

There is a closed door at the end of the corridor

Mauricio van der Maesen de Sombreff

December 23, 2024

Contents

preface	4
introduction	5
curiosity	6
neurodivergent	9
Laplace's demon	12
hypervigilance	13
perception	14
decay	15
emulation	16
Wave Function Collapse	17
memory	18

preface

The title for this thesis comes from an early memory. Without an abundance of organized memories, I still maintain a clear mental image of this corridor. It belongs to a first period of separation from reality, a generator of narratives intended to build sense. Building backwards the parameters for a Markov chain to generate the time sequence of my life events.

The title sets up a journey of exploration, with a hidden aspect, and the intention of uncovering it. The story (if there is any) revolves around what is behind the door, why it is closed, and what it means as a memory.

The corridor leading to the closed door is a path of self-discovery and confrontation of personal fears. It implies a setting that is limiting and confined, adding to an atmosphere of tension lived in Uruguay until the restoration of democracy in 1985. The closed door is the focal point of such tension, always present but unreachable. It represents a barrier between protection and isolation, between reality and imagination.

In this context, I explore the themes of curiosity, the fear of the unknown, and a tendency to be constantly drawn toward the off-limits. What is the fear of the dark if not a fear of the unknown? It's a driving force for widening the senses and understanding the environment.

This book is the reflection of my current ongoing introspection, an exploration of the negative space of the memory, and an attempt to confront possible pasts in possible realities. As explored by Roland Barthes in his essay "The death of the author"[Barthes, 1967], it is to be noted that meaning in this thesis arises from intertextual relationships between chapters, not from a self-contained intent.

This book is written in ~~TeX~~ (tug.org) and managed as code.

introduction

```
w = 'w = {}{}{}'; print(w.format(chr(39), w, chr(39)))'; print(w.format(chr(39), w, chr(39)))
```

There is stubbornness in the craft of casting materials through mold making, despite how rewarding it can be. Its whole process makes it hard to allow for later changes. The mold is not the memory of a piece, nor its essence, but it will define its final shape. Is the environment in which we grow and develop ourselves such a kind of mold?

I remember only fragments about my own past, but I've spent the last few years making stronger efforts to understand the ways in which I perceive my own "umwelt", why I react, and what I react to. What shaped this current way of thinking? Without an objective memory of my own history, creating versions of this multidimensional mold in which I've cast my way of perceiving has become an iterative process of re-creation.

```
% recursive alterations allow for a progressive reshaping of perception.  
  
% The quine and implies a connection between software, computer models and a human tendency for self-replicating  
based on our current understanding of reality.
```

The small snippet of code at the start of this page is called a Quine. It is a program that produces its own source code as output, exemplifying a form of computational self-reference.

Gödel's incompleteness theorem proves that any formal system capable of expressing arithmetic contains statements that refer to themselves cannot be proven true or false within the system. It shows that a self-referential system cannot demonstrate its own consistency.

Perhaps the notion of a quine, or of a self-referential system, relates to the idea of creating our own model of the world, and the difficulty of interpreting the reality as something different than the one that is predefined by the observer. It also reflects on the boundaries between the artwork and the system generating it.

curiosity

commitment to struggle

As most people, I place some of my earliest memories in my childhood. It was a time where differences were particularly notorious, misunderstood, and punished. The dictatorship heavily controlled education to align with its ideology, promoting nationalism and suppressing critical thinking or dissenting views. As all children born in this period, I received an education shaped by censorship and limited intellectual freedom. Teachers and curricula avoided topics related to human rights, democracy, or the abuses of the regime.

I grew up in a society where trust in the government and institutions was deeply eroded. This mistrust influenced my attitude toward authority and civic participation. In a context where discipline and normativity appeared as main values, I learned to defend my position on the right side of this equations:

% Deconstructing the status quo against an institutionalized system of meaning making.

curiosity = disobedience

curiosity = insubordination

curiosity = commitment to struggle

"All men by nature desire to know". This is the opening line of Aristotle's *Metaphysics*, highlighting curiosity as a fundamental aspect of human nature. However, I experienced that curiosity, as a "distracted learning style", is often rejected as a vicious form, as opposed to a virtuous one. Aristotle did actually have an inclination to recommend being studious about one thing (*monopragmosyne*). Even Plato argued before that curious people suffer from an imbalance in the 3 parts of their soul: reason, spirit and appetite. [Arjun Shankar, 2020]

It became well established that being curious implies taking risks, failing, making mistakes, "die at least a few times". [Foucault, 1980] Foucault reflects on the transformative power of curiosity, suggesting that it involves letting go of established ways of thinking and being open to change, which he metaphorically describes as a form of \dying."

Curiosity, in this frame, presents an invitation to explore boundaries and question all norms. The digital and other forms of artwork inspired by this can evolve in forms that resist being fully understood, requiring viewers to engage multiple times or from different perspectives to gain insight, embodying a commitment to struggle.

The exploration of unconventional media as a way to disrupt the status quo is

a recurring theme in media theory. Several theories and philosophical perspectives address this phenomenon. McLuhan's "Understanding Media" [McLuhan, 1964], is a good example of this (The medium is the message). Artists using unconventional media are not just creating content, but they are defining new ways to experience and understand such content.

Deleuze and Guattari refer to the idea of deterritorialization, as the process of breaking away from established structures. Their concept of "rhizome" emphasizes non-linear, decentralized forms of thought and creation. [Gilles Deleuz, 1980]

Curiosity drives us to break away from familiar territories, whether intellectual, cultural, or artistic. It encourages us to explore "lines of flight", creating opportunities for new knowledge and experiences. Non-linear, interconnected ways of thinking and being (as a neurodivergent individual), as opposed to hierarchical structures, allow for an open-ended exploration, where the process is as valuable as the destination.

neurodivergent

The holographic principle suggests that information about a volume of space can be encoded on its boundary, leading to a perspective in which spacetime within that volume, including time, is a projection. Thus, time might not exist as a fundamental property but instead as a result of interactions in this deeper, more fundamental layer of reality.

I spent years understanding what this means to me. I learned about the mask I put on unknowingly | to fit in, to attract less attention, to avoid conflicts and misunderstandings. I learned the consequences of wearing this mask. The idea of perception as a controlled hallucination suggests that what we see, know, and understand is no more than the most likely prediction made by our trained brains. A neural network in which an internal conflict arises between an error signal|indicating that what's in front of us does not match our expectations|and a massively skewed training dataset of memories, insisting that what we know from past experiences is the correct interpretation.

Neurodivergence is now better known and understood, but as a statistical minority, it is not well represented in the dataset of human interactions. It is only logical that it would be difficult to comprehend from the perspective of a neurotypical brain. The issue of skewed datasets is commonly addressed in the context of AI and machine learning. However, while we can design datasets to balance the represented populations, a real brain learns from real interactions, and the statistics remain the same regardless of awareness.

Analytical acceptance, algorithmic forgiveness.

% Intuition and "the big picture"

For some neurodivergent individuals, time feels less sequential and more layered or interconnected, as if different "dimensions" of experience coexist and interact simultaneously. Much like a hologram contains a vast amount of information compressed into a simpler lower-dimensional form, neurodivergent cognition could compress complex timelines and experiences into non-linear formats, creating unique interpretations and associations across time. Neurodivergent cognition might operate by "projecting" internal mental states or processing vast amounts of sensory data into condensed forms, like patterns, metaphors, or unique associations. The holographic principle challenges the classical idea of locality, suggesting that information can have nonlocal representations. As a neurodivergent individual, cause-and-effect thinking strategies don't come naturally, favoring lateral connections and holistic insights that reflect nonlocality in thought processes. Often a heightened awareness of details, turns into an intuitive grasp of the "whole system" encoded in parts, as kind of cognitive holography. Most attempts to uncompress this "intuition" often come across as confusing

misunderstandings, since even language is made to reflect linear interpretations of reality through sequential narratives.

"Anything in the territory that resists attempts at modeling thus becomes, in the world of digital models, noise in the system" [Benasayag, 2019].

% Exist within the noise

RANSAC (Random Sample Consensus) is an iterative algorithm used for estimating the parameters of a mathematical model from a dataset that contains both inliers (data points that fit the model) and outliers (data points that do not fit the model). It is particularly robust to outliers and is widely used in applications in the presence of noise. We must define new non-probabilistic approaches to social norms and rules that includes outliers, or avoid the models and rules altogether, validating the richness of the full spectrum, avoiding the expectations of coherence to the known set.

% in relation to my installation work, and to this text:

I'm interested in multi-sensory installations, layered audio-visual compositions, or interactive works that allow viewers to experience various "time slices" of the piece, where events and emotions compress into a single moment. Experiences of layered and non-linear time are certainly an inspiration to an approach that defies linear storytelling or straightforward interaction.

symbiotic contamination

failures with a serial number

In the current context of a neurotypical majority, forging the options and leading to a society that values selection over creativity, the creation of our own tools seems to be the obvious choice to true creativity. Such practice allows to dig into deeper understanding of the final outcomes, and explore the equally rich outcomes of every step of a process.

Laplace's demon

$$\frac{d\mathbf{x}}{dt} = f(\mathbf{x}, t)$$

Pierre-Simon de Laplace conceived a thought experiment involving a hypothetical intelligent being with knowledge of the current state of everything and the capacity to process all that information. Under the hypothesis of a deterministic universe, such a being would know both the past and the future, thereby eliminating the perception of time, since everything that exists now would also reveal what was and what will be.

In a much more limited context of both space and time, the constant monitoring of microscopic changes and patterns places me in a position to predict possible futures and assume causality from potential pasts. I live without a normal perception of time, burdened by the overwhelming anxiety of processing all possible realities with the same intensity as the "here and now." Predicting an experience and experiencing the predictions. Presuming a cause for every effect.

Sense belongs to the realm of Aion, not Chronos. [Deleuze, 1969]

The concept of "speculative remembering", where memories blur and predictions merge with present experiences plays a role in creating an "all-knowing" archive that adapts over time. [Sonal Dutt, 2024]

In the context of the digital arts, the idea of predictability often manifests itself in a form that simulates control while embedding elements of randomness and chaos, allowing the viewer to experience the tension between determinism and uncertainty.

% science fiction

hypervigilance

Stochastic resonance is a phenomenon in which a signal that is normally too weak to be detected by a sensor can be boosted by adding white noise

Whenever I take a walk, I don't just stroll from A to B. I'm constantly monitoring every obstacle, every moving object and person around, everything that can be moved by the wind or shifted by the weight of raindrops. I calculate the next position of every object, adjusting my trajectory to account for the space needed for myself and my companion, when there's one by my side. I walk, and I am in the near future as much as I am in the present|more than most people I've discussed this with.

I observe what everyone else sees, and I analyze the changes in their motion patterns and facial expressions, curiously attempting to predict their intentions, possible thoughts, and probable actions. I play out their actions in my mind like a game of chess. I'm here and now, yet I am also everywhere before and after. I'm everyone in my own form, simultaneously avoiding and seeking connection.

The brain's "signal detector" operating in an overly sensitive state, amplifies both real and perceived threats. Constant monitoring, responsiveness, attention to subtle changes, amplified details that go often unnoticed.

% How could I share a hyper-experience ?

[Kurt Wiesenfeld, 1995]

perception

Self-Organized Criticality

Loud drones, low frequency soothing sounds.

Whispers louder than the loudest screams.

A new detail that changed my day.

The repetitive, unsettling touch.

Tight knots, tight hugs.

Invasive gazes that were not supposed to last.

The faces, the mirrors, the shadows.

Acoustics as the language of every surface.

Self-Organized Criticality describes how certain systems naturally evolve toward a critical, highly sensitive state where small changes can lead to large-scale effects. This state of criticality is "self-organized" because the system doesn't require external tuning to reach this point. It naturally arranges itself into this state through its own dynamics. These models help describe the experience of sensory amplification where the world can be perceived in vivid detail or with overwhelming intensity.

[Adami, 1993]

decay

$$n \rightarrow p^+ + e^- + \bar{\nu}_e$$

When an atom has an unbalanced number of protons and neutrons in its nucleus, it becomes unstable. When an element is unstable, it decays. If there are additional neutrons, making the atom heavier and disrupting the internal nuclear forces, a neutron can transform into a proton by emitting an electron and an antineutrino. This type of decay is known as beta-minus decay.

Just like a carbon-14 atom, with an extra pair of neutrons, we carry the weight of indecision, of uncertainty, of forces that throw our lives out of balance. And just like that carbon atom, we decay, emitting electrons and antineutrinos|massless and imperceptible particles we leave behind, transforming. And just like the resulting nitrogen-14, older and stable, we find rest.

In this chapter I explore transformation and impermanence. Glitches and dynamic pieces capable of degrading over time to evolve into new forms. I pay attention to pieces that simulate the decay of (digital) memory and the breakdown of stability.

emulation

Human beings are creatures who practice and train, creatures who are free to reach beyond themselves in the process of becoming.

Peter Sloterdijk [Sloterdijk, 2014]

Living often feels like running a sophisticated emulation program on a computer. On the surface, the emulated environment mimics a typical operating system, seamlessly performing tasks and following expected protocols. However, behind this facade of normality, a complex system is working overtime to replicate behaviors and responses that comes naturally to others. Constantly striving to appear organized, focused, and in control, while battling with distraction, impulsivity, and a torrent of unfiltered thoughts.

Just as an emulated system can lag or crash when overloaded, I become overwhelmed and fatigued by the continuous effort to conform to neurotypical standards. The emulation requires immense mental resources, leading to burnout and a sense of disconnection from my authentic self.

This section questions the boundaries between imitation and authenticity. Just as in an imperfectly emulated operating system, deeper layers can only be revealed by interaction.

Wave Function Collapse

$$a \propto E$$

Anxiety is proportional to the entropy of a situation.

Entropy, quantum mechanics and puzzles

The algorithmic way to solve a sudoku puzzle is to find the cells that present minimum entropy. This means, find the cells where the number of possible options is smaller. When a possible solution is presented to this cell, the cells around them will in turn decrease their entropy.

According to quantum mechanics, the wave function represents the probabilities of different coexisting realities, that is, until a measurement is made. At the moment of measurement, chance is replaced by actuality. The wave function collapses, and reality is set.

Every unknown in life, every decision still not made, creates a multitude of possibilities, a distribution of parallel potential realities, simultaneously existing in a high entropy state.

Making a decision, or a discovery, will collapse all possibilities into one, reducing entropy and in consequence reducing the associated anxiety for the unknown.

% this chapter should also reflect on the act of observing, and its effect on creating realities.

memory

The military dictatorship in Uruguay that started in 1973 finally came to its end in 1985. By that time, I was 5 and carefully kept away from all the struggles and terrors that happened during that period. Some human experiences can't easily be described in words, but perhaps those words are not even needed. Even though I have personal memories of the dictatorship itself, the societal impacts of the regime had a significant influence. The door at the end of the corridor kept us in the dark, perhaps protected from ideas that I couldn't even attempt to grasp. Sounds were replaced with silence and the sleeping time was replaced with long stares at fluorescent constellations and doodles of imaginative inventions.

I can't avoid creating evolving narratives that reflect the fluidity of memory itself.

Many families of the children born around the 1980s were deeply affected by state repression. Parents who were political dissidents, union activists, or simply suspected of opposing the regime often faced imprisonment, torture, or exile. If not the near family, friends of any close connection to this situations would affect the dynamics of tension and increased anxiety. To protect children, families often avoided discussing politics, creating an atmosphere of silence and fear. Children absorbed the lingering trauma of parents who had suffered under the dictatorship. This trauma could manifest in overprotectiveness, anxiety, or suppressed anger in family dynamics.

Lean-Luc Godard's film "Here and Elsewhere" (Ici et Ailleurs, 1976) touches the themes of representation and history and reflects on the the political memory of images and the ways in which a non-linear and fragmented memory can be reassembled in different ways based on the context. The film questions the ethics of remembering through images, questioning the reduced representation of a true past.

This thesis is too an invitation to become more critical about our own processes of remembering, and how memory is shaped by media and context. It's important to note how personal and collective histories are remembered, forgotten and rewritten over time.

Memory behaves sometimes as an interactive installation, capable of recalling previous viewer interactions, layering them as part of the piece, altering and separating it from its original self.

In Camera Lucida, Roland Barthes distinguishes between the studium (the cultural,

intellectual response to an image) and the punctum (its personal, emotional impact). He reflects on the role of the viewer in the construction of meaning. The memory of a closed door, the need for bridging the unknown with rational narratives, the context of my own neurodivergent experience. Constructing meaning. [Barthes, 1993]

References

C. Adami. Self-organized criticality in living systems. 1993.

Perry Arjun Shankar. *Curiosity Studies: A New Ecology of Knowledge*. 2020.

Roland Barthes. The death of the author, 1967.

Roland Barthes. *Camera Lucida*. 1993.

Miguel Benasayag. *The tyranny of algorighms - Freedom, democracy and the challenge of AI*. 2019.

Gilles Deleuze. *The logic of sense*. 1969.

Michel Foucault. The masked philosopher (le philosophe masqué). *Le Monde*, 1980. Interview.

Félix Guattari Gilles Deleuz. *A Thousand Plateaus: Capitalism and Schizophrenia*. 1980.

Frank Moss Kurt Wiesenfeld. Stochastic resonance and the benefits of noise: From ice ages to crayfish and squids. *Nature*, 1995.

Marshall McLuhan. *Understanding Media: The Extensions of Man*. 1964.

Peter Sloterdijk. *You Must Change Your Life*. 2014.

Dr. Parul Mishra Sonal Dutt. The speculative memory: contextualising memory in speculative fiction. *South India Journal of Social Sciences*, 2024.