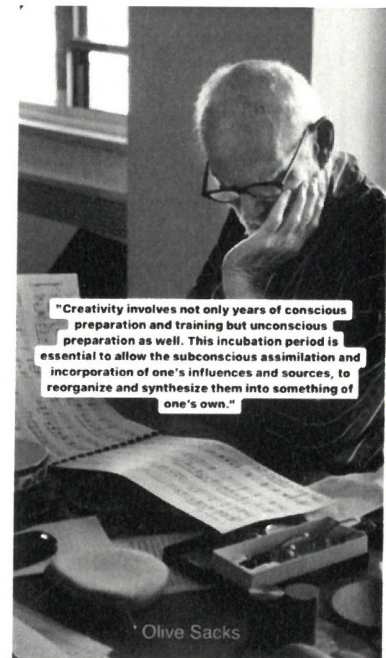
PUBLO BEL SKA

Sabbatical schedule of Stefan Sagmeister, [from his presentation at Forward Festival Vienna 2021]

This process of fertilisation of the field of our ideas produces its own dynamics after a certain period of time. These periods need not necessarily be long and occur naturally if they are allowed, although they can also be intentionally promoted. A popular figure in international design, the Austrian Stefan Sagmeister is a celebrated advocate of sabbaticals, in his case once every seven years of studio work. Often asked in his interviews about questions of creativity and methodologies for generating fresh ideas, he has on multiple occasions emphasised his experience with sabbaticals in public talks, starting with that first year when he thought that having all that empty time in front of him would work as a springboard on its own. As he later discovered, that however pushed him to fill his days with bland tasks, such as answering overdue emails and

sending files to this or that applicant. His second time he instead prepared a weekly schedule in a notebook, in his own words «very much like in grade school» [Sagmeister, Power, 09:04], including different creative exercises like writing short stories or doing projects testing local craft techniques. With the development that accompanied the days, some of those practices endured or mutated and others were relegated, spontaneously. The key would be that, as he points out, these generative tasks without a fixed client or goal produced work that fed organically into the studio's output over the next seven years, and pushed Sagmeister in very fruitful new directions, such as producing his film *The Happy Film* or devising exhibitions like *The Happy Show* and *The Beauty Project*, which was also a book by Phaidon.

The reason why Akhet is of such paramount importance is because it has a direct bearing on the quality of the projects that will emerge in its wake, whose solutions will depend, as we see, on the variety and complexity of the associations that our mind is able to create during the Peret period, and whose base soil will inevitably be nourished by what we allow to come to it during Akhet, the season of flooding ourselves.



[Oliver Sacks, nitch.com]

The research

1 | AKHET

Just as often, though, designers simply lack sufficient knowledge about human environmental experience.

[Goldhagen, World, 34]

We shape the system that shapes us

The present research, derived in its present form from an almost gnoseological and broadly multidisciplinary interest, has its origins in questions much more directed to the field of digital interface design. From the competencies of a user experience (UX) designer, my professional practice moves between digital interfaces and the design of paper/screen books, experimental in nature, which I approach in their analogue form with the reader as user in mind. The gestures and steps that an application takes into account along the user's journey to the information or functions are also those that I consider when the user holds the book in their hands. From this focus of interest and during years of practice — throughout which digital tools have changed in form and functions to a greater or lesser extent, and with them our practices— a discourse around constant problems and needs was repeated in my network, mostly students of higher education in multiple branches, and professionals in the creative field —from design, photography, animation and film, to ceramics, fashion, interior design and architecture, among others. These testimonies expressed reflections on the problems that using digital tools caused them, not when producing a final artwork, but in the process of managing their resources and development. Namely, adapting to systems that were not intuitive or adapted to their practices, and in particular a shared, salient perception of needing to perform certain tasks on paper or other analogue media to carry them out to the best of their abilities. These perceptions were in line with my own experience, despite having a balanced background between analogue and digital media, and being a native computer user since the age of three, with a largely self-taught development.

Within this framework, my interest for this research was ultimately to propose new foundations for future digital interfaces in creative project management in particular, or, in the case, to rethink the interface of current operating systems from their base, seeking to establish them outside the assumed standards on which they are built. Do —and, if so, how— digital tools affect the way we have ideas?

There is a pervasive sense among the pen-and-pencil generation that to say that the computer is useless for a certain way of writing

Sé muy bien que esto parecerá irracional o pedante a casi todos, pero pienso que un cierto modo de escribir no es compatible con el ordenador *para el primer borrador*. Lo que sucede

«I know this will seem irrational or pedantic to most people, but I think that a certain way of writing is not compatible with the computer for the first draft.» [Calasso, Biblioteca, 38]

(which is also a certain way of thinking) is pedantic and anachronistic. Meanwhile, barely a generation has grown up since the launch of the World Wide Web in 1991, and social networks are saturated with content from the digital generation sharing with others their experiences in the search for systems that return to analogue. Young people born among computers and tablets, who study the daily habits of illustrious figures in search of better ideas, trying to return to the simplicity of dedicating themselves to one thing in singular and avoiding distractions, and who time and again recommend to their followers, of the same generation, to return to writing with pencil and paper when it comes to reflection, ideation and planning. In short, characteristics of a life away from the screen, devoting as much attention as possible to one thing at a time. To some extent, this generation seems to sense two things: that ideas in the Web 2.0 era have become homogenous, and that when it comes to thinking about something, paper works better for them than contemporary devices, such as they are today.

At the same time, another section of the internet, which in most cases is intertwined with the first, is dedicated to the problem of memory and personal databases. As we all know, the exponential amount of information and possibilities to which we are exposed generates an omnipresent anxiety about trying to accumulate knowledge in a useful way, and many systems experts and productivity content creators work on the same question: how to create a truly practical personal knowledge base without losing any of the information that comes into our hands? Thus, authors such as Sönke Ahrens or Tiago Forte are amassing a following, the former with his *How To Take Smart Notes* introducing Niklas Luhmann's *Zettelkasten* method to the wider masses outside the purely academic sphere to which it remained so far confined, and the latter with his method of building a digital knowledge base and system in *Second Brain*. The motto: «The proven method to organise your digital life and unlock your creative potential». The courses of their concerns converge: memory and creativity, saving in order to generate.

The design of interfaces for digital systems and applications has advanced so broadly and suddenly that we are unable to achieve a similar speed in analysing the short and long term impact they have on us. Digital platforms, which are increasingly at the core of contemporary project ideation, enact a homogeneity of a level and scale hitherto unheard of. Only decades from now will we be able to perceive the impact that this homogeneity of ideas and the increasing abandonment of the teaching of manual ideation techniques will have on our environment. In the meantime, cognitive science has only just emerged, when computing and visualisation technologies enabled its acceleration in the 1990s. It, neuroscience and other branches of research are providing a significant body of new information about how we relate to our environment, which differs from the models we have relied on until now. Among other things, we used to think that the brain stopped changing after a certain age, whereas today we

know that it constantly mutates and is affected by the environment in which we live. There is a call to reconsider our designs to adapt them to this new paradigm, taking into account what we know today. In this regard we will discuss the current work of American author and architecture critic Sarah W. Goldhagen, who urges designers to attend to this knowledge about our cognitive experience in the bodies we inhabit, applied in her case to architecture and urbanism. In our case, understanding the role that the physical environment and our senses play in our information processing and capacity for ideation is critical to designing the tools of the future, almost certainly based on Virtual Reality and Augmented Reality (VR and AR). How important is physicality to the recording and retrieval of memory? What in our senses is critical to the generation of knowledge?

Mnemosyne is the mother of the Muses

The divergence of theories about how our brain processes operate is still very great among the experts in the fields involved. Naturally, this thesis does not assume the pretension of reaching conclusions in this respect, but to delve into these same unknowns that we share from the perspective of art, competent in connections between extremely diverse contexts. Why is there this common knowledge among the users I interview that they remember things better when they write them down by hand? From our position in a university, absorbing and remembering knowledge is at the basis of the development of both students and ideas, *Mnemosyne* is the mother of the Muses. Also, as we see in more detail, the most important function of a tool in undertaking ideation tasks seems to be its flexibility; its ability to adapt to sudden changes in our needs by following our changing, non-linear way of thinking and not being based on limited formats. If we work better with pencils than with computers for certain types of tasks, we should be interested in why, what is the relationship between our cognition and physical space, and approach the process of designing these digital tools by owning that knowledge and applying it to rethink our solutions, rather than lightly labelling this embodied knowledge we share as an anachronistic and nostalgic preoccupation. We will delve into the ancient technique of the Memory Palace and see what made certain physical systems, such as Luhmann's aforementioned *Zettelkasten* or Aby Warburg's panels, both tools of knowledge, particular. The thesis does not seek to establish a single method, but rather to attend to our creative processes and perhaps offer a reasoned revaluation of physical methods as generators of more varied ideas. Nor does it at any point advocate the abandonment of digital tools, but rather points out dynamics noticed when studying and using different methods with these questions in mind. We will discuss synaptic processes and association as the source of our ideas. What is the suggestion advantage of one method over another?

M

When I look around me in RT almost everyone if not everyone is using a notebook - even CI with an iPad writes by hand, with Apple Pencil. However in my Quantum Physics class practically everyone if not everyone is using a computer with a keyboard. Why would that be?

ment affects what we think, feel, and do. Only creative writers, it seemed, captured something of what I was trying to explain. The associative, nonlinear, intuitive, and metaphorical thinking in poems and prose passages, some of which I include as epigraphs introducing each chapter, crystallized some essential qualities of how people experience our built environments. My initial questions still remained mainly unanswered.

[Goldhagen, World, XII]

— los besos pueden ayudar a explicarlo todo —
Kisses can help explain it all

Ideas are not, they happen

Goldhagen said that she had found in literature and lyric poetry examples of what she wanted to address in urban planning and the design of our environments, an intuition to which those literati gave form, far from the theory of architecture. I have found in the physicist Carlo Rovelli that conjunction of words, and in the theory of quantum mechanics the dynamic sensibility I was looking for to talk about ideas. What form does an idea have before it is that particular idea? In a concept map, the idea is not the point, it is the interaction. Ideas are places, and our methods of recording attempts to map how to return to them, yet they are not fully restored. Since a given form fixes a particular possibility from the superposition of states of an idea, and ends all others, we must be aware that there are immeasurable consequences to the kind of ideas we promote to fix. Rovelli said, in trying to explain the non-linear structure of time as known to physics today, how extremely limiting language is to talk about nature as we understand it today. We need to adapt the language we once created from our limited experience of reality to be able to think in new terms and structures. For example, he says:

La gramática de muchas lenguas modernas declina los verbos en «presente», «pasado» y «futuro». No es adecuada para lidiar de la estructura temporal real del mundo, que es más compleja. La gramática se formó a partir de nuestra experiencia limitada, antes de que nos percatáramos de su imprecisión a la hora de captar la rica estructura del mundo.

«The grammar of many modern languages declines verbs in «present», «past» and «future». It is not adequate to deal with the real temporal structure of the world, which is more complex. Grammar was formed out of our limited experience, before we became aware of its inaccuracy in capturing the rich structure of the world.» [Rovelli, Tiempo, 86-87]

What confuses us in understanding time, he says, is just the fact that our grammar is organised in this way. This arbitrary division we made, a *design decision* in the language we created as a tool to relate to reality—and a decision that not all languages made— is the reason why today we find it so hard to think in the physical terms that shape that same natural reality. Ideas are dangerous like that. Once fixed they become so habitual that they seem unique and inevitable. We reinforce the concept that reality is this, by a natural and inextinguishable development, but we must be aware that the designed world we touch, and our way of living in it, are a direct consequence of this myriad of decisions that closed off other, different possibilities. Maybe Rovelli's kisses can explain it all.

S. Tobs

2 | PER ET

The method of the method

As research into methods of creating and using personal knowledge bases, the thesis is also a record of the search for the method of its own production. It should not be a presentation of historical methods, but embody them, include the experience of these and other methods from the tools of art, a physical practice. In this it produces a body of knowledge that reflects on itself. In artistic research—and I would venture to say that in all branches of research, although in some it is not so marked—the act of *doing* is not only that of carrying out a predefined action, like a regulated experiment. Making is also *thinking* by doing, an action that mutates as it is carried out, generating knowledge in practice, which adapts in real time. Regarding the position of the artist as researcher, the following excerpt from Angelika Boeck and Peter Tepe quoting Billy Ehn is remarkable:

Billy Ehn, Professor for Ethnology at the department of Culture and Media Studies at Umeå University, shares observations that are similarly motivating to me. He examined the similarities and divergences in the strategies of cultural researchers and artists, and argues that their respective work processes are largely similar to one another: both ask questions, choose methods and read theories, collect material and gain new ideas by making observations, conducting interviews, surfing the web and taking part in social events — whereby they pursue different questions. He discovers that artists take a more playful approach and follow intuition; that they are more inclined to regard the ordinary as something extraordinary. He considers particularly important their ability to see themselves as actors as well as objects of research, their willingness to live experimentally and the desire to generate their own experiences rather than just analysing them. According to him, scientific research could also benefit from the special nature of artists to expose themselves to unusual circumstances and to pursue unusual ideas (Ehn 2012: 14 ff).

[Boeck and Tepe, "What is Artistic Research?"]

Throughout the discourse of the thesis, processes are presented that materialise the concepts studied, practices carried out as methods of knowledge generation parallel to research, such as *Heat Maps* or collections through *Punchers*. And in the way that both Rovelli and Goldhagen use literature and lyric to speak of an intuition in relation to their scientific fields, and as part of the practice of generation through the contraposition of agglomerated elements, multiple citations from different creators, fields and times are appended, which speaking to each other seem to speak of the same thing; a sort of conversation about the creative dynamics that the thesis tries to dissect.

griego clásico.⁵⁷ El pensamiento abstracto puede anticipar en varios siglos hipótesis que posteriormente encuentran utilidad —o confirmación— en la investigación científica.

«Abstract thinking can anticipate in several centuries hypotheses that later find use —or confirmation— in scientific research.» [Rovelli, *Tiempo*, 67]

«When we do science,» says Rovelli, «we want to describe the world as objectively as possible. We try to eliminate distortions and optical illusions derived from our point of view. Science is about objectivity; a common perspective where we can agree.»

He adds: «That's great, but pay attention to what is lost by ignoring the observer's point of view. In its pursuit of objectivity, science must not forget that our experience of the world is internal (...).» [Rovelli, *Tiempo*, 114] That we experience the world from the bodies we inhabit, as Goldhagen argues.

This is what art has always tried to do, on the other hand, from subjectivity: to start from what the individual experiences in order to arrive at the shared common.

3 | S H E M U

Growing a Book

Es una teoría hecha de fragmentos coherentes pero diversos, que «solo» quiere ser una descripción coherente del mundo

Finally, this discourse, which has been generated in a process of accumulation and association—in the manner of Warburg's panels—and which describes this practice throughout itself, is collected in a book which, as a final third level, embodies in its form and mode of generation the same process of research. Like its content, its format springs from the same praxis of accumulation and association, and refers to quoted contents reproducing the very body of the original content of which the ideas, like particles that attract each other, came to form part. These particles interfere with each other, speaking of the same dynamic of collision and emergence —*sticky cohesions*— whose parts change upon contact with a new entity, mutating the whole into murmuration (flocking behaviour) [Golding, Radical, 96].

In short, this is intended to be the cartography of an island drawn from the sea, a relationship between the parties indicating the absence of a necessary knowledge and research framework, recorded in a Notebook of Course and Defeat.

«It is a theory made up of coherent but diverse fragments, which "only" wants to be a coherent description of the world.»
[Rovelli, Tiempo, 95]

Punchers

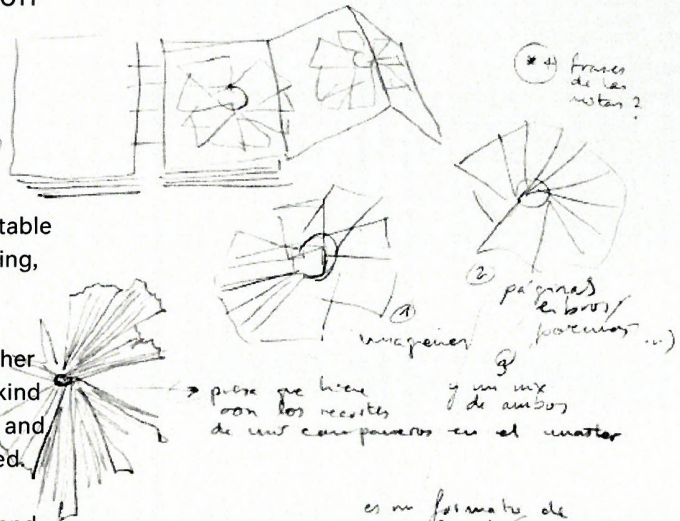
M

Creating synergies through the collection

The Punchers are an experimental small circular Zettelkasten format, made of steel and with a small magnet on the inside for a more secure and comfortable closure. It is a tool for creating synergies, for collecting, which in collecting creates sense.

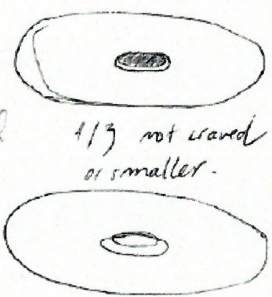
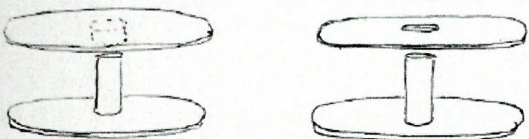
The research of a project can be collected in a Puncher instead of in a notebook, by punching a hole in any kind of paper/note/card/scanning —produced or found— and rearranging the notes to create a sequence, if wanted.

Instead of accumulating inputs throughout the day and then transporting them to a drawer as a filing cabinet like Luhmann's, the tool acts as an archiver. There is no need to carry an office hole puncher either, the archiver is the tool. The tip is strong enough to punch holes in heavy cardboard and can even work with textiles or organic material such as leaves.



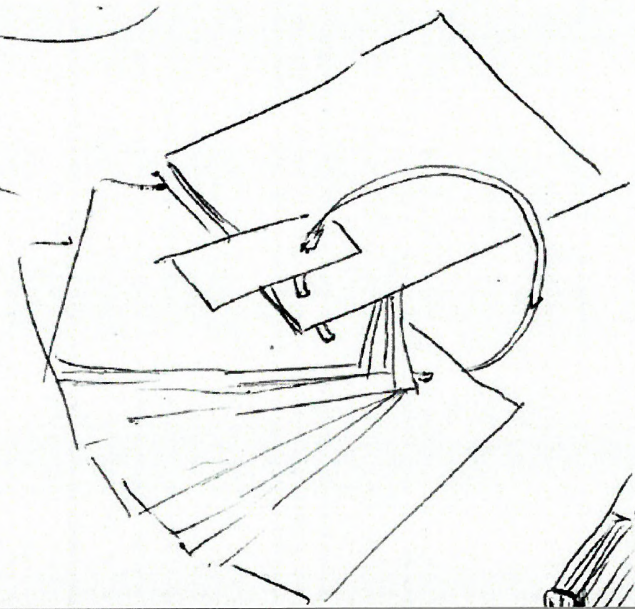
es un formato de
archivo de (fines que)
de recolección pero en el
coleccionar de creación
de pines. Como un

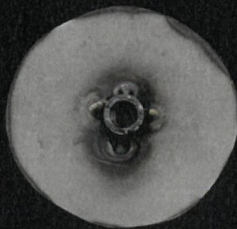
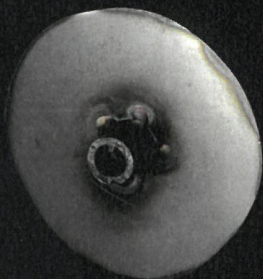
SACHS
VIENNA
(two points
of force)

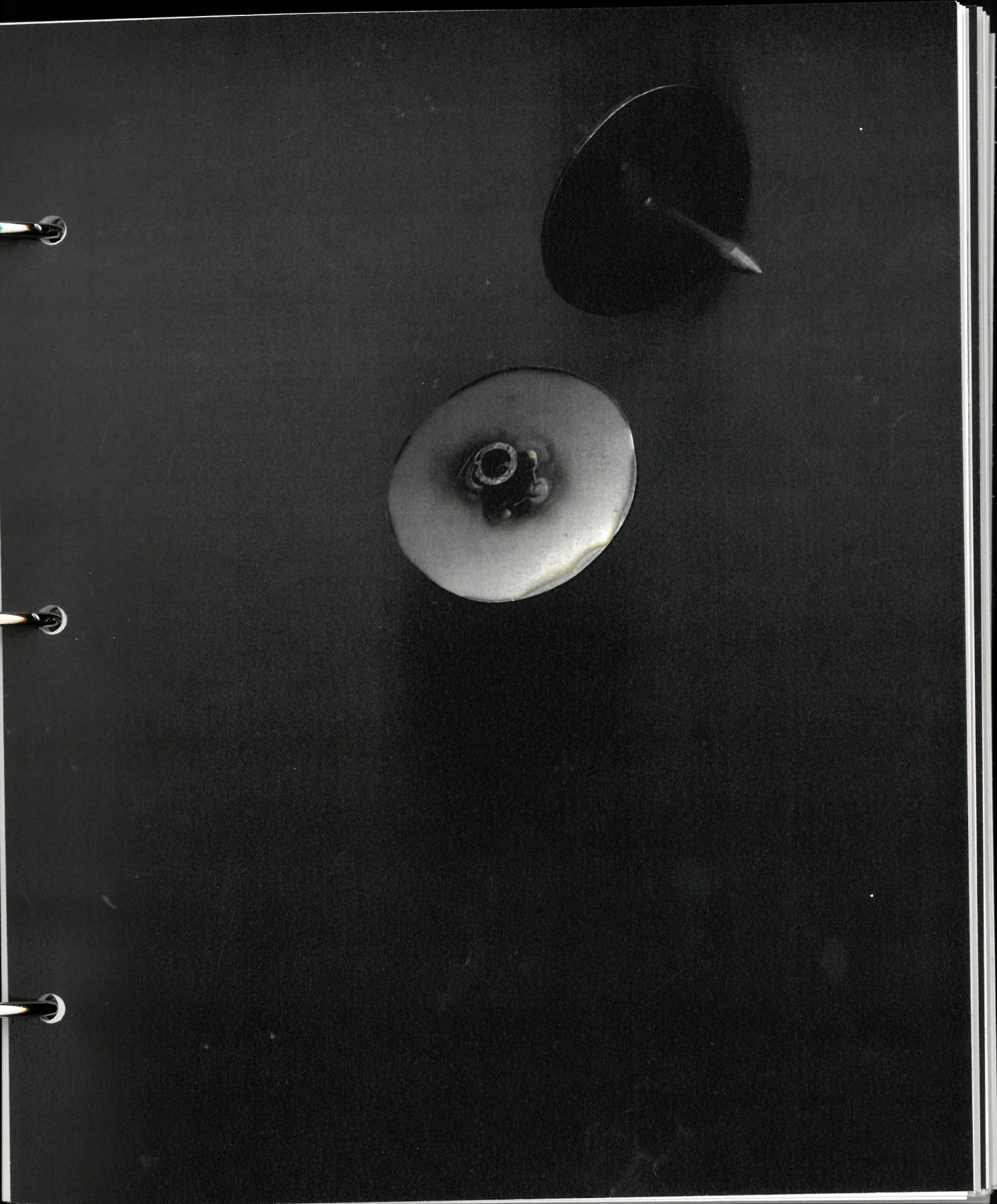


¿podrían ser de
metal ligero
y tener afilados
que cortaran papel
de cierta gramaje
cuando se
cerraran sobre
él?

→ wrapping
collection making
registering
(in sample
taking)







The Concept Map

M

«The Great Khan possesses an atlas»

The unpacking of books, perhaps because it is essentially chaotic, is a creative act, and as in every creative act, the materials employed lose in the process their individual nature: they become part of something different, something that encompasses and at the same time transforms them. In the act of setting up a library, the books lifted out of their boxes and about to be placed on a shelf shed their original identities and acquire new ones through random associations, preconceived allotments, or

[Manguel, "Unpacking"]

In a nod to Benjamin's famous 1931 essay *Unpacking My Library: A Speech on Collecting*, the writer and scholar Alberto Manguel published his own bibliophilic musings in 2018, after facing the odyssey of packing his 35,000-volume library into boxes. What precedes these lines is an extract from this book, published in *The Paris Review*, in dialogue with Benjamin on the act of unpacking the library and creating a new order for the books. A Map of Concepts is an arena that functions with the same dynamic as the books Manguel writes about, out of their boxes and scattered on the floor. As the latter describes the action of unpacking, so is the action of drawing a map like this: essentially expansive and messy. There are no measurements, no scales and, above all, no points of reference; everything is based on the fact that the books (the concepts) are now free of their bonds. It no longer matters so much where they come from or what they originally meant, only the identity they take on in relation to their adjacencies. A project is substantially this: a conglomerate of information that adapts its meaning in correspondence with the rest of its adjacencies.

them. In this waiting period, before the new order has been established, they exist in a tangle of synchronicities and remembrances, forming sudden and unexpected alliances or parting from each other incongruously. Lifelong enemies Gabriel García Márquez and Mario Vargas

[Manguel, "Unpacking"]

I think it can be said that the creativity or interest of a project is based less on the quality (so to speak) of the components it brings together under its umbrella, than on the conjunction of new and familiar connections it establishes between them. Of course the quality of the elements is intrinsic to the quality of



Drawing a Hypothesis - Questions of Order and Relational Characteristics of Figures of Thought (Map),
Nikolaus Gansterer, [instagram.com/nikolausgansterer](https://www.instagram.com/nikolausgansterer/)

the whole, this is obvious, as ingredients in a dish. But it is also logical that the same ingredients can be mixed in more or less graceful combinations, the same elements of a story can tell completely different stories, and the crux of a project, what makes it interesting, is not its nodes but the form of its connections. In his article, Gopnik highlighted these as the two emerging principles of Jacobs' book:

Two core principles emerge from the book's delightful and free-flowing observational surface. First, cities are their streets. Streets are not a city's veins but its neurology, its accumulated intelligence. Second, urban diversity and density reinforce each other in a virtuous circle. The

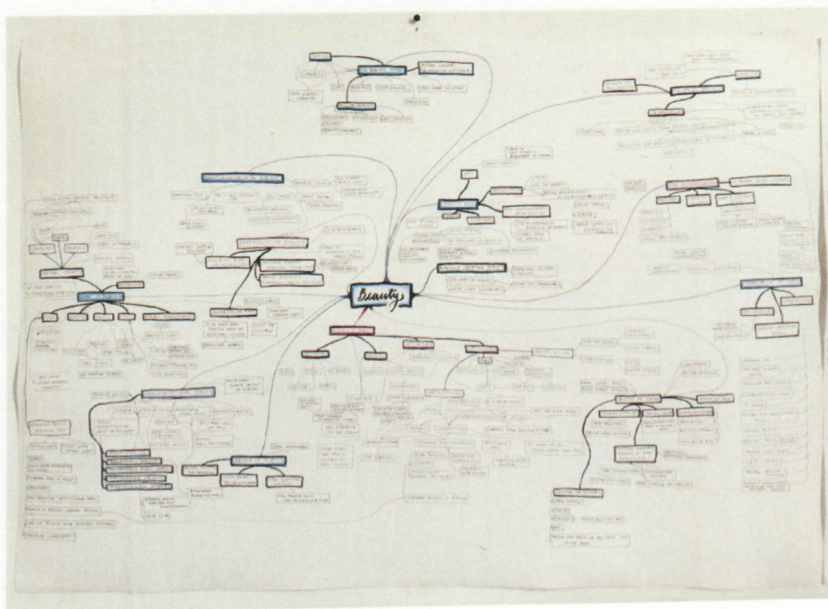
[Gopnik, "Jane Jacobs's Street Smarts"]

«El atlas representa también ciudades que ni Marco ni los geógrafos saben si existen y dónde están, pero que no podían faltar entre las formas de ciudades posibles.»

(«The atlas also represents cities that neither Marco nor the geographers know if they exist and where they are, but which could not be missing among the possible forms of cities»).

— [Calvino, *Ciudades*, 146]

Streets are the neurology of cities, not their veins. The project *thinks* with these connections. And, as we know, the diversity and density of our map reinforce each other in a circle [SEE PAGE 33]. It is this thinking of the map *through itself* that tells us things we don't know, which is the advantage of the map, more in its analogue than in its digital form, in my experience. This happens because the digital tools are primarily focused on reorganising the content to make the map clean and balanced (as we have said, this is however an essentially messy action). The focus in the development of these applications eludes that the function of this concept map of ours is not so much to link elements, but to see what happens when they are linked, and where the content accumulates. Some programmes allow us to freely rearrange our cores and sub-cores and this of course has its advantages to give the map the shape we want without having to draw it again. And yet, I insist: the function of the map is to tell us what shape it wants to have.



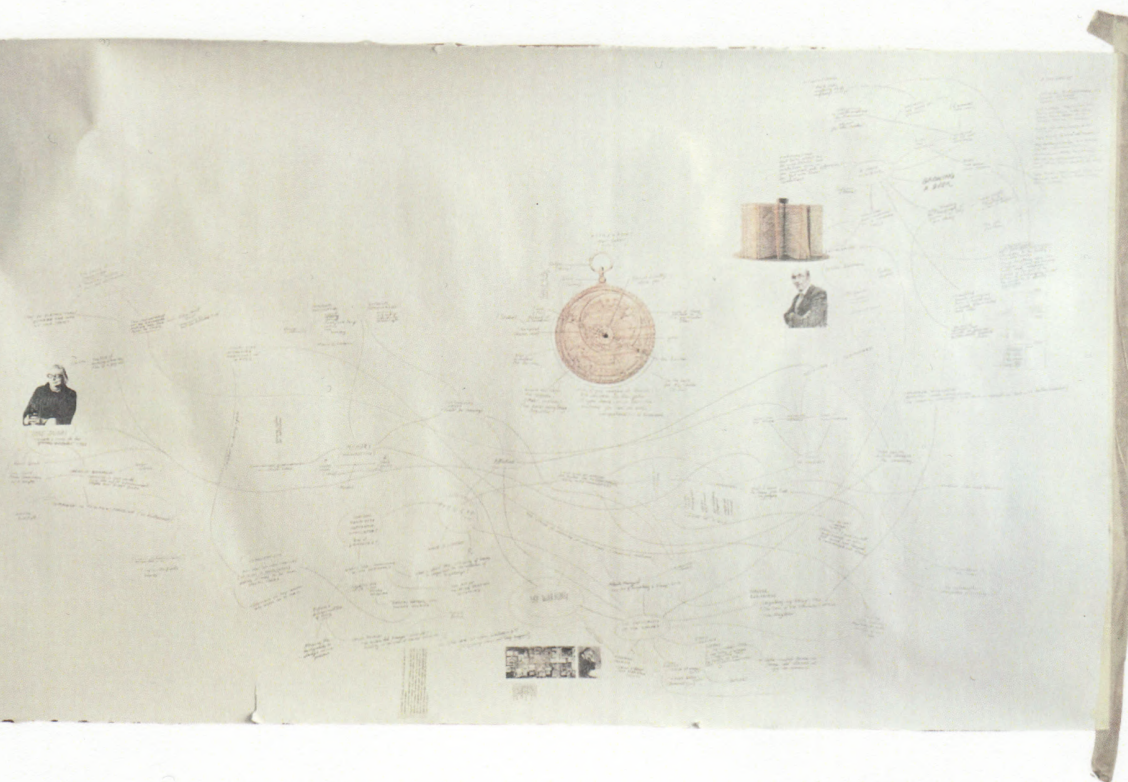
Map of Beauty Project — kindly provided by S. Sagmeister

The map shown below is the map of this thesis, started at a certain point between starting to read sources and collect inputs, and knowing what inputs I needed to look for or what my question was. I keep it on the wall behind my desk and add concepts here and there as they seem relevant. Some time later, having it always behind me and in the middle of the research process, I suddenly look at it. It has a gigantic empty area at the top left, it is unbalanced and this bothers me. Instantly I wonder if the topics below are being carried forward and the ones above are being neglected, if the research is taking a clear path without my noticing it. This is a purely visual impression, which however has no relation to the image of the final work or its design, it does not refer to an aesthetic decision or a choice of material. It is visual, but it speaks purely to the content. This is the magic of the physical medium. The disorganised thinking that a large paper map allows us —so different from an automatic digital *mindmap*— has the added value of finding forms in itself. By avoiding having to think within the cubicles of a programme, we realise only after elaborating it that it has formed a body for itself, and this body tells us something we didn't necessarily know.

CONEXIONES COMO AGENTES FORMADORES

connections as forming agents

↓
Karen Barad
intra-actions
(instead of
interactions)
not outside of
the action but
part of it



Once the map answered those questions at its inception —what inputs was I looking for or what was my question— it ceased to be useful. The map is not the table of contents, it is not the final structure of the project, only a tool to understand what is already there. As Gopnik writes, «Self-emerging systems are not self-governing systems». Self-emerging concept maps also need trimming, editorial work and a lot of commitment, just as a wild garden must be cut down to limit its expansion before it reaches to the neighbours' plot.

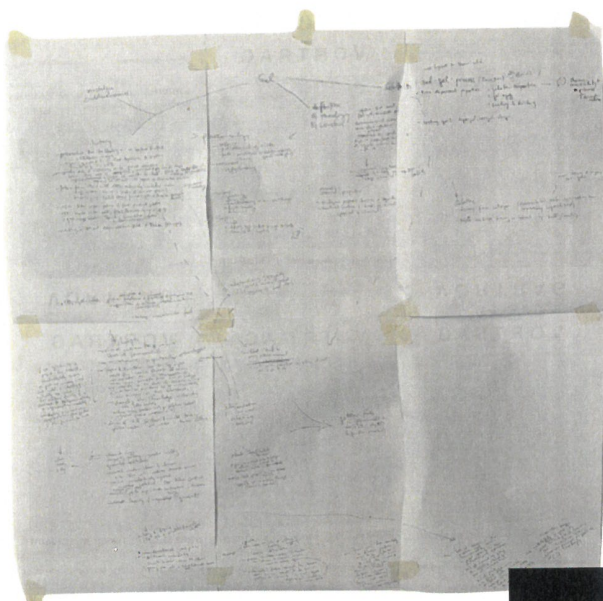
they require an immense amount of centralized planning to work. Self-emerging systems are not self-governing systems. It takes intervention to sustain them.

[Gopnik, "Jane Jacobs's Street Smarts"]

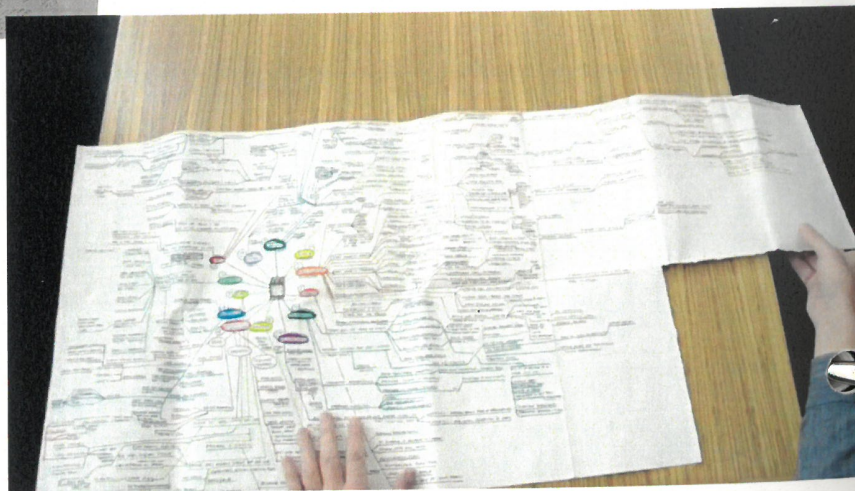
Against the infinite canvas

Just as a self-balancing map is not an advantage, neither is the digital infinite canvas ideal for the main function of concept mapping —which I instead found so comfortable when it began to be installed in the digital tools I used, and still do for some exercises. The finitude of paper is a provider.

Here are two examples, from Sagmeister for his *Happy Film* and from Jannis Neumann for his master's thesis *Grasping the Liquid: On the Analogies between the Materiality of Gelatin and Essentialist Biases in Scientific Research*.



Jannis Neumann, thesis concept map



Still from *The Happy Film*, Stefan Sagmeister

I don't want an infinite board. I want a paper that has limits, so that if a branch of research grows so much that it reaches the edge and builds up, addition after addition until there is no more room, then that is exactly what the map shows. I want to have to add an extra paper on the side, as in Neumann's example, because I want to remember that I had to do it; the fact that an area of research grows until it doesn't fit into the paper it was assigned, means.

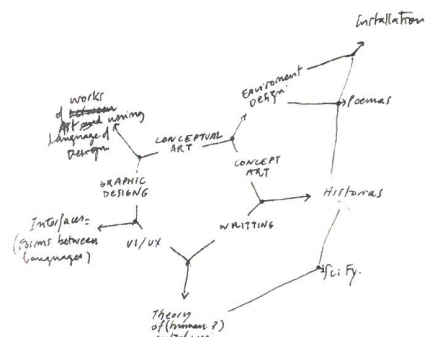
Tree structure with roots

At a certain point in the research another type of schema emerged in practice, we will call it a tree structure with roots. Traditionally, the tree or *arborescent* schema is the one that Deleuze and Guattari criticised as being based on a unidirectional dualistic division that does not allow for the feedback of elements. Deleuze's proposal in opposition was the *rhizome*, a horizontal scheme in which heterogeneous elements are linked together without hierarchy.

Nk, who introduced me to these concepts, pointed out to me that the scheme I was working on had a tree structure but grew on both sides from the *trunk*, with a crown of branches and a corresponding inverted crown of roots. This was not necessarily so in this particular case, as the branches and roots did not grow at the same time but were successive, and did not both start from or meet at the trunk; but this highlighted it as a particular type of scheme. The rooted tree scheme is a unidirectional one, from bottom to top. It does not start with a seed that will generate the trunk as its roots and branches grow in equilibrium, but starts from separate points —say, nutrients below ground level. These come together in composite forms without forced dualism, until at a certain point they converge into what will become the trunk, above ground level. From then on, branches will emerge in bifurcations/trifurcations etc., without forced dualism.

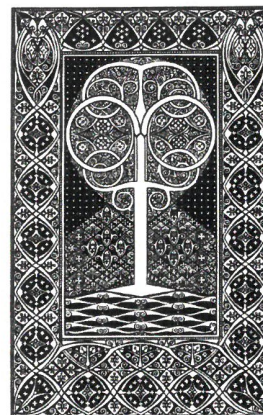
As an example, this in particular was an outline of the set of inputs and files, digital and analogue, that constitute the process of starting a project from the moment the need for it is expressed until it takes shape in the chosen idea that constitutes the point at which the roots create the trunk. From there, the ramifications expand again in relation to all the files in all their versions that constitute the final product. In this case both parts don't grow at the same time, nor are their dimensions related.

You will find the centre in the joining of roots and branches. The idea is the centre of the trunk, the convergence between that *from which it comes* and that *which emerges from it*. This structure turned out to be, schematically, the same as the cones of light with which Rovelli presents the structure of time. The present is a concrete centre, a point, and from it emerge broad past and future.



[shutterstock.com]

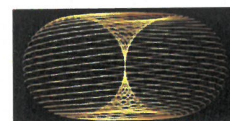
I tell Nk about Yggdrasil, which is probably the reason why, in my imaginary, a tree scheme naturally grows in both directions. Its shape is that of the toroid with which Nassim Haremein describes the universe. Nietzsche and Gilgamesh.



[Upanishads, Peter Behrens]

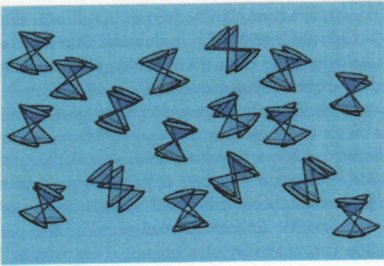


[shutterstock.com]

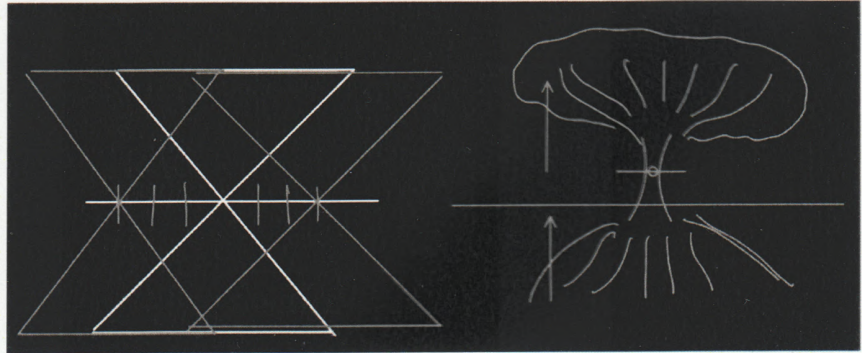


[Resonance Science Foundation]

The superposition of the cones is that of the superposition of possible configurations from the theory of quantum mechanics [PAGE 57] which, at each point, mutates the idea.



[Rovelli, Tempo, 69]

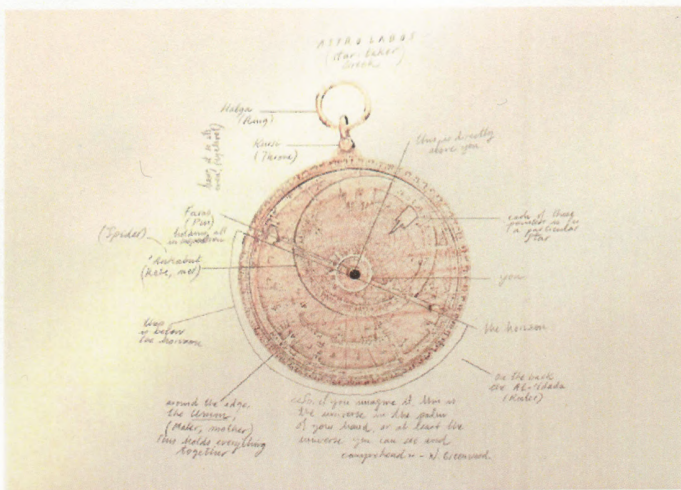


Dynamics of the Rooted tree scheme

Mapping the coast from the sea

In our course-and-defeat journey, we will sometimes find ourselves in a sea too wide to be fully explored. In design, when the concept of a project remains so open-ended that moving forward from concrete decisions becomes an unmanageable task, I have a habit of approaching the work in the same way: always start by defining what we should not or cannot do. In the manner of a navigator and their crew, outlining the limits of the ocean we find ourselves in with the coasts we are sighting, we are in turn tracing the map of an island of dry land,

an island made up of the possible in contrast to the non-possible, matter against emptiness. And it is this matter that takes shape as the coastline becomes clearer. Steep, flat, leafy, desert-like. In any case, a terrain that we can now explore.



astrolabos (from Greek = star-taker)

At the start of the map, an astrolabe, to find oneself wherever one is

Looked at another way: the number of possible solutions to a design problem can be overwhelming, but the number of possible inadequate solutions will always be greater. If you eliminate what is not useful first, the landscape is reduced and it is easier to find connections between the things that remain, which is ultimately what design is all about.

Registration and access to the mental space

What does an idea look like before it becomes that particular idea?

Before I read more about his biography and his work, I used to be very struck by some of the allusions Jean-Michel Basquiat wrote in his work. Darius, Hypatia, Anaxagoras, Sophocles, Scipio. Eleanor Nairne used a beautiful expression when she wrote that Jean-Michel «filled his work with points of reference, which invite the viewer to search for constellations of meaning» («llenó su obra de puntos de referencia, que invitan al espectador a buscar constelaciones de significado») [Nairne, Basquiat, 38]. I was under the misconception that these were a record of his personal research. He disproved it himself when in an interview, talking about his process—with the television, radio and record player playing at the same time—he said that he wrote them down because he liked the sound of them. Jazz painting. This was not what I was looking for, but precisely because of that momentary disappointment, it helped me to recognise my natural interest in the ways that artists' research shows up in their work. I continued to appreciate his work for what it is instead of for what I thought it was.



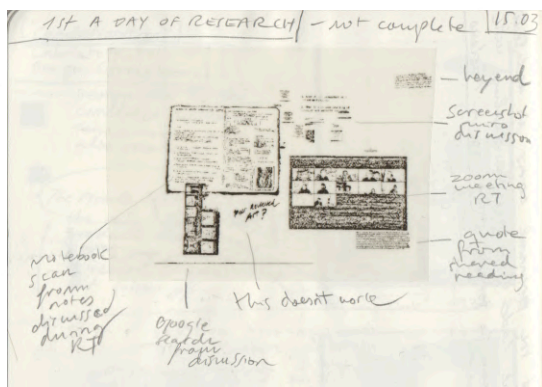
[Jawbone of an Ass, Jean-Michel Basquiat]

Ciertamente, buena parte del deleite que despierta ver las pinturas de Basquiat consiste en ahondar en estos aspectos, juntar piezas, desentrañar alusiones y referencias e ir tan lejos como sea posible. Según Basquiat: «Busco claridad, pero también quiero cierta oscuridad, ser algo más críptico».³¹ Como la poesía, una parte quedará opaca aunque siga sonando hermosa y verdadera, y una parte fundamental de la historia consiste en seguir los gestos del artista a lo largo del lienzo y desandar la cadena de decisiones que guiaron su mano. Cada vez que se contemplan estas pinturas, se descubren detalles inadvertidos y nuevas capas de significado, y por ello se creó especialmente este libro, con su generosa selección de obras.

«Indeed, much of the delight in viewing Basquiat's paintings is in delving into these aspects, piecing them together, unravelling allusions and references and going as far as possible. According to Basquiat: "I seek clarity, but I also want a certain obscurity, to be a little more cryptic". Like poetry, some of it will remain opaque even if it still rings beautiful and true, and a fundamental part of the story is to follow the artist's gestures across the canvas and retrace the chain of decisions that guided his hand. Each time one looks at these paintings, one discovers unnoticed details and new layers of meaning, and that is why this book, with its generous selection of works, was specially created.»

[Werner, Basquiat, 31]

The interest in these references came from a fixation with understanding the environment of the authors when they produced a certain work. For me, what mattered was not their motivation behind the subject matter of a painting or a novel, but the landscape of their mind at that specific moment —the one from which they made the decisions informing the cuts that were the works we have been left with as records. For those who share my fixation, this nurtures an interest in manuscripts and their process corrections, travelogues, diaries and collections of authors' personal letters; windows all together into that mental space from which the idea took shape before it became what we know today.



Thermal footprint of temporary memory

In his book on Time, Rovelli explains that the only way to leave a trace or record of something is for a process to stop, i.e. to be irreversible. Gravity, for example, can make a ball fall, but it can also make it bounce back up. Heat, however, only goes from hot to cold bodies, and not the other way around. This was the law that Rudolf Clausius enunciated and which is, says Rovelli, the only law that differentiates past and future; no other [Rovelli, *Tiempo*, 25].

atrás en el tiempo.¹³ En las ecuaciones elementales del mundo,¹⁴ la flecha del tiempo *solo* aparece cuando hay calor.* El

«In the elementary equations of the world, the arrow of time *only* appears when there is heat.»
[Rovelli, *Tiempo*, 25]

«A memory is what is left when something happens and does not completely unhappen»

— [De Bono, *Mechanism*, 40]

Because heat does not bounce back, the event leaves its mark on our synapses.

Heat is an agitation of molecules. When a hot object comes into contact with a cold object, the extremely agitated molecules of the former will cause the molecules of the latter to start moving and colliding with each other. It is nice to think that leaving an imprint on our surroundings is basically the tumult of our agitated molecules touching inert elements and making things happen. A mark is thus an event that in its happening transferred heat from one thing to another.

This is why, says Rovelli, «computers heat up, the brain heats up, (...) and even the goose quill of the amanuensis in the Benedictine abbeys of the Middle Ages heated up the paper a little at the point where the ink was deposited». The approach of Heat Maps is to establish a practice with the methods of art in representing the state of ideas before they are concretised into a particular form and meaning; a record of a mental landscape at a particular time. The aesthetics of the cloud, the accumulation, the communication of the search. Creating [recording] an image of the mind, a representation of the mental state during/

Collages [edit]

The small collages printed throughout the book are a part of Green's collection, *Tiny Stampede*. This series was displayed in an exhibition in 2011 in Pasadena, California.^{[3][4]} She combines snippets of sentences, printed images, inked fingerprints, pieces of a postage stamp collecting book, pencils shavings, her own drawings and watercolors, and other mediums. The mix of media is a form of found poetry, which uses fragments of sentences and random words from other sources to create a new unified work.^{[4][3]} Green used this process as an escape, a way of coping with trauma and grounding herself.^[4] [Karen Green, [wikipedia.org](https://www.wikipedia.org)]

after reflecting on a particular subject and establishing relationships between it and others from a particular position. After a certain time of production, it becomes an archive of specific temporal moments in a continuous evolution —as indeed all works are, but in this case focusing on this function. An *Atlas Mnemosyne*, not of position in space (geography) but in time, and of non-linear chronology, similar to Warburg's but with a different interest. Mapping the state of the mind at specific moments, this is an atlas of memory, not collective or historical (although evidently affected by and part of these), but of an investigation from a particular prism, and how that prism shapes itself as it filters and produces.

From this point the exploration continues on a different level by sharing this output, to observe its effect on others and to understand the different reactions it does or does not initiate in the synapses of others. It is pleasurable work to undertake and the result openly extends research for others to take up, reinterpret, reform. The formation of different ideas from equal inputs. ←

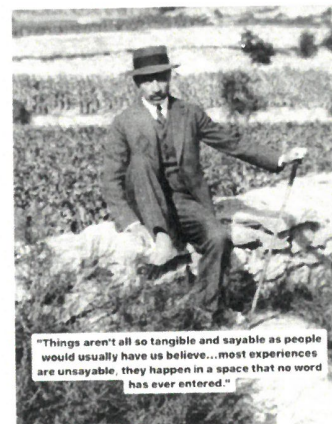
I don't write down in Heat Maps every input I receive —of course, this is an impossible task. Moreover, I don't try to make a media pop collage, a portrait of what the environment throws at me every day, full of advertising, of more or less striking phrases that randomly reach one's ears —right now I hear «*how sweet should a diet coke be?*» [Gladwell, Masterclass, "02 - Structuring Narrative", 13:30]. It is none of these things. Nor, unlike work like Karen Green's *Tiny Stampede*, is this a process to produce a random set. If one is on a quest, what one picks up is not really a coincidence; things are connected. Would you be able to bring to mind the physical sensation of walking and feeling that you have crossed the path of a spider's thread? Barely perceptible, but taut with a certain consistency. Discovering ideas is a similar procedure. We just have to find a thread and follow it without breaking it. Of course, this will not lead us to a linear arrangement of dots, but to a complex spider's web which for us may be of interest in only one of its parts, and which attaches itself to even larger external structures. The form of the web found, though highly variable and constantly adapting, necessarily takes its shape from the structures in the middle of which it has been created. Each part of this idea is connected to its environment and is not random, one only has to follow it carefully. The actor needs only one thing: enough personal interest to trace this transparent network, and what they find will be dependent on this particular interest. This is one of the beauties of art: the ideas are similar in thought, the themes repeat themselves con-

[Bohr, Writings, 32] [Benjamin, Translator, 260]

«Evidence obtained under different experimental conditions cannot be comprehended within a single picture, but must be regarded as complementary in the sense that only the totality of the phenomena exhaust the possible» — Niels Bohr, *The Philosophical...*

«Fragments of a vessel that are to be glued together must match one another in the smallest details, although they need not be like one another» — Walter Benjamin, *The Task of the Translator*

Perhaps in the multiplicity Bohr spoke of, in which something is not susceptible to being captured in a single form, we can find a way to say more of the things for which language has no words.



"Things aren't all so tangible and sayable as people would usually have us believe...most experiences are unsayable, they happen in a space that no word has ever entered."

[Rainer Maria Rilke, [nitch.com](https://www.nitch.com)]

tinuously in history, but the particularities of the authors' interest, in meaning and form, give shape to completely different works.

Methodology

1-PROCESS IS TOO SLOW & TOXIC

LOG — The word **chronology** is formed from the Greek 'time' and 'study', it says nothing about what form it takes or where it is positioned to be studied —it does not mean that something done 'chronologically' must be done in linear order. Try to think in non-linear chronologies.

Cronología (del griego χρόνος 'tiempo' y λόγος 'estudio')

To keep a record of the mental space at a particular time, description in words is not enough —not in my experience, perhaps this is relative to the type of memory recording, dependent on certain as yet unclear differences between cognitive typologies. But empirical knowledge tells us that there are symbols containing in themselves meanings that described in words would be stretched to the point of being lost, and that the limits of language do not encompass the message that some images can convey by themselves. At the same time, the alchemy between words is one that opens up spaces for messages not necessarily written on those lines, relationships with elements that are not on the page, but are formed in the spaces between the lines.

For me, the closest visual representation to that momentary mental space made of connections is that: a set of inputs, both visual and textual, registered together. On the one hand, they represent themselves, as additions to the whole of the research, in that temporary moment. On the other hand, they also represent a call to other elements not physically recorded on paper, but which are present in relation to each other, thanks to connections between the mind's synapses. A reading between lines, and between images.

For the Heat Maps, I collect these inputs on a single side of a piece of paper, using a variety of painting techniques but almost always those that take the least amount of time. I will not use slow techniques such as painting, nor do I try to reproduce by hand all those images that I can print in their original form. It is important for me to record the image as I saw it, for which I use the transfer technique —I print it mirrored with a laser printer and transfer it with chemicals to the paper. This takes some time and is also toxic to some extent, but it records a very close version of the original, with vivid colours. In other cases I draw or write by hand, depending on the input. Then I write a column of references on the other side of the paper, recording the origin.

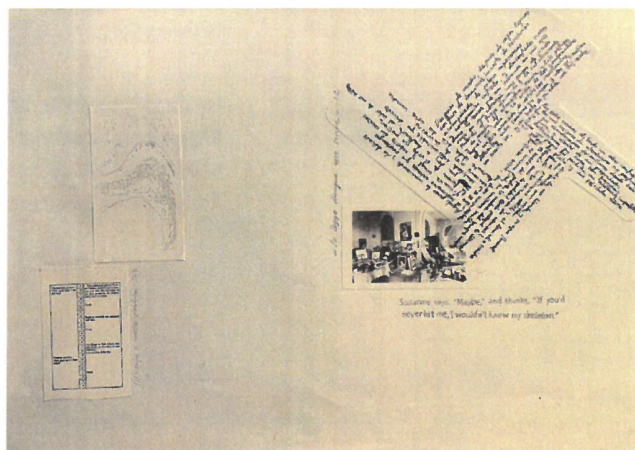
In addition to these long-lasting techniques, some of the registers are made by *thermo-printing*. This is the same technique used by ticket machines in cash registers; by means of heat, they mark the contents on thermally sensitive pa-

per. This, however, has a limited life span of ten to fifteen years if kept in neutral conditions, and disappears if it comes into contact with heat sources, liquids or chemicals such as those found in highlighter pens (interestingly, if information is underlined in a thermo-printed text, it will be precisely these words that will not be readable). The machine I use for these is however very convenient, battery-powered and portable, and prints any content from the mobile phone, allowing complex images or long texts to be recorded very quickly and anywhere on sticky paper—these can be added to a notebook, for example. The paper comes in different formats, the ones I use are white or transparent.

The significance of this kind of impression is that it is very similar to our mental inputs, perhaps the most so of all. It can add an incredibly complex input to the landscape of our mind that changes the meaning of its adjacencies completely, and it is much more complex than an impression on fickle material, like a trace on wet sand. It holds for a long time. But, unlike the other detailed printing techniques, it is not matched with a long permanence. Like those mental inputs that in a moment can single-handedly change our synapses creating complex new meanings, one day they disappear completely from our memory, however complex they may have been. The elements that remain are the ones that are the most compelling. This is fundamental in the form of Heat Maps: a set of records that like our synapses happen through heat, whether printed, traced by pencil pressure or transferred by pressing pigments against paper, and of whose original set, after a time, only traces remain, losing the meanings that arose in their interaction.

In the procedure of research for this thesis, Heat Maps were made during one week each, and were scanned on both sides at the end of it. The scans are needed to preserve—in heat—the original state of the memory.

This same goal and these techniques could be used in a notebook, so that the record of the mutation of ideas is constant and uninterrupted, not separated by gaps of time. This is in any way what a sketchbook already is, regardless of the intentionality of its form or subject matter.



In looking at this first trial, I recognise that the quote about the skeleton is from the author of the biography *Widow Basquiat*, about Suzanne Mallouk, and I remember that the reason I came to read the extract was because I was hunting for Picasso in that period, which led me to Basquiat as it always does - [...]. Moreover, the skeleton quote made sense as a mirror to Basquiat's own childhood, during which he was involved in a car accident that led him to spend time in hospital, where his mother brought him a copy of *Grey's Anatomy*, a book he became obsessed with and the source of interest for his later depictions of the human body. The photo is from Picasso's studio, and the picture of Benjamin Franklin's diary is there because, with Picasso's, I was interested in his habits and system. Meanwhile, I was finishing reading Calvino's *Se una notte di invernò un viaggiatore*, a phenomenal work about language and narrative structures interfering with each other.



A game, the camera-based text recognition function of some contemporary phones allows textual inputs to be mixed in new ways, born solely from their physical position next to each other.

Enclosed in the Benjamin
improving my library with
handwritten annotations, color
inked underlines and transcribed
extra information

Transcription of Tessa Brown's
Instagram post

Screening from the *Agave* series
by Tessa Brown, 2012

Artwork by Tessa Brown, 2012
A brief history of the digital knowledge
system based on the *Agave* series
from Tessa Brown, sometimes used
to visually left the history of knowledge
system, a part of the *Agave* series, the
with annotations and color coding

The Body of
Tessa Brown

Spreads from
the *Agave* series

Screen image
from the *Agave* series

Spread from
the *Agave* series

Andreas Dele
from the *Agave* series

Screen image of
the *Agave* series

Examples

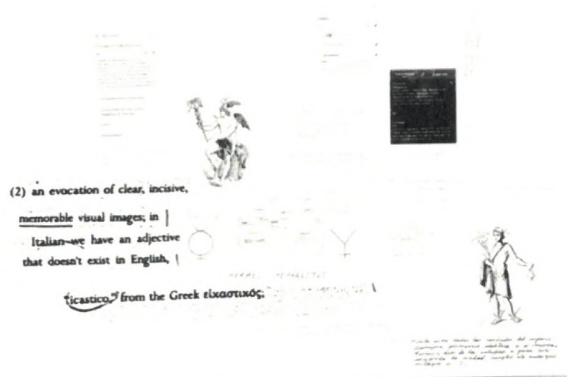
Naturally, despite being records of a research process, there is a certain visual pleasure in them, a harmony achieved with greater or lesser success in some attempts than others. Trying to find the key aspects of this balance or imbalance in them is part of the interest in collecting more.



A week's Heat Map — Week #5



A week's Heat Map — Week #2



A week's Heat Map — Week #6



A week's Heat Map — Week #3

LOG [Week #04] — I am having problems with the material, the transmitter fluid is drying out and starting to discolour the ink in shades of pink, why is this, is it because the paper or printer inks have changed?

LOG Also in [Week #04] I have realised that without active images ["imagines agents", *Ad Herennium*, Yates, Memoria, 27] memory is not recorded. A general google search gives a good overview of the accumulation of images received around a particular theme, but in such a small size they don't build anything.

Notes on process of pieces: not to note down
 who+ does not matter
 ex. method might work
 I may have to look into
 it but it's not relevant
 Is this an error?
 Explain the need to define
 the matter



«A lot of what makes us... brings us pleasure in reading or in writing or in the act of engagement of all sorts of art, is a version of the Other Minds Discovery, it is the pleasure we get in investigating the contents of someone else's mind, and being reminded once again how amazing it is that you don't think like me! Right?»

[Gladwell, Masterclass, "24 - Conclusion", 01:40]

A week's Heat Map — Week#1

How to capture a
Brownian motion?

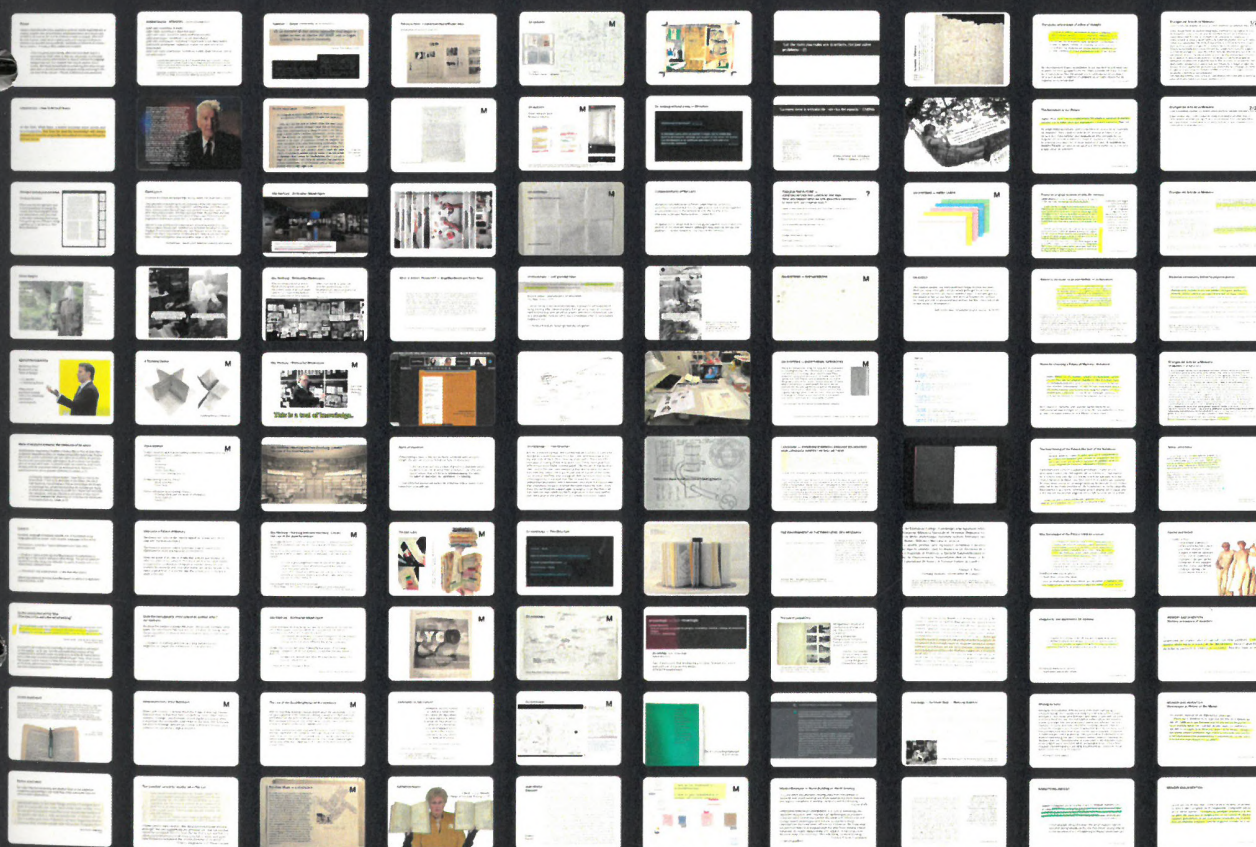
ling and dancing
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 to for a
 beautiful dance
 move

Index Cards

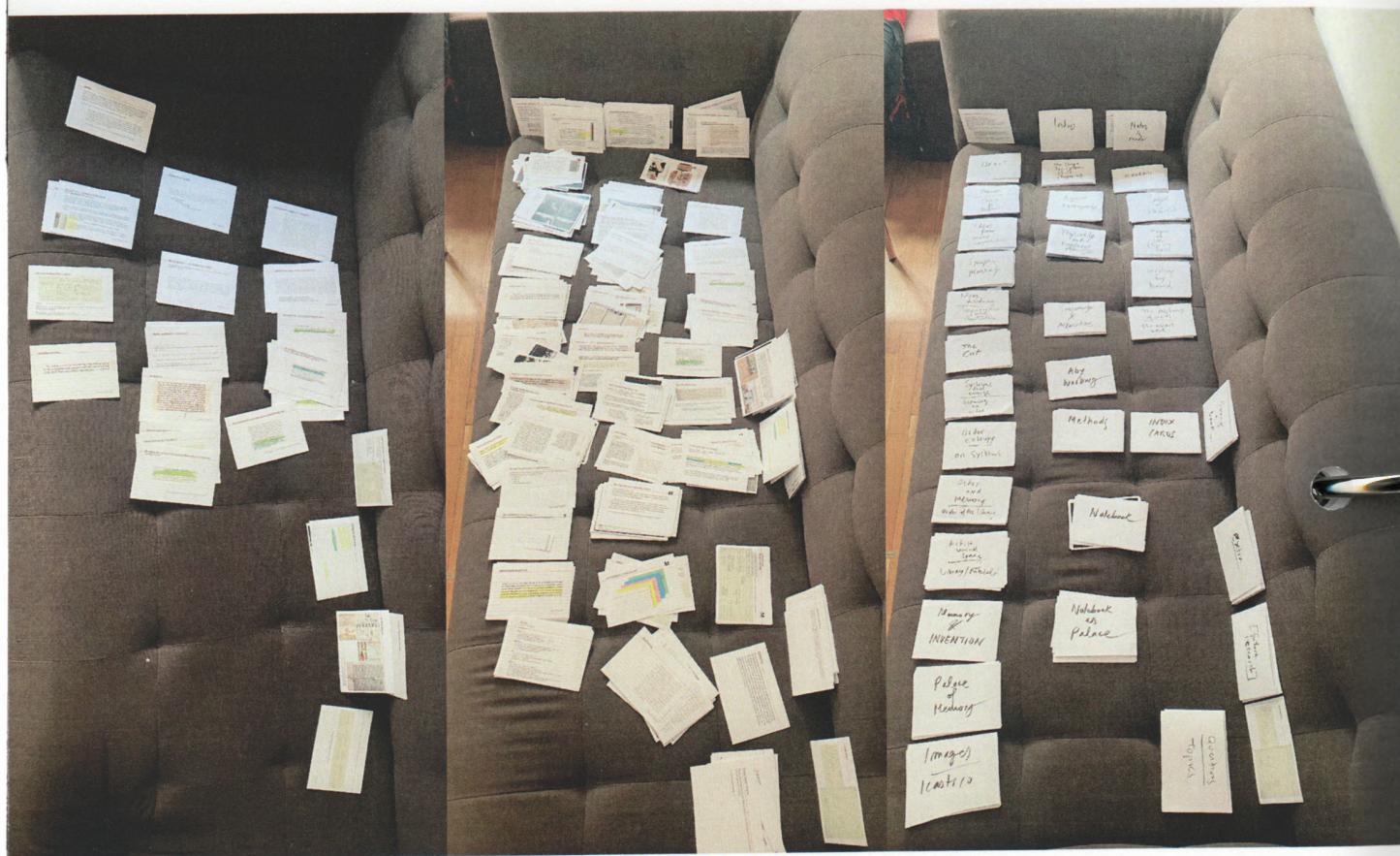
M

Playing with content in a material form

The interest of using index cards as a format for working with the content of this research lays in freeing each particle of content from its original body. Once freed from their context, they were much more likely to move away from the contents they succeeded and those to which they gave way, thus enabling them to connect with others from very different backgrounds. This generated genuinely advantageous dynamics that proved more useful than expected, and pointed to the extent to which the playfulness of the format benefited the process of shaping the content. At the time of this writing there are 452 cards.



The process was as follows: starting by placing cards next to each other in piles referring to the same themes, one quickly found contents that were links between two piles, placing them in between each other. Then, the confrontation with cards that were related to more than two piles, or to two that were already physically far from each other, arose. Thus, the intrinsic synergy of the content accounted for the form of the discourse, and the need to divide or link piles with each other. Some cards seemed to fight for the attention of several



«A day of card filling is quick and sufficient, also fun», I wrote during the planning as a note to myself. I was wrong.

themes, which translated into their status as meaningful arguments. It was a pleasurable process, but one that also required intense concentration, as some extracts could easily be related to many of the clusters, which in turn began to become consistent chapters.

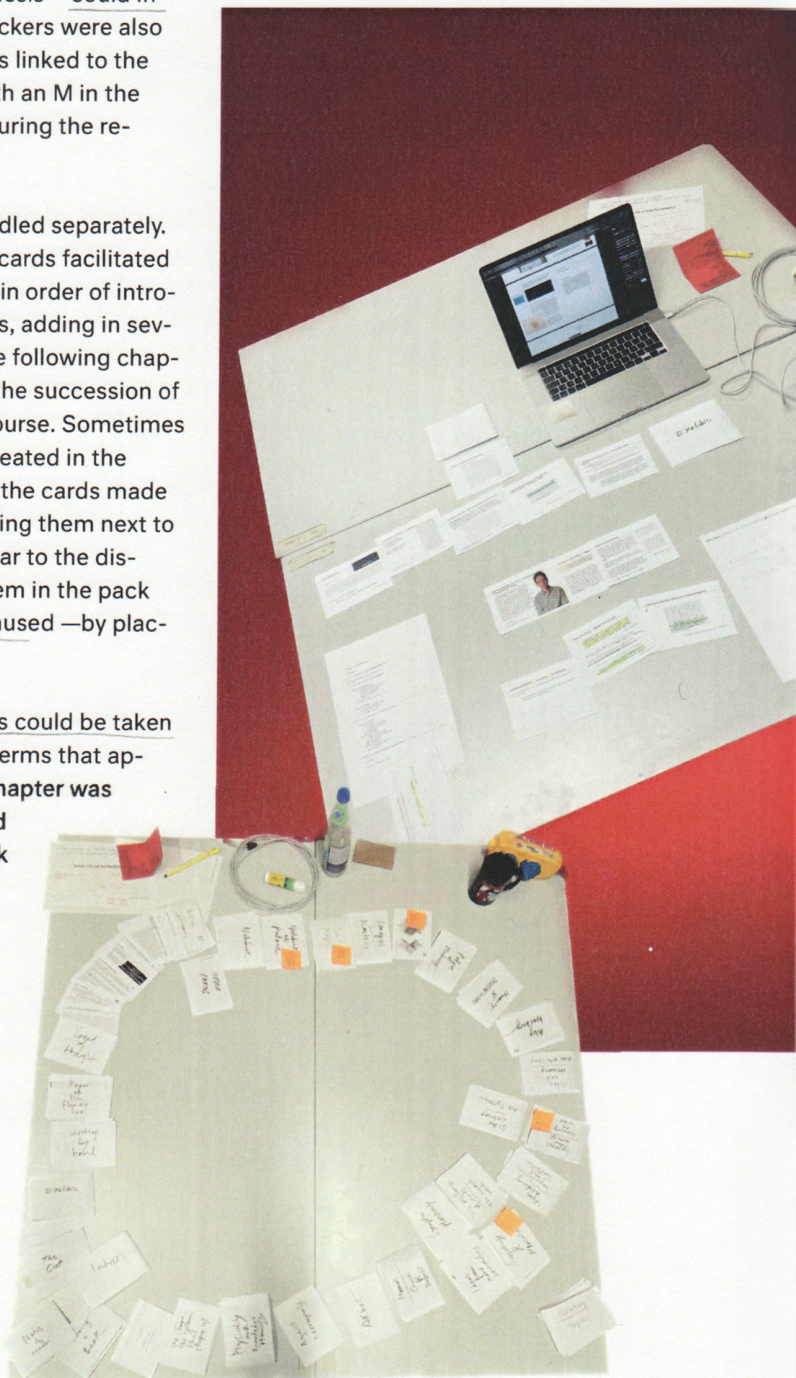
The piles were then grouped in order of linear succession and each was given a title depending on the concept it represented. Having the chapters or themes in mobile packages facilitated the work of transforming this succession, placing some in horizontal lines perpendicular to the vertical sequence of content

*«The creative mind
plays with the
objects it loves»
[Carl Jung]*

from start to finish. Thus, the table of contents ended up taking on a circular shape, a configuration suited to the format of the book that would contain them in rings, without these being attached to a binder. A circular book, where the conclusion of the chapter *The Cut* and the appendix *Growing a book* could in turn be the introduction, and the introduction at the beginning—necessary in the bound and quotable version of the formal thesis—could in turn be a recapitulation at the end. Coloured stickers were also used to identify the chapters whose content was linked to the introduction of the various methods marked with an M in the thesis, and which came into being organically during the re-search process.

Each packet could then be transported and handled separately. After arranging their contents on a surface, the cards facilitated the organisation of the elements of the content in order of introduction, knot and conclusion inside the chapters, adding in several cases some final elements that linked to the following chapter. It was these linking cards that transformed the succession of chapters and defined the final order of the discourse. Sometimes some packages had to be merged and others created in the process as needed. Moreover, the physicality of the cards made it very easy to identify binding content—by placing them next to each other in horizontal succession perpendicular to the discourse—, separate sub-themes—by keeping them in the pack vertically between other horizontal ones—, or unused—by placing them upside-down at the end of the group.

When drafting the text, the contents of the cards could be taken from the digital file by doing a quick search for terms that appeared on these, so that once the order of the chapter was established, content could be copied and pasted into the drafting document, which made the task much easier. Of course, this resulted from the prior work of scanning all the quotations from the original books, and pasting them onto the cards with their corresponding citation and, where appropriate, the related topic and some written comments; this followed Luhmann's example, where the heavy lifting was done in recording the input together with our personal comments on it.

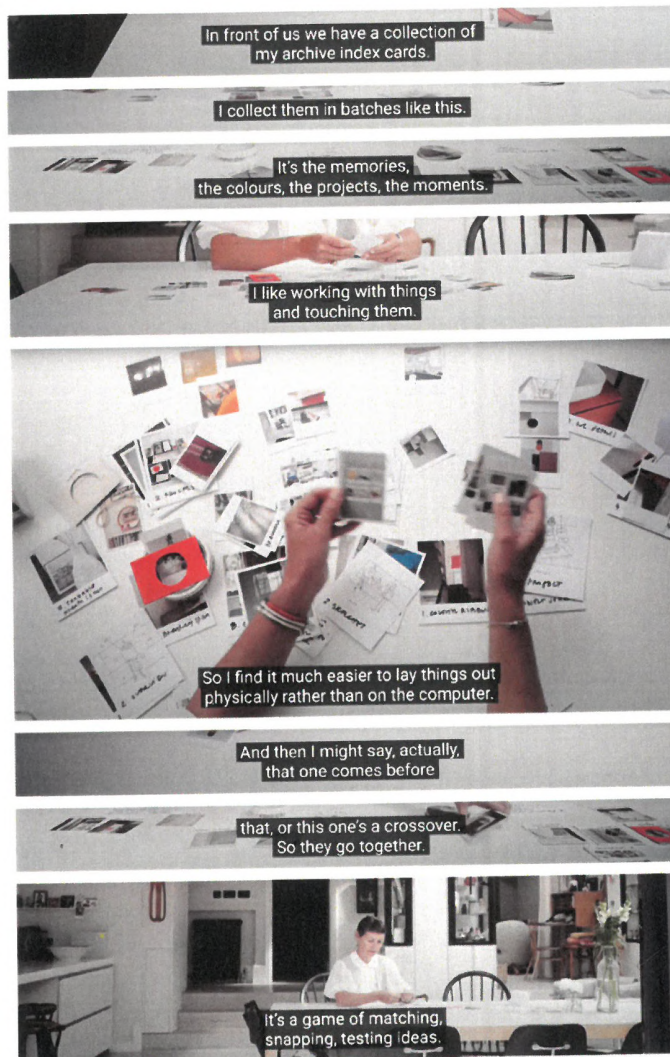


All in all, the experiment proved largely successful and definitive in relation to the final form the discourse took. It pointed to qualitative aspects of the methodology that I would like to explore further, such as certain benefits of counteracting the overwhelming amount of resources and information we handle and their relation to the high levels of stress and anxiety that have been seen to increase in the last decade, or the advantages of transporting to new environments the materials needed for only a couple of sequential chapters, which also demonstrated improvements in the ability to concentrate. In addition, it was the origin of a legacy project to develop a digital programme to facilitate the implementation of the method, circumventing some of the unnecessary difficulties, and building on a library of cards common to multiple projects, in the *Zettelkasten* way. It suggested ideas for its use in other fields, such as education, through exercises in which a pile of various cards would be extracted from a common library and distributed in smaller groups to the students, who would then have to carry out an exercise relating the elements obtained. Even under a common theme and analogous cards, interesting argumentative and analogy-generating exercises could arise from introducing different individual cards into the groups of identical cards for each pupil.

For the implementation of these systems, reusable materials similar to those used by some stationery brands —such as Rocket Book— are considered, which allow the contents of notebooks and cards to be removed with the use of heat.

The usefulness of cards as a format for physically managing content and allowing connections to emerge, within the confines of a single project's content, is rooted in the same aspects that make the *Zettelkasten* useful, but they are not an implementation of this; it is important to remember that these are two different things. The cards are *ordering*, *mattering blocks of knowledge*. Like building

blocks. The same reason why post-its are still used on whiteboards, when the whiteboard is set up for writing and erasing content: so that team members can move and rearrange them, to allow those connections to happen.



[Inside Designer Irenie Cossey's Family Home, YT]

__nitch Joan Didion // "See enough and write it down, I tell myself. And then some morning, when the world seems drained of wonder, some day when I'm going through the motions of doing what I am supposed to do... On that bankrupt morning, I will simply open my notebook and there it will all be, a forgotten account with accumulated interest. Paid passage back to the world out there. It all comes back. Remember what it is to be me."

▲ FBY

- Contra la cultura de la productividad.
David Allen GTD, "Get Things Done".

■ LA PARADOJA DE MENÓN

Athens dice que se conoce así el no poder anticipar exactamente la información que buscas en una lectura, pues entonces no necesitarías leerla [encontrarla].



Wie du es in den Wald rufst, so
schallt es auch zurück.

- How you scream at the woods
that, how they will scream back
at you.

"Wittgenstein's observation that Galtornan photo-
graphy was "the picture of a
probability" »).

↳ "The law of probability, the law of
nature, what you see when you
blink"

- Philosophical
Grammar, vol. X

KATHARINA SIEVERDING

- Transformer VI A/B - 1973/74

- photographic
overlays of her
own face with
that of her portrait.

+

FRIEDL KUBELKA

⊗ The First Year Portrait - 1972/73

one per day, but
layered down as
in a calendar

as record of course and defeat, inbox and Palace

In the interviews and chats I have with creatives and students, when I ask about the form of their journals, the way they record and archive their notes, ideas and content, and the boundaries of both digital and analogue, the same point comes up repeatedly in their argumentation: the way their mind links elements together is different between digital and physical formats; namely in a notebook or in a digital notes app. This disparity, as yet undefined but empirically noticeable to them, is what leads some to try different methods of handwriting on digital devices —such as ReMarkable or ApplePencil— and most to create a hybrid system for themselves. There are still many questions I would like to investigate regarding the real reasons behind users' perceived limitations in both systems; meanwhile, as I observe the analogue tendencies of the personal computer generation, a question emerges: what is it in the notebook format that enables this specific synaptic dynamic?

Before starting this research and from experience, my assumption was the following: something in the size of a notebook, which cannot be too small or too large, makes it a container of comprehensible measurements, and this, for some reason, is important; I remember what I write down by contrast with what is around, and I remember where I was seeing what I wrote down; and, finally, something in the gesture of flipping through the pages over and over again, in the process of use, is at the basis of why the notebook works for me as a generating device, as a thinking machine. Today, having advanced in the investigation of the correlation between our cognitive processes and the physicality of our environment, I now recognise many reasons behind these questions, and I cannot but think of Calasso:

To-

dos los discursos sobre una eventual sustitución del libro por otros medios ignoran un hecho elemental: nuestro repertorio de gestos es limitado. Los objetos son intentos más o menos felices de adaptarse a las características inevitables de estos gestos.

«All the discourse on the eventual replacement of books by other media ignores an elementary fact: our repertoire of gestures is limited. Objects are more or less happy attempts to adapt to the inevitable characteristics of these gestures.» [Calasso, Biblioteca, 17-18]

In the course of the readings of this research and with the notebook as a method, the question of its dynamics has remained ever present, and every system and note on our cognitive responses has been set against this, forming the following considerations. We see the notebook as a record of course and defeat, an inbox of temporary notes, a container whose format enables new synaptic connections and as Memory Palace.

Interconnectivity in the notebook

Writing by hand in separate notebooks or on separate sheets of paper is not the same as writing chronologically in the same notebook. We learn to separate our notes by subject at school, because their primary function is to collect separate compendia that we have to memorise together and reproduce together on different occasions. From here on, in working life and/or research, this is never the case again. Intelligence and the ability to deal with new problems with positive results is largely based on the individual's ability to link diverse knowledge into logical schemes. As Ahrens mentions, being able to link new information with information we already know makes it easier for us to understand and assimilate new data [PAGE 104]. The more we have to link, the better.

This dynamic of separating notes by subject is favoured by digital systems as we use them today. Is it possible to make a mixed record in a single file chronologically? Certainly, and many people practice this, for example when they open the same very long note on their phone to jot down anything they don't want to forget.* This is however an example of a temporary note, an inbox to be taken out of and put somewhere else. When it comes to knowledge bases, archiving information that we intend to keep for the long term, we tend to create separate files. Like at university, one file for each subject, or for each topic within the subject, or for each lecture within the syllabus. There are exceptions of course, and the adaptation of systems to individual needs by the user is the best source of reform of the systems themselves, in my opinion. The general trend, however, is towards separation. This is natural, given that the digital environment allows us to accumulate files and folders that would result, in analog and to return to the university example, in having to carry around all our notes for each subject all the time. This separation is also the reason why we tend to generate huge accumulations of files that we forget and end up being useless for not being, as we learn from Luhmann, linked to each other. But, above all, they prevent the appearance of unexpected connections, *sticky cohesions*.**

When it comes to generation, as we see, association is the key [PAGE 29]. Returning to paper, it is not the same to write by hand in notebooks or on separate sheets of paper by topic as it is to write chronologically in the same notebook. The latter method understands the environment as an active agent of ideas, and allows contributions from one source to be related to those from another.

* Personally, I have not met anyone who did not complain that this solution made them forget most of what they wrote down, except for one subject of the interviews who spent time cleaning up his notes and putting the information where it was needed every day. This is then a perfect inbox solution—as is sending emails to oneself, if one checks them regularly.

**And the finitude, which will be important.

In it, entries on one topic in the morning will affect those on another topic in the afternoon, and vice versa —time is reversed, what was said changes meaning when opposed to something new. The connections in the notebook result from everyday use, without any particular effort, thanks on the one hand to its heterogeneity of elements, and on the other hand to the continuous gesture of flipping between pages, as we shall see hereafter. On one occasion, in response to an essay written for an exercise in language and literature at the arts university, I was asked how I had found the elements that made it up, disparate concepts that, being of very different origins, fitted together. The answer is that I didn't. If I would have needed to search for disparate elements on purpose, that would have been impracticable. The elements were in my notebook, accumulated, loose, and the notebook linked them together. We know that the mind naturally looks for patterns as a matter of saving cognitive resources —whatever it can group under one type, it groups together, so as to simplify the constant scanning of the environment— and the continuous turning of pages that we exercise in the daily use of the notebook, keeps those elements in mind until that sudden spark of contact with a new input creates a connection that remains.

reducirlo a un único punto, sería este: necesitamos una estructura sencilla y externa para pensar que compense las limitaciones de nuestro cerebro. Pero, primero, déjame hacerte de guía

«We need a simple, external structure for thinking that compensates for the limitations of our brain.» [Ahrens, Zettelkasten, 29]

Our brains are not good at remembering large amounts of data accurately and reliably, but they are good at finding patterns in any kind of information. This is what the notebook is: a tool that performs the function the brain is not good at, and thus makes it easier for it to perform the function it exceeds at. This is why tools like Pinterest represent a certain danger to ideation; they are good at finding patterns between things that are the same, rather than trying to link those that are not the same at all [LATERAL THINKING, PAGE 30].

In its interconnectedness, the notebook is a kind of water bowl, a «container of externalised thoughts» [PAGE 65], in which we allow different substances to dissolve in order to see what is happening. As a chronological record, it acts as a continuous Heat Map [PAGE 84], a relation of course and defeat in our wandering. The extracts are the visual signs —like carving a wax tablet— of the mental space in which we were situated that week. These notebook pages, side by side, are the record of a cognitive journey, replicated in the synapse; and, in this case, they react to each other, unlike the separate Heat Maps. They have in common, however, their facet of enquiry: an entry recorded in the notebook is

always a question in itself, an extract we filter from the world on account of an interest whose origins we do not necessarily yet know, and, at the same time, this entry is an attempt to seek answers to the entries recorded around it —like Warburg's *law of the good neighbour* [PAGE 78]. Sometimes, once two markedly disparate concepts are solidly bound together, only the notebook gives an account of how this chemical bonding reaction happened.

As an inbox, the notebook is a flexible tool; it's all about speed of thought here, not losing that momentary synaptic spark. Take a note, draw a quick sketch, perhaps write the first lines. The notebook is thus the first phase, from which one can move on to digital or other systems to expand on the concrete realisation of a particular idea. Like the endothelium, the notebook is an internal loop, exchanging waste and nutrients with the outside world.

ON SYSTEMS — ENDOTHELIAL NOTEBOOKS

Part of an intimal tunic, lining the inner zone of blood vessels, including the heart, the endothelium exchanges wastes and nutrients, consuming a great deal of energy. These notebooks are my endothelia, from the Greek "endo" (ένδο) 'inside', and "thēl" (θήλιο) 'loop', links between me and the life going on around me. Loops of time and people, of places where I was and am, consumed with the day to day and evolving with the learning that accompanies the passing courses. Notebooks of inked notes, of pencil and pen lines, of glued clippings, which, filled with nitric oxide, are capable of relaxing the smooth muscle cells of the blood vessels, that contract and dilate with the passing of events.

I carry one with me at all times, an endothelial notebook.



— Ivonne Gracia, Antonio Pérez Foundation - Contemporary Art Centre. Cuenca, 2013

On the notebook and memory

conspicuously present in the accustomed confusion of these books. For what else is this collection but a disorder to which habit has accommodated itself to such an extent that it can appear as order? You have all heard of people whom the loss of their

[Benjamin, Unpacking, 60]

Contrary to what might appear to an outside observer, for the owner, the notebook is an orderly record. Like the library, one who continually browses through its shelves builds up a mental map of the position of all the books, and even if they cannot cite them from memory, when they need a particular one, they automatically tend to the right area. The physical clutter that is ordered in the habit of moving around in it. This, as we see [PAGE 17], is our spatial navigation system, filing information from our environment with the same tools with which it consolidates long-term memory. And because the neural networks that are reused are those that remain, in the scrolling of the notebook, continually revisiting its signs in different contexts, that information is repeated, recorded better, like Luhmann's anthill [PAGE 108].

« Something about... for me, I keep ideas in my phone too but, something about the pen and paper, to me, is better, just because I can look at all my ideas and I can see them, at once. You know what I'm saying? Like I don't feel like: <— (mimics the infinite scroll on the phone) "Oh man what was that thing I said that one day. Shit. Man, scroll, oh fuck!". You know what I'm saying? Like, you're sitting there for two hours: "What was it...? I remember the phrase but what I use to rhyme with it?". For me, I remember which side of the page it's on. »

— Eminem



[How Eminem Really Makes Music | Deep Dive, (YT), 06:20]

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 3. El mundo ideal
 4. El mundo real
 5. El mundo posible
 6. El mundo necesario
 7. El mundo contingente
 8. El mundo eterno
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 10. El mundo espacial
 11. El mundo moral
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 14. El mundo cultural
 15. El mundo científico
 16. El mundo religioso
 17. El mundo artístico
 18. El mundo literario
 19. El mundo musical
 20. El mundo dramático
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[illegible]


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[illegible][illegible]

Handwritten notes on the top left page, including a small diagram of a person's head and shoulders.

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Handwritten notes on the bottom far right page, featuring a small diagram of a person's head and shoulders.

Hay algo en el desorden físico que crea un orden (quizás metafísico)
 que el coleccionista reconoce, pero que el sistema digital, que cambia con
 actualizaciones
 que no se repite (retraza, camina, recorre) no puede mantener.
 un sistema orden mental que no llega a formarse.

There is something in the physical disorder that creates an order (perhaps metaphysical) that the collector recognises, one that the digital system, which changes with updates, which does not repeat itself (retraces, walks, traverses) cannot maintain, a mental order that fails to form.

Research: old French
 (re-) 'expressing intensive force' +
 (cerchier) 'to search'

[- search harder
 - search again]

Diligent inquiring or examination
 to seek or revise facts, principles,
 theories, applications, etc.;
 laborious or continued search
 after truth.

In the course of the gestation of this thesis, with regard to the notebook that accompanied it, I began to worry, months before the deadline, that I would have no space left on the

remaining pages to *think* about what I still needed. As if I couldn't continue in another, as if it had to be *connected and contained* in order not to get lost. The effectiveness of the notebook format is based on that interconnectedness, on carrying all the inputs with oneself and being able to *go back*, review and connect one of the older ones with the newer one—to let them influence each other. The same reason generates *finitude* in the notebook. If we were to start another one we would have to carry both with us, and the first one would start to get lost in memory, as if we wanted to fill the Memory Palace with images for a new discourse, before we had recited the one in the present images. The notebook is a *tool of re-search*: first one searches—with a pencil, looking, walking, touching, moving—and then re-searches—connecting what one has found. The first happens *chronologically*, the second does not.

To record what I write, my memory notes its context; for example: that I was in that conference with this person, that I wrote it down at the top of the left page. Surrounding place and place on the page come together, because they are unique. What we want from a memory system is for it to reactivate those synaptic connections that link a certain input to a whole physical record of time and place, which we know our body makes on multiple levels through our senses. Ideally, a memory system would transport us to a particular moment in those various levels of registration, as smell does, like Proust's madeleine. Less effectively than smell, but more effectively than typing on a computer or screen, *tracing signs manually records these layers of sensory information*, so that each external register—writing, drawing, incision—is linked to internal registers—visual, olfactory, spatial, sonic, tactile.

The tactility of the notebook and its manageable, finite, human-sized format allows for a very specific typology of emergence, *allowing the background to be always present during the period of an investigation*, a cartography with different temporal dimensions that feed back on each other.

Thus there is in the life of a collector a dialectical tension between the poles of disorder and order. Naturally, his existence is

The Notebook as a Palace

seguro. Pero ¿no se verá inevitablemente dificultada la corriente de nuestro discurso con la doble tarea que imponemos a nuestra memoria? Pues ¿có-

«But won't the flow of our discourse inevitably be hampered by the double task we impose on our memory?» [Yates, *Memoria*, 43]

Quintilian wondered whether it was not counterproductive to occupy our memory with remembering the "memory of words", an object for each word of a speech, and more importantly, whether even making the effort would not make the speech a poor and not very fluent one. Again, more complex tools are not always the best solution. For us today, remembering the Palace is already a daunting task, and we become less used to keeping a memory of things as we rely on digital tools and databases. The inputs we can keep in mind—even if we do not memorise them, those we are familiar with and can recall most easily, those most likely to get linked in our synapses— will be those with which we generate our ideas at any given moment. As an external tool to assist in this, the notebook is our Palace, a step between it and Luhmann's *Zettelkasten* of long-term memory.

The ancients' rules for building and using the Palace are surprisingly valid for the notebook as well. To begin with, as Yates transcribes from the anonymous *Ad Herennium*, it is to choose the building:

iendo. Deben ser de mediano tamaño, no demasiado anchos, pues esto hace que las imágenes alojadas en ellos se vuelvan vagas, no demasiado pequeños, pues entonces la colocación de las imágenes resultará sobrecargada. No han de estar iluminados demasiado brillantemente, pues entonces las imágenes alojadas en ellos esclumbrarán y ofuscarán; ni han de ser demasiado sombríos, de suerte que las sombras oscurezcan las imágenes. Los *loci* han de es-

«They should be of medium size, not too wide, as this makes the images housed in them vague, and not too small, as then the placement of the images will be overloaded. They should not be too brightly lit, as then the images housed in them will dazzle and obfuscate; nor should they be too dark, so that the shadows obscure the images.»

[Yates, *Memoria*, 24]

These may well be instructions for choosing a notebook. Not too small, not too big, with paper that is neither too white nor too dark. Cream papers, in fact, soothe the eyes and are more pleasant, as the contrast is less than with chemically white paper. As for the size, everyone chooses the right size for their use of it depending on the signs they are used to using, but as an example, during a

symposium I attended, when receiving an A4 bloc of paper from the organisers for our notes, I asked the person next to me about the use she was making of it.

Her, who laid the bloc out in landscape format and wrote in columns, said that if she filled the whole width of the page with single lines, the words would get lost, the lines would go too far out of the field of vision. For this reason, it was necessary for her to imitate the width of the pages of her notebook, a more comfortable size —corresponding to the measurements of her annotations. As Yates warns, images housed in Palaces that are too wide become vague.

La formación de los *loci* es de la mayor importancia, pues un mismo conjunto de *loci* ha de ser empleado una y otra vez para recordar materiales diferentes. Las imágenes que hemos colocado en ellos para recordar un conjunto de cosas desaparecen y se borran cuando no volvemos a usarlas. Pero los *loci* permanecen en la memoria y podemos usarlos de nuevo colocando otro conjunto de imágenes para otro conjunto de materiales. Los *loci* son como las tablillas de cera que permanecen después de que se haya borrado lo escrito en ellas, siguiendo dispuestas para que se escriba en ellas de nuevo.

«The formation of *loci* is of the utmost importance, because the same set of *loci* has to be used over and over again to remember different materials. The images that we have placed in them to remember a set of things disappear and are erased when we do not use them again. But *loci* remain in memory and we can use them again by placing another set of images for another set of materials. *Loci* are like wax tablets that remain after the writing on them has been erased, still available to be written on again.» [Yates, *Memoria*, 24]

* A notebook in the freezer

One of the interviewees used a Rocket Book notebook which, like Elfin Book, produces reusable materials whose contents can be erased with heat, by using hot water on specific pages or by putting the entire notebook in the microwave. The information is at risk of being lost if the notebook is exposed to high temperatures for an extended period of time—for example, if one forgets it in the car in the summer sun. In that case, it is necessary to rush to put the notebook in the freezer.

This person, like so many other creative people, chose to use the same type of notebooks over and over again, so that they were familiar and comfortable. In fact, the Memory Palace was not intended for long-term memory. The *loci* were designed to be reused with different information, exchanging the images in them for each other. Perhaps this is how the notebook works, when one keeps the habit of using the same type:* same size, same feel, same weight—a tool one recognises, like the weight of a mechanical balanced pencil in one's hand. One remembers the information and its position on the pages in the current notebook, and goes forgetting the previous ones. These, on visiting them like abandoned Palaces, are recognised in some strokes, while others result surprising and unknown.

As we know, irregularities and heterogeneity favour our memory over the homogeneous and repetitive, so both the notebook and the Palace avoid the symmetrical and create order out of disorder. As we learn from Goldhagen, variation in patterns, textures, colours and shapes generate attention impulses and reinforce memory [PAGE 35]. Also in our notebook it is important to trace “monuments”, symbols of reference for our memory.

Singular es en verdad el arte de este arte invisible de la memoria. Refleja la arquitectura antigua, pero con un espíritu nada clásico, **centra su elección en lugares irregulares y evita los órdenes simétricos**. Está lleno de imágenes humanas de una clase muy par-

«Truly singular is the art of this invisible art of memory. It reflects ancient architecture, but in a non-classical spirit, focusing on irregular places and avoiding symmetrical orders.»

[Yates, Memoria, 34]

And finally, the “memory of things” and the “memory of words” work in the same way in both. At the Palace, the former tries to create an image that represents a whole concept; the latter needs to create an image for each word, the one Quintilian lamented.

cuales es que hay una memoria para **«palabras» [verba]. Se quiere decir que la «memoria de cosas» confecciona imágenes para recordar un argumento, una noción o una «cosa»; por su lado la «memoria de palabras» ha de encontrar imágenes para recordar cada palabra individual.**

«This means that the “memory of things” creates images to remember an argument, a notion or a “thing”; on the other hand, the “memory of words” has to find images to remember each individual word.» [Yates, Memoria, 25]

Precisely in the notebook, a sketch—whether of a plan or a scheme or of the record of a moment—represents in itself a whole idea or instant, whereas to remember quotations or records of data, one must write them word for word, traced as signs on paper. Often, however, we are able to remember the whole quotation only by seeing the lines written in a certain position, in a certain handwriting. We remember writing it down, reinforcing this memory by flipping the same pages over and over again, like rooms in a Palace.

«Cosas» son pues la materia del discurso; «palabras» son el lenguaje del que la materia se viste. ¿Pretendes una memoria artificial

«“Things” are thus the matter of the discourse; “words” are the language with which the matter is clothed.» [Yates, Memoria, 25]

Remembering in pictures

Seeing the print I had pasted of Katherine Hayles next to the information from her YouTube talk, someone asked me about it, surprised and amused that I had printed and pasted an image of her. This is how my memory works, seeing this image reminds me of the intrapersonal (embodied) feeling I got when I saw her speak, dressed in yellow. The time she left between words, how she looked at her notes and how much she didn't, and how she moved; even the tone and accent of her voice. I still remember it perfectly as I write these lines looking at the image. This record, thermo-printed, will fade ten years from now, like my memory of the recorded talk.



[Still from Katherine Hayles - A Theory of the Total Archive, (YT), thermo-printed and scanned]

Finitude in the notebook — The limit as a provider

As we said, the importance of the interconnection between the elements with which we nourish the notebook is the reason why it creates finitude: the dynamic of its connection ends with the pages.

* The poet G. A. Bécquer said that there was a swarm of beings inside his mind waiting to receive a body, and that he feared he would die and that they would haunt him for eternity, condemned not to be. [Bécquer, Rimas, 15].

On 18 October I found myself halfway through the notebook that accompanied this research. I had the feeling that this advance meant something, a call to *make sense*, to take stock of what we have found, a time to give up what may come for what we have.* Trained to look for patterns and to point out the limits of each thing in order to order the whole, we naturally tend towards this kind of impression, which is nothing more than a deception we play on ourselves. Had the notebook been thicker, or larger, this half would have come later —or perhaps I would have covered the surface with more dramatic gestures, with larger writing, had I been confronted with an inviting format. This is the beauty of the physical medium: its limits are our providers. Calvino, too, would have needed to collect notes for longer before setting out to write a book if he had used larger folders. In that case, he might have ended up publishing larger volumes —say 1,079 pages, like David Foster Wallace, for example. But he didn't. Calvino's works fall into other measures: ones that frame his meticulous way of thinking, of calm storytelling, and of using *not-too-big* folders. Calvino's measurements. So too the notebook we choose is in a certain way a measure beyond its physical condition, a volume of our thinking and an arbitrary magnitude of time which, in its closing, is established as an entity in itself.

Ode to a notebook

Like Calvino, I too have my notebook, which helps me to remember a way of thinking, as well as specific, subconscious measures of notes. Like so many others I have encountered over the years in the creative field, I have come to accept that a certain notebook and a certain writing utensil do matter in order not to find barriers between thought and hand. My bookshelves account for the many formats and types of notebooks I have endeavoured to try over the years, including those I have assembled myself, in the conviction that there is no excuse for the perfect tool if one can choose paper, cover and thickness. I have found advantages in forcing myself to use small lined notebooks on occasion, or black paper on which the sign was light rather than shadow.

Nothing, however, has overthrown the preferred, a basic black soft cover notebook with blank pages, 13x21cm, portrait format. Looking back to the most fertile periods, when the richest connections were made between disparate contexts, this notebook was the container at the base of all my thinking. As I start a new one I vividly recall the image of the signs on the first pages of the

previous ones. I remember what worked, and what did not. Its touch is something important, the soft but subtle texture of its cover, which refuses the attention of the fingertips, which wants to go unnoticed without redirecting attention to its weft. Its weight, light yet sufficiently thick. The way it folds to fit into the pockets of clothes that I have often acquired with this format in mind, and its durability even if it twists over and over again on the fibres of its spine. No lines, no numbers, no date or cells. No nothing. And a paper whose slight thickness and semi-transparency only enhances it, and which, —unlike those on the internet who nurture a penchant for notebooks as perfectly measured and planned, clean and precisely coloured work—, I appreciate in its blending of contexts, its way of transferring content from one realm to another.



A discussion with J. Golding

?

What is it about the criticality of touch so important to the creation of knowledge?

Touch affective

intersection tactil page

effective system of knowledge transfer

[extra note now: SENTIMENTAL VALUE (USEFUL FOR MEMORY??)]

different

dimensionatities

of time

What's the attraction of the paper?

calligraphy of a culture

hieroglyphs on buildings – surface and the way

hunchback of Notre Dame

topology of the atmosphere

Enables the click — the sticky cohesion
that's the start

—> creates a very odd map, a
map that can only be created
when the journey starts

the importance of the notebook -> Rothko

Judith Butler —> rehearsing instead of performing

What happens when one relies on a notebook?

Flip through something.

there is
no back

Allowing the background to always come present.

there is
no unfolding

A very specific kind of imagination.

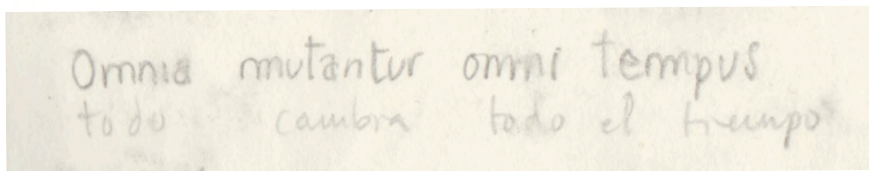
Enables a kind of emergence

Situated in there to retrieve it.

Empathy

The Cut

From Peret to Shemu



Everything changes all the time

«Cuando se mira un río pasar, no se ve el agua»

«When watching a river go by, one doesn't see the water»
[Rafael Guillén, as quoted in Montero, Cuerda, 213]

Rovelli explains that time is made of *grains* so small that we perceive it as continuous, but it is not. In the same way that light is made of photons and air is made of molecules, although we perceive them as continuous entities, on its Planck scale—which we understand as the *minimum* interval of time and in which quantum temporal effects manifest themselves—time is made of grains of 10^{-44} of a second, «a hundred millionth of a billionth of a billionth of a billionth of a billionth of a billionth of a billionth of a second». This means that there is no temporal continuity; time is the *jump* from one grain to another [Rovelli, *Tiempo*, 66].

Let us imagine that the apparent continuity of the development of an idea is

lo «continuo» hayan sido en vano. La continuidad es solo una técnica matemática para aproximarse a cosas de grano muy fino. El mundo es sutilmente discreto, es discontinuo.

«Continuity is just a mathematical technique to approximate very fine-grained things. The world is subtly discrete, it is discontinuous.» [Rovelli, *Tiempo*, 66]

composed of a myriad of grains, reacting to each other, each with its superposition of states. These possibilities are made up of an immense number of tiny variables which, like quantum time on its Planck scale, we are unable to perceive. Only by fixing one of the states in a concrete form can we quantify it, understand this idea as a thing that is in a concrete space and time, and start from

La idea de que el tiempo puede ser granular, de que existen intervalos mínimos de tiempo, no es nueva. La defendió ya en el siglo VII de nuestra era Isidoro de Sevilla en sus *Etimologías*, y en el siglo siguiente Beda el Venerable en una

«The idea that time can be granular, that there are minimum intervals of time, is not new. It was advocated as early as the 7th century AD by Isidoro of Seville in his *Etymologies*».

Which is why Rovelli says «abstract thinking can anticipate in several centuries hypotheses that later find utility - or confirmation in scientific research» [Rovelli, *Tiempo*, 66].

*Vivir es detenerse con el pie levantado,
es perder un peldaño, es ganar un segundo.
Cuando se mira un río pasar, no se ve el agua.
Vivir es ver el agua; detener su relieve.*

«To live is to stop with your foot raised, to lose a step, to gain a second. When watching a river go by, one doesn't see the water. To live is to see the water; to stop its relief.» [Rafael Guillén, as quoted in Montero, Cuerda, 213]

it as a point of reference, a precise support. Just as we arbitrarily measure an hour —today, from 15:00 to 16:00 — and separate it from what we otherwise perceive as the continuum of Time —even though it is not. For example, think of Picasso and Braque's idea of Cubism. Cubism is not a single painting, drawing, or sculpture; no particular work is the culmination of what Cubism is. As a concept, Cubism is understood as a movement in the visual arts and encompasses a period of about ten years depending on different sources, between 1907 and 1917.

This is however an arbitrary division and a simplified definition in order to deal with Cubism as an element in our discourse and as part of other ideas. There is no defining period in which cubism begins or ends, as it can be related to examples from other periods, nor is it, as an idea, limited only to the visual arts, as its characteristics can also be applied to other fields. Even if we take Cubism as a reference and concentrate solely on the plastic arts, and within these on Picasso, and from him solely on his painting, for example, none of the paintings is, as we have said, an absolute container of cubism, not even within his work. Cubism in Picasso's painting is composed of the manifold of his pictures. They are representations of a possibility, a break in the continuum of the development of the idea of Cubism, which could have been realised in an infinite number of different forms. At the same time, Cubism could not have taken shape as an idea had it not been for the production of multiple states of that idea. By taking the infinitude of the idea and trying to fix it in a form we create a *cut*, and the continuum of these *cuts* constitutes the development of the idea, which *mutates* from them. As Montero wrote, by fixing an idea in the first written words of a book, we eliminate the possibilities of it taking on a myriad of other different forms [PAGE 58]; but, had her not done so, we could not read her words today, nor would they become part of different ideas —to relate to and affect the possibilities of the grains that form other ideas.

the philosopher i told you about is called masaya chiba (千葉雅也) 15:16

動きすぎてはいけない: ジル・ドゥルーズと生成変化の哲学 [Don't Move Too Much: Gilles Deleuze and the Philosophy of Becoming] 15:18

so he's interested in overcoming the common interpretation of deleuze which is about connecting/relating more and more, and he say deleuze actually talks about rupture (cut) too, that the world is composed of connections "as well as" cuts 15:21

the "as well as" and "not too much" (in "don't move too much") are what's important 15:21

and he says to make "becoming" possible, cuts are as important as the connections 15:22

Screenshot from conversation in WhatsApp, 06/05/2022

In 2013 the Japanese philosopher Masaya Chiba published his work 『動きすぎてはいけない-ジル・ドゥルーズと生成変化の哲学』 (*Don't Move Too Much: Gilles Deleuze and the Philosophy of Becoming*), in which he similarly discusses the importance Deleuze put on cuts (*coupure*) in contrast to the continuum of becoming (*devenir*) that is more often highlighted in relation to this thinking. Reality is made both of continuous connections and of cuts in these connections, both being necessary. He introduced the idea of the cut as an *a-significant* one, a stopping of the continuum that occurs for reasons unrelated to the meaning of something, for contin-

gent causes, forcing it to continue developing in different directions. To illustrate this we can think of a plant from which we cut a stem, which we plant in

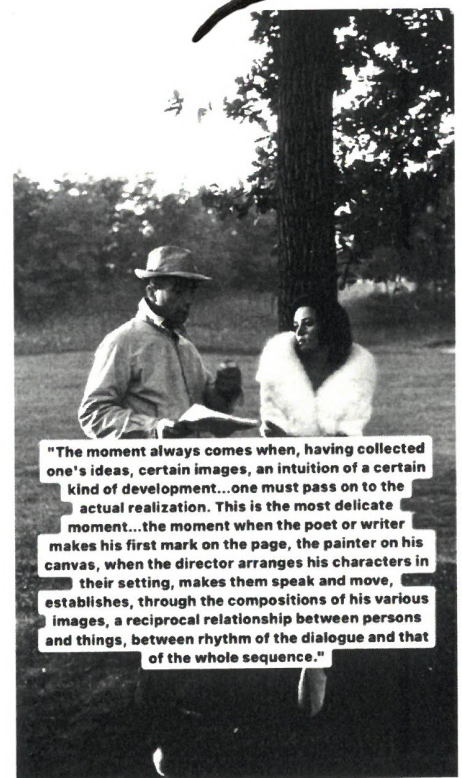
another pot. Or, following Picasso's example, a painting that ended up as it is today for reasons tangential to its development —as if Pablo needed to finish that work so that it could take part in an exhibition whose celebration was pressing, or finish it so that he could start work on another. Chiba speaks of contingencies such as tiredness or laziness, of arbitrariness such as not getting to read a particular publication or text message, which would have triggered a series of events different from those that occurred without that information [Chiba, *Don't*, 37]. Reality is the result of that concatenation of such chance decisions that fixes in concrete forms some ideas and not others. Reality occurs as *interference*. And in this continuum of ramifications between which we select and cut to go on branching, we can say that we do not *assemble* ideas, we *grow* them, by collapsing indeterminate states, while nevertheless not having full control, as things interact also between themselves.

The cut establishes a moment, a state in the process. This allows a way to develop *autrement*, in another way. This is why it makes no sense to look for conclusions in the individual works of artists; they are a concatenation of moments in a continuous search, composed of multiple interests and suggestions —as Díaz Ereño wrote about Oteiza's library, [PAGE 80]— and they take shape in relation to contingent needs and circumstances. The production is made up of significant and a-significant decisions, conscious and involuntary. As in the state of superposition of configurations, «indeterminacy is resolved when one magnitude interacts with anything else», it is a third entity that forces the probability cloud to collapse into a concrete form. [Rovelli, *Tiempo*, 70+71] This is why the literary critic Angelo Guglielmi wondered if Calvino thought that the possible coincided with the existing [PAGE 63], and Michelangelo Antonioni said in interview that the moment of the first mark on paper, after the mental development of certain ideas, was the most delicate one. [Michelangelo Antonioni, "Autobiographical interview" in *Cahiers du Cinema* (1960)]

Finitude and the setting of arbitrary limits

The key to Chiba's work is the «not too much» in the title, which comes from a brief remark Deleuze made in an interview («One should not move too much, so as not to disturb becoming» [Deleuze, "Anti-Oedipe et Mille plateaux"]). In order to develop and continue *becoming*, things must mutate, interrelating with each other. We know that the grammar that best defines our reality is that of change, and that symbiogenesis is not an isolated event, but that our world is itself *symbiotic* [PAGE 61]. Nonetheless, for two things to be related to each other, affecting each other, they must to some extent have distinct characteristics. In a world of high, complete, absolute entropy, of homogeneous chaos, nothing would move any more, and everything

[Don't Move Too Much: Gilles Deleuze and the Philosophy of Becoming, Masaya Chiba]



[Michelangelo Antonioni, nitch.com]

* Hermann Hesse is credited with saying «It is not our purpose to become each other; it is to recognise each other, to learn to see the other and honor him for what he is».

**«I'll tell you a secret. Something they don't teach you in your temple. The Gods envy us. They envy us because we're mortal, because any moment might be our last. Everything is more beautiful because we're doomed.»
[— Achilles, *Troy* film]

Calvino started thinking about the Charles Eliot Norton Lectures as soon as they were proposed in 1984. He stood before the vast range of possibilities open to him and he worried, believing as he did in the importance of constraints, until the day he settled on a scheme to organize the lectures; after that, he devoted most of his time to their preparation. From the first of Janu-

[Esther Calvino, as in Calvino, *Six Memos*, preliminary note]

would be the same. For a connection to happen between two things, a distinction must exist between them, contrast, and for that finitude is necessary; the boundary that separates one thing from another, that keeps them diverse. Chi-ba says move, connect with things, but *not too much*. The cut is also important; to connect with the other, there must be a separation*. In this sense, indifference is crucial, so as not to become one another. These differences are also those that, from ideas or similar inputs, produce completely different works in different authors. As we say, the actor will find a different spider's web structure depending on what their particular interest is, starting from the same initial thread [PAGE 86]. Even if we start from the same particle, the connections we make from our individual experience lead those particles to coalesce in dissimilar ways. As human beings we have finitude, we are finite,** and we work within and from this finitude, which is both limit and tool. This thesis is also a product of finitude, of consciously defined cuts and of cuts produced by circumstances.

mo. Rareza en lo arbitrario de quien establece sus límites ahí donde no existen límites naturales. Maravilla por el sentimiento de comple-

«Strangeness in the arbitrariness of those who set their limits where there are no natural boundaries.»
[Calasso, *Biblioteca*, 29]

«There is an acquisition of knowledge in that arbitrariness», Calasso writes about the collector who defines the limits of his collection depending solely on the will of his whim [Calasso, *Biblioteca*, 29]. One can establish arbitrary limits —«a painting is not finished, it is abandoned», said the painter Bonifacio Alfonso [Alfonso, *Cicatriz*, 30:00]— but, as when we talk in design about defining those solutions that are not valid, in order to be able to map the island of land

that we can explore [PAGE 77], those limits are necessary. In addition, the material can produce useful a-significant cuts. The example of the notebook that accompanied the research for this thesis is apt: how getting to the centre produced reflection on the material already collected and the beginning of the work of constituting discourse through these particles [PAGE 139]. The notebook acts as a cut, which, being random, gives meaning to the content, forcing it to be contained in a maximum extension, *forcing it to work on itself*. And, in this way, it gives it an outlet, in a concrete form that will be the thesis, and which will in turn be able to connect from its final body with others.

Whether in the notebook that is finished and marks a size and a time, or in the book that constitutes a closed discourse, or in a painting that is the physical

materialisation of an individual moment in the multiple course of a continuous search, the cut is a tool for the development of thought, a trick to move forward on the basis of concrete steps, to leave traces that can be followed later.

También la distinción entre presente, pasado y futuro se vuelve, pues, fluctuante, indeterminada. Al igual que una partícula puede estar difusa en el espacio, del mismo modo puede fluctuar la diferencia entre pasado y futuro: un acontecimiento puede darse a la vez antes y después que otro.

«The distinction between present, past and future also becomes fluctuating, indeterminate. Just as a particle can be diffused in space, so too can the difference between past and future fluctuate: one event can occur both before and after another.» [Rovelli, *Tiempo*, 69]

The cut is also uncertain in some ways, and indeterminate. When does an idea begin? If we take an investigation like this one, and we are confronted with the question of how long we have been working on it, we require a cut in the continuum of our interests, to make sense of it and to quantify it, a cut that makes that time and space manageable in order to better understand each other. In this case, we could choose as a beginning the date of the start of the notebook, when we started to collect inputs in it as particles to work with later. However, these elements were collected on many occasions because, in contact with them, they were linked to previous knowledge of similar interests, readings and notes from months, or years, or decades before. Much of what the notebook collected is there because it made sense within a framework in which we were already moving. If a concept that we registered at the time out of an instinctive interest but for no particular reason, makes sense and joins those we handle today, attracting with a certain magnetism the work of authors we read five years ago, when would we say that the search that has given shape to this project really began once we closed it? Today or five years ago?

Ideas occur as events, while their constituent parts can occur *both before and after* each other. As Rovelli writes, absence alone cannot create pain for us; something has to have been there before for absence to hurt. It is affection that causes us pain, when *it is not there* [Rovelli, *Tiempo*, 92]. We now turn to the second part of Anaximander's quote: «Things do justice to one another, following the order of time» —which is not linear.

Las cosas se transforman una en otra según necesidad
y se hacen mutuamente justicia según el orden del tiempo.

[Anaximander, as quoted in Rovelli, *Tiempo*, 18].

The Cut

From Wikipedia, the free encyclopedia

The Cut may refer to:

Media [edit]

- *The Cut*, a 2011 novel by American author [George Pelecanos](#)
- *The Cut (website)*, a website by *New York* magazine
- *The Cut (magazine)*, a bi-monthly New Zealand golf magazine
- *The Cut (play)*, a 2006 theatre play by Mark Ravenhill

Television [edit]

- *The Cut (1998 TV series)*, a 1998 MTV talent series hosted by TLC member Lisa "Left Eye" Lopes
- *The Cut (2005 TV series)*, a television reality show for world class
- *The Cut (Australian TV series)*, an Australian drama television se
- *The Cut (British TV series)*, a BBC television teen drama

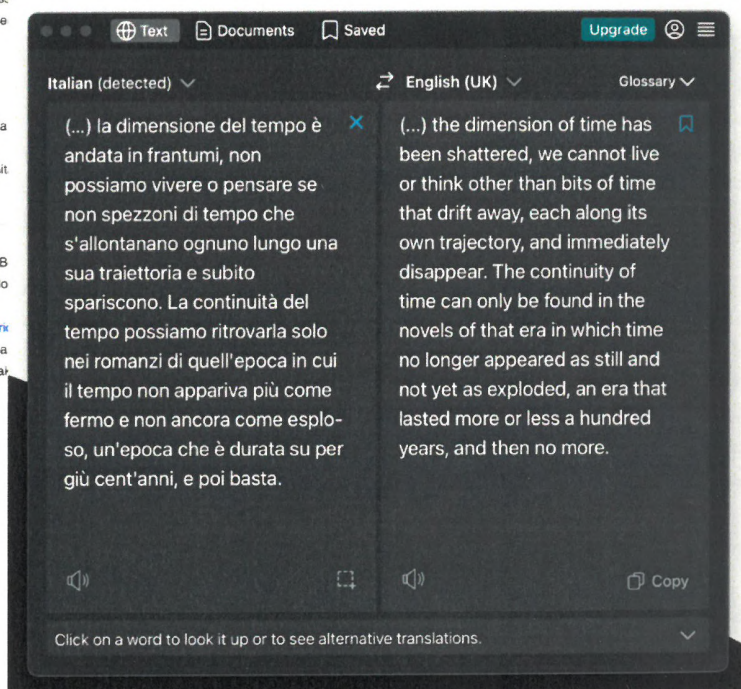
Film [edit]

- *The Cut (2007 film)*, a South Korean horror film
- *The Cut (2014 drama film)*, an internationally co-produced drama
- *The Cut (2014 short film)*, a short film
- *The Cut (2017 film)*, a Kenyan film directed by Peter Wangugi Git

Places [edit]

- *The Cut (Michigan)*, a river in Roscommon County, Michigan
- *The Cut, Berkshire*, a river in England that rises in North Ascot, B
- *The Cut, London*, a street in London which runs between Waterloo
- *The Cut (theatre)*, a theatre in the Suffolk town of Halesworth
- The Cut, an 1834 bridge built in the Northern Irish town of [Banbr](#)
- *Maryland House of Correction* (also "The Cut"), a Maryland Depa
- *Montlake Cut* (also "The Cut"), the easternmost section of the La

Results of term "The Cut", [[wikipedia.org](https://www.wikipedia.org)]



[Calvino, Viaggiatore, 08-09] Capture of translation from DeepL App

Growing a book

A container that embodies the research

El libro, como la cuchara, pertenece a esa clase de objetos que son inventados de una vez para siempre —en tiempos muy antiguos o quizás no tanto—. Capaces de innumerables variaciones, pero dentro de un mismo gesto: extraer una pequeña cantidad de líquido, para la cuchara; leer un texto, incluso largo, sosteniéndolo con las manos, hojeándolo y desplazando con facilidad la atención en su interior. El rollo era

«The book, like the spoon, belongs to that class of objects that are invented once and for all—in ancient times, or perhaps not so ancient. Capable of innumerable variations, but within the same gesture: extracting a small quantity of liquid, for the spoon; reading a text, even a long one, holding it in one's hands, leafing through it and easily shifting one's attention inside it.» [Calasso, Biblioteca,

17]

The book, not a vehicle for content, but a tool for thought —and why its form matters

Speaking of the influence that the work of physicists John Wheeler and Bryce DeWitt had had on his career, Rovelli wrote that, as humans, we are this network of encounters and exchanges, and that characteristically «we do not need to be in the same place or at the same time for them to occur» [Rovelli, *Tiempo*, 93-94]. The book is an instrument of thought, its main function creating the exchange, to transfer ideas from one being to another, provided they share language or signs, across time and space. As Carl Sagan wrote and we already quoted in our article *Book designing in the age of the loam*, «nothing less than magic» [Sagan, as quoted in Gracia et al., "Book designing", 327]. The way of transferring them, however, is based on its physical form, which has many other functions in itself: among others, to contain a specific discourse from beginning to end, in a definitive record that speaks of a particular *momentum* and tells of its time as much as of its content, made to last and remain as a record of an ideology and an intention in most cases with names and surnames—including and depending on the era editors, contributors, translators, sponsors, designers and printers, who are also important in the context of the book, or,

me realize books are made for the future. The unchangeable or frozen information is the key to understanding the past and the future.

[Boom, Boom, 30]

* In the absence of a more in-depth investigation of the thousands of applications available, this observation is based on experience with some of the most widely used applications. Adobe Acrobat allows the same document to be opened in different windows via a secondary function in the top menu, while Preview on macOS or Books App do not allow the same document to be opened twice. Also Acrobat takes the user to the same window of the already opened document when they try to open it a second time directly.

failing that, a lack of these which is itself a significant sign. The scroll had the same functions, only in a less convenient and less durable form. The codex, eleven centuries before Gutenberg, found the body of paper and wood that best suited our physiognomy and our gestures. And today, after seventeen centuries, we consider the possible substitution of the book by a medium in a totally different form because we forget its intrinsic values and because we ignore «an elementary fact: our repertoire of gestures is limited» [Calasso, Biblioteca, 17]. But not only: in addition to our ergonomics, the codex made a leap in adapting to our way of thinking, allowing us to compare, as the acclaimed book designer Irma Boom points out, data from the beginning and the end of the volume, something that the scroll format did not allow [Boom, Boom, 39]. This is relevant because it refers to our way of thinking, and the actions we generate around knowledge as matter. For us, a discourse comes naturally to be compared to what we know from experience, to what is affirmed by others, and to the discourse itself for consistency. We navigate the content of a book and refer it to itself and to its exterior, once again jumping time and space. Today, the bulk of the most widespread digital document reading applications do not consider this possibility, some do not even allow the opening of the same document in two different windows; they are made to offer the content, but not to think it as a book allows it*. The function of opening different pages of the same document side by side for comparison would be easily integrated in these interfaces. The fact that it is not offered as a direct function or is not present at all, despite decades of development, shows the difference between the goals of these two formats, which are diverse, and begs the question: who is thinking the tool, how, and for whom?

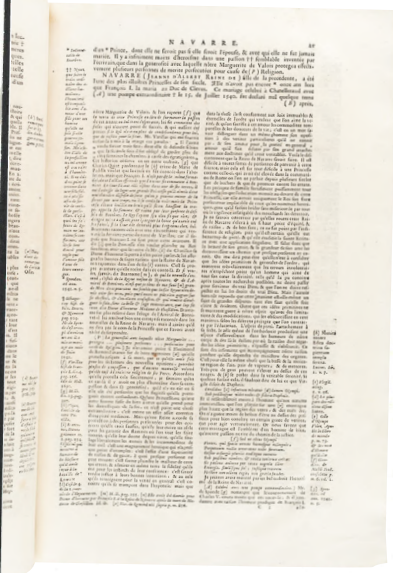
Returning to the topic of the book as container of one discourse in a definitive form: to understand the intentions of authors, the form of the book itself can be essential, its design. This not only affects the transmission and reception of the discourse, but also has the capacity to add new layers of meaning.

«The first edition of a book is not a (sic) secondary part of a work. It is an aid to understanding it. A physical aid: tactile and, above all, visual. Irreplaceable.» [Calasso, Biblioteca, 24]

Dictionnaire de Pierre Bayle,
entry: Navarre
[livre-rare-book.com]

La primera edición de un libro no es una parte no secundaria de una obra. Es una ayuda para comprenderla. Ayuda física: táctil y, ante todo, visual. Insustituible. El bibliófilo que no

To exemplify this claim, Calasso uses Pierre Bayle's *Dictionnaire historique et critique*, and points to its use of three distinct levels of information. The dictionary entries, which are intended to be the main body of the text, are sometimes barely two lines, while the notes are piled up in columns of smaller font size all around, in what is beautifully described as a «patrol of insurgents intent on invading the whole territory» [Calasso, Biblioteca, 26]. The third level is the bibliographical notes, presented in the margins. Calasso speaks of the text, referring to the constituent entries of the dictionary, as a mere formality, and of



Bayle as a rebel who guides the reader through a jumble of notes that serve as a tool to extend beyond, far beyond, the formality of the entries. These notes function as synaptic pathways in Bayle's mind, tentacles extending from the original incipit to diverse references.

ferencias bibliográficas. Enseguida se entiende que la esencia del *Dictionnaire*, sus comentarios maliciosos, su atrevimiento y sus motivos secretos se encuentran en las notas. Esa varie-

«It is immediately clear that the essence of the *Dictionnaire*, its mischievous comments, its boldness and its secret motives are to be found in the notes.» [Calasso, Biblioteca, 27]



Contemporary editions of the *Dictionnaire*, which may seem as suitable as any other for conveying and receiving the content of the work, nevertheless lose this «visual relationship», diminishing the size of the sheet of paper and accumulating notes across too many pages.

En esa relación está el quid de la cuestión.

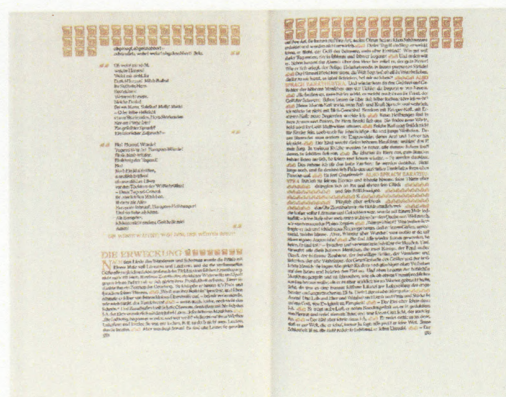
«This relationship is the crux of the matter.» [Calasso, Biblioteca, 27]

In addition to the example of the *Dictionnaire*, two other works are named in Calasso's book in relation to another matter, the *Upanishads des Veda* designed by Peter Behrens and Henry van de Velde's *Also sprach Zarathustra*. Calasso names the boldness of the design and the value of the materials used, both characteristics of an era of splendid publishing production in Germany between 1900 and 1914. This brings time and space, the date and place of a work's creation, back into our question as consubstantial aspects of its form. Once again, a work is a combination of significant and a-significant decisions concerning its existence in a connected reality [PAGE 144].

* «This typographical variety reduces its insolence and audacity, if one thinks that the work belongs to the time when the maxim *larvatus prodeo* was observed», adds Calasso, a comment to which we return later. [Calasso, Biblioteca, 27]



If this relationship between content <> container is understood as an intrinsic part of a book insofar as conveyor of thought, measures must be taken to let the content design the body that the book should have. This is practised in many ways and at different levels, some more extreme than others, depending on the value to be given to the form and the degree to which the reader's physical use of the volume is to be encouraged. How can then the form embody the content?



Also sprach Zarathustra diseñado por Henry van de Velde,
[kettererkunst.de]

How form can *embody* content

«Our experiments, which are further detailed in our design essay immediately following the catalogue, first materialised in a prototype of paper, metal and magnetic sheets. It was to be an ode to the very nature of the Data Loam project, a book without constraints, a free and yet rigorous tome, that would entice the reader to engage playfully with its content. Our goal was to give away control, to let the data entwined within the books pages become its own entity, its own agent.»

[— Gallo et al., "Publication Prototype", 321]

We think of the journal as an ever-growing, organism-like archive of mutating meanings that extends over time and (media)-space. With each issue, new encounters are created and the net of correlations between different articles of the journal expands. A pond whose integrity varies with every drop added to it, an intertwined web of tentacles communicating with each other.

The prototype that is [was] on display can be seen as a procedural form of the applied methodology from the Radical Matter Journal, its content being the messy, sometimes incoherent, process of how this [that] very exhibition came to pass, told through the notes, sketches and scribbles of the individuals who created the exhibition in the process of producing the works that compose[d] it.

Within the context of the exhibition the prototype is [was] presented in its playful form, a movement frozen in time, while retaining a format that visitors can take away. The continuous pages overlapping others, their content divided into two layers, which reads as complete when being together, but allows it to be interwoven in different arrangements.

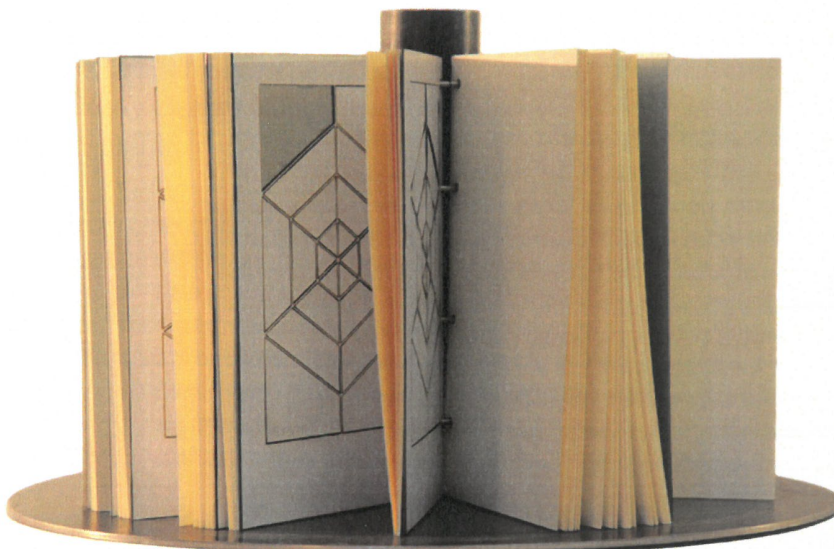


109

[Gracia et al.,
"Radical ⇌ Matter Journal [Prototype]", 109]

Faced with a task such as the design of a book, we designers tend to start the conceptualisation process within pre-established limits, which, however, are not necessarily prescriptive, but self-imposed. This is an unfortunate and all too common consequence of our work in the commercial market. If we think about De Bono's Lateral Thinking [PAGE 30] and the reinforced synaptic connections we talked about on [PAGE 27], what we are doing is letting our ideation process start only after the original input has linked up with some of the most common synaptic connections. For example, we quickly start worrying about page size, margins and fonts or paper colours; meanwhile, we take for granted that a book has to have paper pages, cover and table of contents, and a number of other aspects that we relate to the format of the book. Sometimes, however, these aspects are no more than assumptions that do not allow the book to play within its own definition, in ways that are more than valid.

In a very fruitful methodology for bridging these constrictions, my colleagues and I had the luxury in 2019 of beginning the process of devising a book from a much more open and playful position than usual. When we were invited to design the book that would contain the three years of research from the *Data Loam: Sometimes Hard, Usually Soft. The Future of Knowledge Systems* project (Johnny Golding, Martin Reinhart, Mattia Paganelli), the project was still only halfway through its journey and its contents were uncertain. We began the design process by trying to imagine, without the constraints of print, the ideal book form that would embody the concepts at the core of the project, which addressed questions of interconnectedness of narratives, non-linearity of discourse and user agency in knowledge systems. How to integrate interaction into a rigid medium such as the printed page?



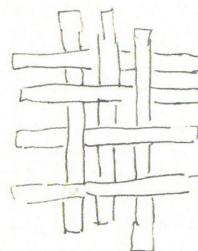
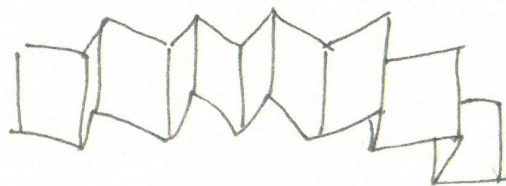
(Data Loam) Publication Prototype

We gave shape to this quest in a prototype of that ideal book, a circular format with no beginning and no end made of sheets of paper, metal and magnetic material. This disruptive start to the idea of the classic book broadened our perception of the format and was key to adapting the project to what would later become its printed version. The process of translating the prototype into the printed book was covered in our essay *Book designing in the age of the loam*, mentioned above.

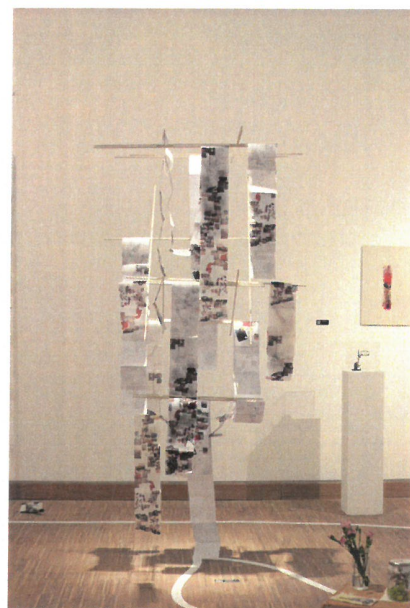
Continuing with this procedural model, Maximilian Gallo and I also developed for Golding and Reinhart the format of the *radical matter*, *International Journal in Contemporary Art, Philosophy and Wild Science* on the basis of another prototype, which again sought to embody the ideas behind their *radical matter* research project. Focusing on their concepts of content cohesion and the emergence of meanings and relationships arising from these encounters, we devised a format in which the content would be collected in multiple strips of pleated paper or individual *leporellos*, which the reader could either read held in their hands like a conventional double-page magazine, or spread out and interlock with each other, facing content between *leporellos* at will—including those from different volumes of the journal. This format was first developed in the prototype exhibited in June 2022 in Vienna together with the students of the Art&Science department of the University of Applied Arts—whose notes and sketches formed the content of the exhibited prototype magazine—and then adapted for volume #00 of the journal, with the various essays and artworks generated by the project, and which was very well received.

Neither of these two examples would have reached the final publication format if the process had not started from this playful methodology of ideation, centred on the abstract concepts of the projects, rather than from the established bases for the book or journal formats—especially considering that both cases concern scientific publications. Like all design work, this is a game of compromises, very much focused, however, on making perennial norms more flexible. Designers with this attitude are the friends of philosophers or artists in the process of publishing, and the bane of their publishers' production editors. But, as we know from Calasso and the *Dictionnaire*, the physical form of a publication «is not a secondary part of the work. It is an aid to understanding it».

The body of the book containing the research of which this thesis is a part not only owes its form to its content and concepts, but has its origins in these previous interests and research, in other books.



entanglement

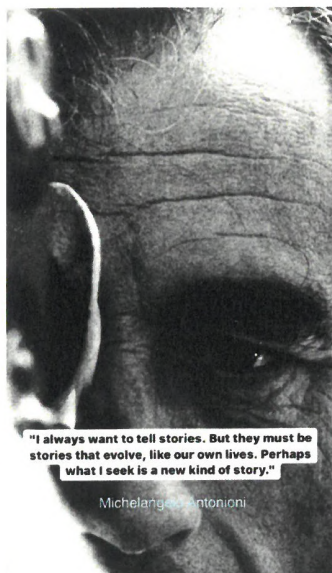


Radical Matter Magazine Prototype, exhibition view at Künstlerhaus Wien

The original book is the Incunable

Eventually, the folds were cut into sheets, or 'leaves', and bound together along one edge. The bound pages were protected by stiff covers, usually of wood enclosed with leather. Codex is Latin for a 'block of wood': the Latin *liber*, the root of 'library', and the German Buch, the source of 'book', both refer to wood.

[Room, Boom, 40]



[Michelangelo Antonioni, nitch.com]

A book open for growth

As in the examples formerly presented, we will speak here of two bodies. One is the open-format book that must contain the constantly developing research, a growing book. If we are to find a name for it—although the book cannot have one, given that its identity is constantly changing—for the purposes of clarity I think tree-book is appropriate. The second will be the finite format in which part of this research is materialised to be communicated externally, The Cut. This second is the printed and bound format of the master's thesis, a limited discourse contained in a finite form.

First we will talk about the tree-book. The research that gives rise to this thesis is concerned with the figured form of ideas and the way in which they are generated, based on associations between elements in constant inclusion, and thus continually mutating. Moreover, an idea is something indefinite, composed of dynamic relations and states of superposition [PAGE 56]. We are therefore talking about an entity that cannot be contained in a concrete discourse because it is constantly evolving, and whose very elements change in the interaction of one with another. What characteristics would a book need to have in order to contain a continuously growing research? This is a question about order, time and limits. How can a book embody the non-linearity of the cognitive process of an idea and, above all, how can it emphasise the meanings that, not being directly represented, are present in the space between elements?

For such a book only guidelines can be established; guidelines for the beginning of a book whose system is intended to be left to metabolise with the needs of the content. That is, the current format is not the final one either. That means to *grow a book*, to have the luxury of not delimiting a premature system that constrains the possibilities.

Non-linear thinking

First, we know that ideas link elements regardless of the distance from their origin and regardless of the time when we first come to them. Moreover, the latest elements added to our—shall we say—network of connections of what an idea is, react with the already existing elements and change their formulation. That is, as Rovelli writes about time, in the formulation of ideas, «(...) one event can occur both before and after another» [Rovelli, Time, 69]. As it happens in the mind, it must happen in the tree-book. Concepts are linked with others that have been discovered before but also with those that will be discovered later, and there is no linearity of reading because the themes nourish each other. This happens, for example, when a film director uses certain objects repeatedly to signify abstract concepts. One may only see one film after another, but after having seen ten, one will have understood meanings of those ob-

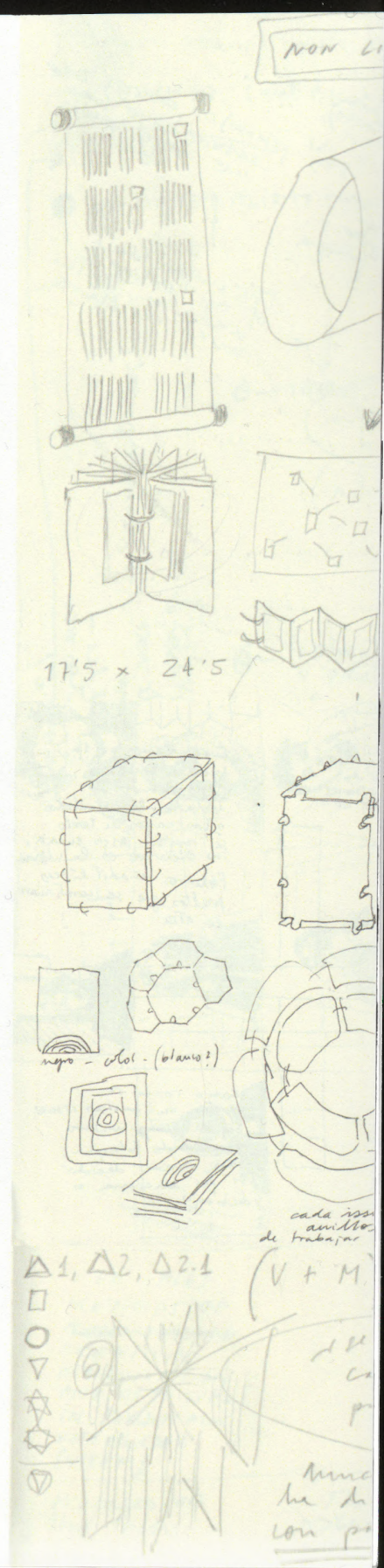
It does not have a sense it has a cover (painful as designer to give it up but).

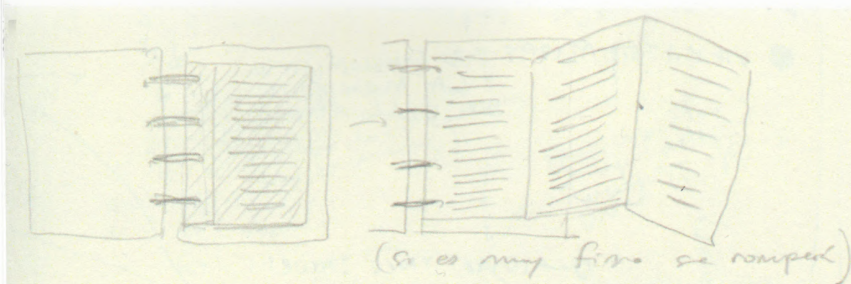
jects that will change one's perception of the first films one saw, if one sees them a second time.

The format of such a book should be circular, in which the chapters can begin to be read in any order. If we think of the layout in facing pages, which have two sides each, the beginning of a topic should always be on the right-hand side, so that one topic extracted does not take with it the B side of another. This of course has its limitations too—but, as we have said before, design is a game of compromises. To contain these additions in a joint but circular order, metal rings are chosen, without being held in place by solid covers, to keep the order open.

> Problem: a narrative discourse would be broken (interrupted).

Cross-references are also necessary, as in an encyclopaedia or Wikipedia article, so that when one chapter needs to build on knowledge introduced in another, the reader has access to it if they have not yet read it. The cross-references therefore take a simple form, two square brackets with the page number in a lighter colour than the base text, so that it can be read when the text is printed and has no hyperlinks, as follows: [PAGE XYZ]. In this case, these references have been kept to a minimum so as not to interrupt the argumentation of the thesis too much, but the possibility of adding multiple more, perhaps in a note format external to the body of the text, will be explored in due course. It is also necessary that the book does not contain terms relating to time when referring to itself. It is not possible to use classical expressions such as "as we have said before" or "as we have seen before", since we do not know the reader's journey. Instead, expressions such as "as we see" or "as we say" are used. Page numbers are necessary, but this need not worry us because we can imitate Luhmann's system: if we find ourselves needing to add a page between 23 and 24 later, we will call it 23b, and so on. It is enough that the cross-references have a number to adhere to. This also speaks to how a discourse is formed for its final body: the discourses of printed books were not originally created in the order of their pages either, but by inserting and deleting content between existing pages.

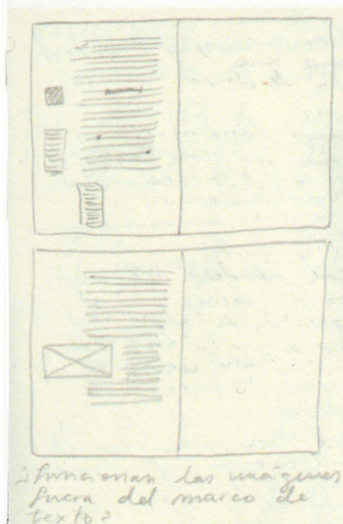




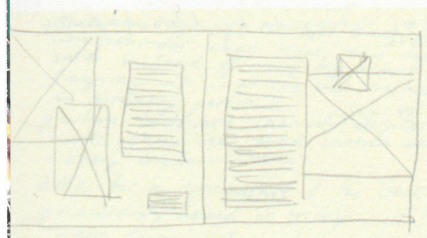
Accumulation and association

Like its discourse, the format of the book springs from the same praxis of accumulation and association. Several levels of content must be allowed, a main one for the body of the text, and space for it to be interrupted to some

extent by elements that act as chemical reactions with it, expanding or changing its meaning, opening up new paths. For this it is essential to have wide margins, a space that will not only contain margin notes and content of secondary levels to the main discourse, but will allow for the practice of marginalia, for as we have said a book is a thinking tool, and space must be given to later additions. This is something we also took very much into account in *Data Loam's* book, where the margins are generous. A space where the unsaid has not yet been excluded, where the reader is invited to make their own associations and inclusions. This is intended to be the atlas of the Great Kahn, in which the cities not yet inscribed, not yet known, also have a place [PAGE 73].

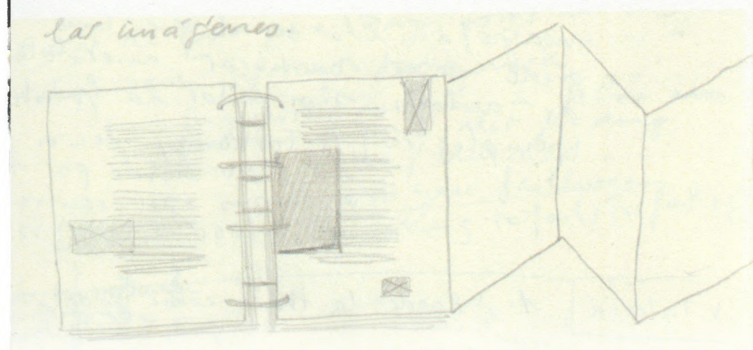


It is considered practising accumulation in disorderly order, where the basic text does not have a characteristic location and each page superimposes contents in a different way. It is decided, however, to keep the two columns of basic text in the same location on each page, affixed as in classical order to the central spine of the book, and leaving wide margins on the outer edges. This system mimics the use of the notebook, in which the titles are inscribed on the left margin, and the basic text is developed in a column attached to the spine, while leaving a margin on the outer side for extra annotations; a system that imitates the creation of itself.

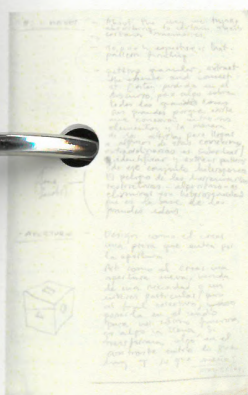


It shows that white space and white intervals are more important in layouts than black printing.
FREDERICK KIESLER, Vienna, 1923

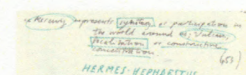
[Kiesler, *Contemporary*, 154]



In the accumulation of diverse inputs, it is important to define the hierarchical relationship between them. As in the notebook, the very necessary inputs to the main discourse are added in its column, interrupting it in the order of development of the argument—scanned quotations that are part of the main discourse, for example, are inserted between paragraphs in this column.



Registrar el chispazo



Nuestra mente vuela como Hermes y con lo que recoge, trabaja después con

Calvino piensa que la primera vez que se utilizó el caballo como metáfora para hablar de la mente en marcha fue en el *Saggiatore* (El probador) de Galileo Galilei. [Calvino, *Six Memos*, p.42] Este símbolo, cuyo origen desconocemos pero que hoy nos resulta muy común y natural, me parece tras el proceso de esta tesis algo inadecuado. Al caballo que corre, indomable y veloz pero en gran medida previsible, yo lo sustituiré por el vuelo de un pájaro, tal vez el vuelo de

Speed and conciseness of style please us because they present the mind with a rush of ideas that are simultaneous or that follow each other so quickly they seem simultaneous, and set the mind afloat on such an abundance of ideas that we experience an emotional freedom that makes it impossible to resist.

⁷ Traducción del libro de John, "Historie de nostre image, Calvins decile v'inghting'ingz lezeu eungeles from reading del' books shal we haue to classify from a rigorously scientific point of view" (Crawford, *Six Minutes*, p.32). De otro modo, hebreo: *haishah* Calvins *nahtah* *nahtah* la importancia de las imágenes, *Calvins* (Biblicismo, 1727) y *la imagen* [con un subcapítulo 6.2.4 *Accidental Numbity* (Etn, Thesis, p.34)]. Una vez más la *heterogeneidad* y la *lugaridad* de acuerdo a *la* *lugaridad* *no* *procedimientos* *de* *la* *lugaridad* *de* *la* *lugaridad*.

Quotations are sometimes added in their original body, as mentioned above, scanned from books or captured from the digital formats from which they arrived at the idea cluster. This speaks again to the process of idea generation, the multiple origins of the inputs that form them, and the importance of the original form, including the manual annotations and underlining made on them during reading. It also argues against homogeneity and increases variation on the page, which as we see with Goldhagen and Yates is a mnemonic resource [PAGE 35 AND PAGE 98 RESPECTIVELY]. As well as text, they function as images, landmarks

Example of a margin note in the greenish tone of annotations in the notebook



so they often become a focal point for subtenants. With the result that these spaces become localities of very specific overlapping practices. This collective working is treated by the experts as a community exchange. Everyone learns from each other and is confronted with foreign problems. Through the collective exchange, it is easier to find solutions for someone else's problems. The "project blindness" that a single individual might have is more likely to be solved by outsiders. In such collective workspaces, it is likely to find uncommon solutions. Experts often wander through the work-

[Schuran, "Ecology", 25]

for our memory, like monuments in grand avenues. The functionality of scanned quotations as mnemonic aids is proven in the use of index cards, where the original scans allow us to recognise a quotation at a glance and remember it more effectively than if they were all written in the same font [PAGE 110]. Occasionally, though very rarely, a quotation is presented together with a reduced portion of the text that preceded or succeeded it, since thanks to the original underlining in the image it is easy to identify which part of the text is the one that is being pointed out, and the rest broadens the reader's possibilities for different associations and gives new contexts.

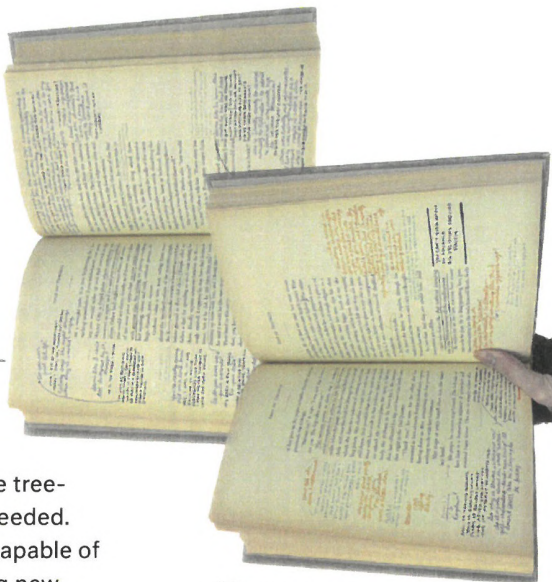
Language and idioms are also considered as particles of this accumulation, which, like images and quotations, also affect the idea. Issues such as the agency of translation in discourse, the value of the exact word or the chemistry between words are being taken into account and will be developed in future research. This may in the future affect the way in which the base discourse is written—for example by showing the collection of synonyms that in the process of writing I sometimes accumulate next to each other in brackets, in the absence of choosing one of them for the final text. In the present form this has been omitted because the chapters on language are not yet developed.

Finally, among the references there are some that introduce the context of the creation of the text in it, which speak of specific times or places. Quotes relevant to the research provided by the thesis of my fellow Master's students, snapshots of chat conversations on the topics under investigation, or mentions of conversations with people in the environment. These introduce the context as the third and final level of an investigation—they represent the environment as a source of form, and the effect that the variety of specialisations of the members of this master's degree has on the knowledge generated. Also in the search for the tone of the text, context is a factor. Following the example of Rovelli or Calasso, who mix information with anecdotes, an attempt is made to find a tone between narrative and essay. I am interested in the tone of prologues: they tend to tell stories that make sense of the content in the author's context.

Nurturing the book

At a certain point the different arguments are developed together into a coherent discourse, a necessary action which at the same time helps to give them a unitary identity, but also fixes them in a concrete state, eliminating their other possibilities. These are printed and added to the rings of the tree-book. Other sources found later nourish the book between the pages of the discourse, in the form of complete scans of the pages of the original volumes. Like a binder folder, the book collects from here new notes, ideas to be added, and little by little generates new topics and affects those preceding, pointing out the need to join one to another or

separate sections to a new theme in order to extend them as they grow in thickness—in the manner of Calvino's folders that grew by topics to become books [PAGE 105]. To make this process as trouble-free as possible when adding new pages, the Chicago citation method is useful, as it allows citing in the same line of text without having to add footnote numbers, and thus avoids problems with numbering later on. Other external notes are marked with asterisks (*,**,*), starting from the single asterisk on each page, that can continue to be registered by hand as well. The bibliography is collected on index cards with the title page of the work printed on one side and the bibliographic information on the other, so that they can be rearranged alphabetically when new references are added.



S Book, J.J Abrams and Doug Dorst

Approaching the text as a stranger

After some time has passed since the printed topics were added to the tree-book, they are reread and handwritten annotations are added where needed. This practice speaks of the constantly changing mental space that is capable of approaching a discourse born of itself as if it were external to it, adding new relationships or correcting statements that no longer hold. What does it mean to underline one's own text? To treat one's own book as an external input, to approach it as *another*. Oskar Alegria pointed out this practice in his book on Oteiza's library, which contained 22 different editions of his *Quousque tandem...!* annotated by Oteiza himself in a healthy practice of self-correction. On the cover of one of the copies Oteiza wrote «Ejemplar corregido» (with a j) («corrected exemplar») and then crossed out the word to end with «Ejemplar ~~corregido~~ijiendo» («corrected*ed* exemplar»). Yet another way of talking about the ever-changing idea.

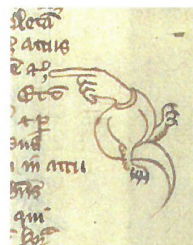
Oteiza que practica también la autonota en su rectificar que es de sabios o en su añadir, que es más de sabios.

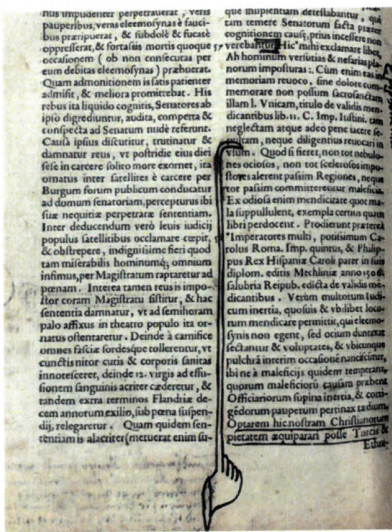
«(...)as a handwritten record of an Oteiza who also practises the autonote in his rectifying, which is for the wise, or in his adding, which is more for the wise.» [Alegria, Oteiza, 47]

como constancia manuscrita de un

Alegria also recalls in his book [Alegria, Oteiza, 28] that now almost forgotten sign of the manicule (from the Latin *maniculum*, small hand) which, before being adapted as a typographic element in printing, was used in the medieval and Renaissance tradition to add notes in the margin or corrections to manuscripts, or to draw the reader's attention to particularly relevant aspects of the text. Sometimes they were added by the author, sometimes by the scribe or copyist. *Nota per manus signum** (Note by hand sign)—the hand that points to the text also points to the hand that traces the note; the reader as an agent in discourse.

* Dictionary of the Royal Spanish Academy (RAE)





Praxis Rerum Criminalium [Riesenfeld Center]

The cut from the growing book

So far we have established the patterns of growth of the tree-book, that which is a representation of the constantly mutating mental space, which absorbs from the environment, reconnects old ideas with each other and is affected by new ones, in which past, present and future are the same thing; a space in which there is no distance and no time. It cannot be contained in a concrete discourse because it is constantly growing. To communicate ideas, however, we find it necessary to subject them to a more precisely measured space, to a measurable form, which can be evaluated from a somewhat finite discourse — even though all discourses are by nature connected to other elements not present in your body. This is The Cut, collapsing the cloud of possibilities into a limited form [PAGE 144]. These limitations, however, grant it a new possibility: to connect in other directions, to be communicated externally outside the personal mental space in order to be supplied with new reactions, and to be fed back in the course of these new directions. The Cut establishes a moment, a state in the ongoing process that is *growing a book*.

We adapt the book that will contain these ideas from the tree-book which, like the *Data Loam* or *radical matter* prototypes, has allowed us to exceed the limits of the conventional form. No longer requiring an open format, The Cut book can be bound, making it more comfortable to read. In the case of the master's thesis that contingencies confront us with, we must choose a theme from among those explored in the research to be the common thread; in this case, this theme will be the physical methods of manipulating content, which manifest the inherent synergies between the particles that form ideas. A talk about a way of creating knowledge that is born out of the use of analogue materials. We then extract from our tree-book the chapters on these different methods, which emerged in the process of researching other topics, scanning them as they are, and which would be to this day:

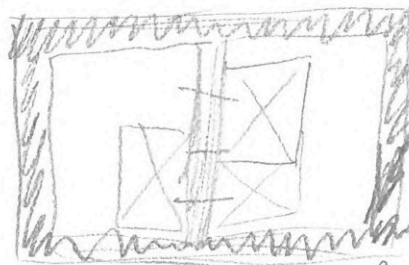
000	M — Punchers
000	M — The Concept Map
000	M — Heat Maps
000	M — Index Cards
000	M — The Notebook

These topics are sufficient in themselves to discuss the methods *per se*, and we include as well the present appendix *Growing a Book*, as it explains the system of formation and containment of all research, which is also a method. To explain the relationship between The Cut and the tree-book that this appendix already discusses, it is considered necessary to also present the chapter on the concept of *The Cut*, and to give context to the topics covered, the foreword

Akhet, Peret, Shemu that names the different sections which encompass the research as a whole, and the chapter that summarises the intentions of the research and the different topics covered, *The research*. Finally, the *Note to the reader* explains the citations in scanned format of the originals and the cross-references—which are the language of the entire tree-book.

All in all, what has been extracted makes up this body:

- 000 — Note to the reader
- 000 Foreword — Akhet, Peret, Shemu
- 000 The research
 - 000 **M** — Punchers
 - 000 **M** — The Concept Map
 - 000 **M** — Heat Maps
 - 000 **M** — Index Cards
 - 000 **M** — The Notebook
- 000 — The Cut
- 000 Apendix — *Growing a book*



Scan de todo el
libro para el
"Cut"

Now, this is the content of the discourse, but to give it the full body of a master's thesis we add the normative *Abstract*, an *Introduction*—which will explain the nature of the work and its form, and warn the reader of the cross-references to ghost pages and their rationale— and a *Bibliography* organised according to convention, rather than the index cards that are the open bibliography of the book tree. The table of contents will reflect this structure, at the same time showing crossed out the rest of the chapters not taken from the tree-book, which are the source of these methods. The difference between scanned and directly printed pages visually differentiates these components.

These *cuts* now have a finite body of their own, and can be shared and receive external comments and annotations that will feed back, in the future, into the mother research from which they emerged.

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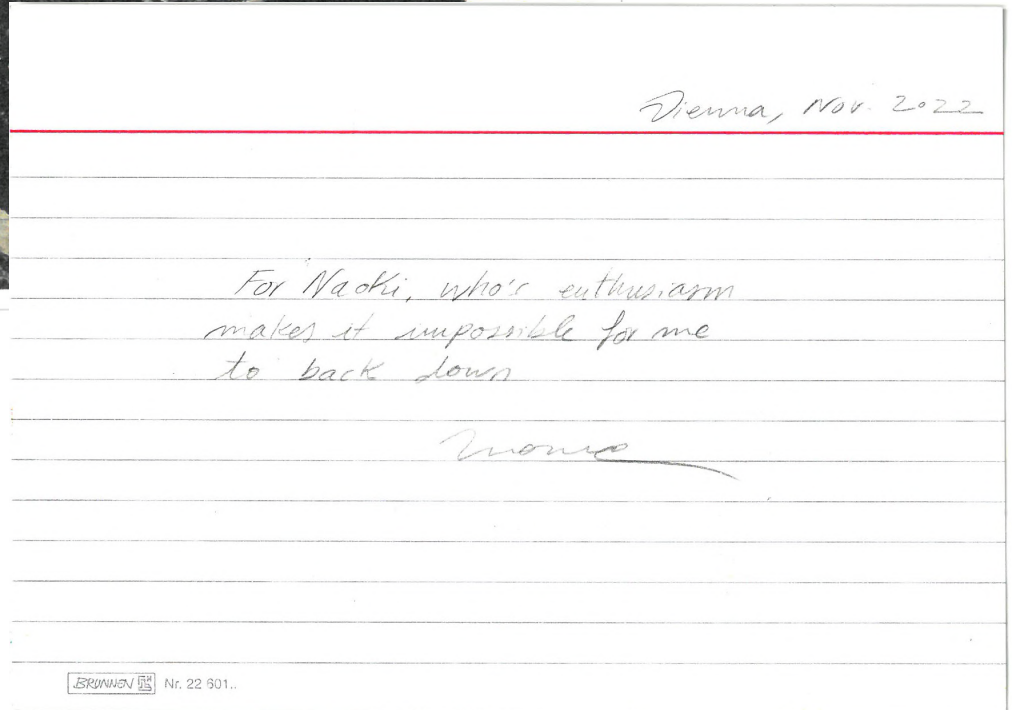
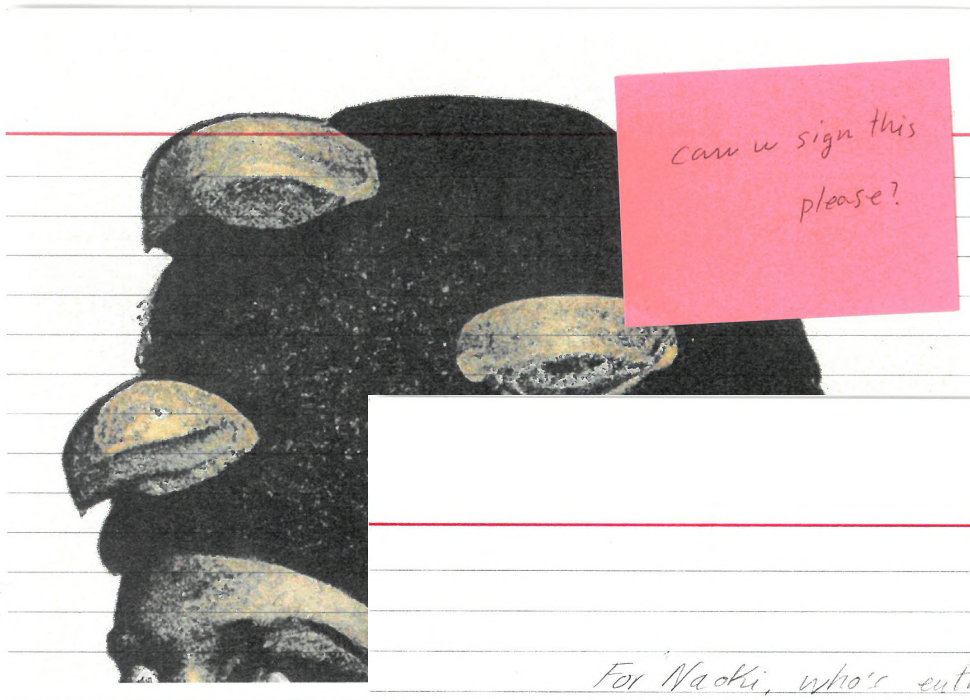
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This thesis is dedicated to Naoki Matsuyama, for reasons that, on reading it, can only be obvious.

I would like to give thanks

To Virgil Widrich and Marthin Reinhart, for letting me in and helping me out.

To my colleagues and friends in the Art&Science department, whose eyes and practices opened up worlds to me, and to all those who, using their diverse mother tongues, helped me in translating what was beyond my reach.

As Rovelli would say: *I am* this network of encounters and exchanges.

To all those I interviewed and who shared their systems with me: the research will continue and those notes will come with.

To Mx, who was the first subject to apply my research to his practice, proving it useful,
and to Mt, who told me I need to be my own client.

To my found brother, who always kept an eye on me, and whose jokes adjusted proportionally to my distress.

To the other two Graces: I leave cause it's not the vibe since you're gone.

To Dn and Lm, who were my home.

And last but not first, to Juan Azpeitia, who taught me to read relationships between all things,
a skill that can undoubtedly be traced back fifteen years to the origin of this thesis.