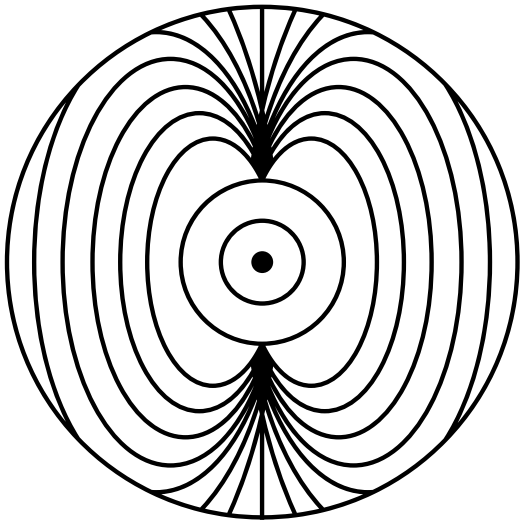
GUSTAVO CASTRO



MNEMONE

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MNEMONE

AUTHOR'S NOTE

1. ON THE TITLE OF THE BOOK

Mnemone is my third short story book and like the others, it strives to have a different understanding of its subject matter, which is memory(ies); also, it is the last one in the series to have a structure comprised of 9 stories and 3 essays, which I will use to develop a theory of memory that goes beyond the epiphenomenalist view of consciousness that states that mental activity is caused by the brain, but the latter is in no way influenced by the former.

Seeing that in my prior books I have argued for nonlinear time and for matter understood as consciousness condensed, in this one I will go on the same unconventional path and take the latter as basis to make a theory of memory that has cosmological implications. That is, I state that the brain has both classical and quantum computing, I also agree with Bergson in his statement that memories exist mostly outside the brain and that the latter just retrieves them from a zero point plane (a repository of information in a realm outside time and space) and re-process them by means of cognition.

Thus, there can be collective memories and also, the Universe has memory of all the things that have happened, of all probabilities and all that will happen, without discarding emergent behavior. As I have said before, I strive to create fiction that has a strong philosophical basis and that takes a perspective that runs counter to scientific presuppositions, without losing rigor. I merely try to make a case for understanding things in a different way.

Like the prior book, I borrow from Goswami, who is fictionalized in my Universe as Ravichandran, specifically on his book "Science and Spirituality. A Quantum Integration" which I take on almost literally on the second page of the first essay; I also use knowledge from master cyberneticians Humberto Maturana, Francisco Varela and Heinz von Foerster. Henry Stapp, Jacobo Grinberg-Zylberbaum, and Dean Radin are also academic influence as well as Penrose and Hameroff on quantum consciousness, Edgar Mitchell and his collaborators on his paper about the cognition and the zero point plane and Robert Lanza and his biocentric theory of the Universe. As always, I cling to the metaphysics of Bergson and I try to back his claims making my interpretations of the before mentioned scientists.

2. ON THE STRUCTURE OF THE BOOK

As I said, this is the last of my books to use the 9 stories 3 essays schematic; the fourth book, which I wrote almost at the same time as this one, will have a 7 stories 2 essays structure. As I have said before, the essays state the rules by means of which the phenomenon in my stories take place; in this case, they will come

in the shape of three chapters of Leon Armienta Palermo's doctoral thesis, which will be completed by his mentor, Salvatore Constantini.

Unlike book 2, I will not delve any further in this whole continuity of my stories in which I talk about humanity going on an exodus to find new inhabited planets, if the reader has any doubts about a story that takes place in a spaceship or that happened after the exodus, please refer to the essay *The Roaming Wars for Beginners,* by Arre Pues. Also, the first chapter in Leon's thesis is a reprise of a technical essay I did for the previous book and resembles it greatly, with some changes here and there.

Because these essays are part of the thesis of a character I introduced in *Materia,* they have a lot of technical content, which the reader must go through patiently and if this happens, they will be rewarded. My stories *Our Lady of Recursion* and *Courtship of Concepts* the most technical, *Jaguar Shoes in the House of the Unholy Knife* also has an element that resonates with *Our Lady* and which might be found interesting.

Unlike *Materia,* where I had a massive amount of visual content and which took a whole year to coordinate and 10 artists involved, here we go for mellowness: *Tomorrow* has colored illustrations by ThuyNgan Nguy, who did the comic book *Beastfight at Dinnertime* in my prior book and which is part of the same story; *Man of Memories* has hand drawn illustrations of the dynamics of memory fields, which are the subject of an interesting postcoital conversation, *Courtship of Concepts* has beautiful and tender illustrations about cosmological déjà vu, made by Greta Haaz and *Nano Wars* will have some planes made about the labyrinths used in an extreme sport.

I have two stories that have a graphic format: *Jaguar Shoes* will have a whopping 18 page black and white comic from Aaron Minier, who did *Breathing Towers to Heaven* in my last book; this story actually changes the style from pencil based, to watercolor, to regular ink, depending on what the character experiences in retrieving her memories and how she feels. *Angel at the Rim of Outer Heaven* has a part of the story told in a 4 page colored comic, although there is also a television script and regular narration involved in it.

Overall, we have slightly less symbolism involved in the narrative media, but we are not exempt with playing with the narrative structure as in with *Chrone. Man of Memories* is actually divided in several stories, which have a song ascribed to it, the way in which the reader assembles a playlist will be the way in which he or she read their stories. This is to emphasize that memories mimic the experience of time and as we have said that the latter can be nonlinear, then they can be ordered in such a fashion.

3. ABOUT THE STORIES

Our Lady of Recursion deals with Samsara Jones trying to build a hard AI of herself, much to the chagrin of her consultant Elvis Jr Jr and his boyfriend, Pedrín. She says that she only wants to have the perfect sparring partner, I don't quite believe her. *Tomorrow* is a prequel of *Beastfight at Dinnertime* and *Building*

stuff and shit, in which Palermo, León and Nico's maternal uncle is deployed on a mission against thought monsters that takes a turn for the worse.

The Man of Memories follows Hanni Lundstedt, Dagoberto Clemente-Ascencio and his brother Rodrigo, as they try to make a band together. Part of the story is about the unravelling of the initially thorny dynamic between Hanni and Rodrigo, as they have abilities that cancel each other out: She can talk to herself through time (past and future selves), and he can insert himself into the memories of people and things.

In *Courtship of Concepts,* we change the narrative from Polly Hawkins' view to that of her sister Pixie Ford. She talks about how she has this feeling of déjà vu, which being more than a fusing of memories, has a cosmological origin akin to the Universe resetting to a saved point. *Don't forget me* walks you through the life of a man that cannot be remembered by others (or in the best case, is hardly remembered).

In *Nano Wars,* there is in the near future an extreme sport of the same name, where highly trained men and women in almost indestructible armor, engage in teams against others using nanotechnology, grenades and live ammo. The story follows Michael Scoman and his team, the Boston Massacre, competing in the play-off match where the championship is decided. *Jaguar Shoes in the House of the Unholy Knife* follows the title character, JS, who is a ninja-saboteur in the same future and spaceship flee that *Tenben Chii* and *Breathing Towers* in a mission that has a bad feeling about it and probably won´t end well (I mean, see the book cover).

Angel at the Rim of Outer Heaven has Bellona Alcázar, known in some circles as Andrómeda de Jesús, telling us the story of her life as a stripper, photographer and art student, and having us see how she can see and talk with prior incarnations through her dreams. Are memories as static as we think? Can we shape our past and can it converse with the future?

Finally, *Prisoners* is about seven people being contained within a strange prison where reality seems to be warped and not entirely coherent. They try to escape, but to do so, they must make sense of this. This story is perhaps one of my oldest, as I came up with some of the underlying ideas since high school/early college, it is part of a larger project that one day I hope to bring into full development.

4. CONTINUITY

Again, all my stories form part of a continuity. Unlike *Materia,* where most of the stories were set in space, half of this book is set in planet Earth, thus we only see the essays, *Tomorrow* and *Jaguar Shoes* on spaceship and in Paris-Earth. My stories are part of a long-term world building, where all my stories and whatever comes next could be arranged as a massive book. In the case of *Mnemone, Man of Memories* continues with *Chrone's The woman that talked to herself, Tomorrow* with *Beastfight at Dinnertime, Courtship of Concepts* follows *In Keeping Secrets of Dying Earth,* which at the same time predate *A day in the life of Her Holiness Chrone Gaia III, restorer of life and lover of big dogs,* while *Jaguar Shoes* is set in the same space fleet as *Breathing Towers*. As the Joker said it in *The Dark Knight:* "It's all... part of the plan..."

5. INFLUENCES

I wrote this book and the fourth one, *Oniria,* on a vacation I took in the summer of 2016 to Bilbao and Trieste, and pretty much they were born on those cities on that order. However, I am writing the author's note almost a year and half after, so I have a lot of things that are hazy and difficult to recall (like memories, in fact).

The first thing I remember listening to a couple of versions of Zappa's *Muffin Man* during the time I wrote *Man of Memories,* and I listened to some of the songs I am listing there, and they are important songs for the story, but they were not that important when I wrote the story. Also, *Bleach*—a promising manga that after two arcs goes to shit*—was an inspiration for Rodrigo, as the ability to insert oneself into memories belongs to a character named Shūkurō Tsukishima.

Mnemone had a much darker mood than *Oniria* and I was listening Elefant's *The Black Magic Show* on repeat; it is an excellent album by a much overlooked band and I thoroughly recommend it. I had moments where I had made a loop with the songs *Sirens, Lolita, My Apology* and the *Lunatic* and then I listened to the latter on repeat, now that I remember, I think I had also their song *Caroline* on repeat. I listened to a lot of moody stuff from Ruelle, Digital Daggers and also some Halsey** in a revision I did back home.

I must clarifly that the use of nanites in *Nano Wars* was before *Big Hero 6* came out, so it is not an influence, I had this idea for another story since college and in the end it stuck in this one. The use of *Outer Heaven* to name a strip club in *Angel at the Rim* is not a *Metal Gear* reference, rather a reference to *Snatcher,* a game also written by Hideo Kojima, where there is a night club called like that.

There were also two phantom influences, if I can call them that. One is the music of Death Grips, an experimental hardcore hip hop outfit that at least on two occasions have almost driven me to a rage-induced coma; ever since, I listen to them strategically as I learned the hard way that MC Ride is not to be messed with. They were very useful in setting the mood in *Jaguar Shoes*. The other are my beloved Red Hot Chilli Peppers, one of their songs graces the title of a story of mine, but also, that song is one of the most sensual pieces of music ever created by men and it influenced the mood of *Outer Heaven*.

The poetry of Juan Vicente Piqueras was also important, I saw a video of him recite the poem I put at the end of the book when I was in college and it stuck to me and now I found it to be the perfect conclusion for my book. Look up the video.

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* Truth be told, the term "to shit" is more than adequate. Read the Fullbring Arc and parts of the Quincy Arc and you will feel the need to pluck your eyes with the pacing, also, the ending is really sloppy, it makes no sense and is less structured than a piece of fanfiction made by a teenager. I don't care if you read this Kubo, you were the Chosen One, you were supposed to bring balance to the Force, not leave it in darkness.

** Her album Badlands was *the* shit. See the difference?

A PHILOSOPHICAL FRAMEWORK FOR THE MENTAL COSMOLOGY OF A SPIRITNAUT, DOCTORAL THESIS, DEPARTMENT OF PHILOSOPHY, UNIVERSIDAD AUTÓNOMA MEXICANA

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by León Armienta Palermo
Completed by Salvatore R. Constantini in light of his untimely departure.

COMPLETER'S NOTE
INTRODUCTION

This book is special in many ways: its author is one of the first people to earn a doctorate degree in Spiritual Sciences at the Universidad Autónoma Mexicana, the first program of its kind, and unique among many academic options due to its recasting of diverse topics and disciplines into one—spiritual science—which, at the time I started, was subjected to mockery and disdain.

It took a catastrophic event in order for it to be taken seriously, where a city was leveled to the ground and millions were killed, in order to stop the constant and unexplained advances of creatures made of condensed cosmospiritual energy. Our efforts yielded what is now known as the Spiritnaut program, where people of rare talents projected their qi into large thoughtforms that were large and strong enough to repel and destroy said invading creatures. I was a first-generation pilot and the first director of this endeavor.

The author of this book was a second-generation pilot himself, who fought thought monsters by my side and went on to succeed me as the director of the Spiritnaut program, when I retired to live in the wilderness as a hermit, unable to deal with the personal losses that haunted me.

This book was left incomplete by its author due to his untimely fall in the line of duty, against all odds, past his prime and against an enemy of a size we had never seen before. I was the thesis director of Dr. Armienta Palermo and I took upon myself the task of completing his visionary and unfinished work.

It saddens me greatly to finish this book in the place of its original author, but it would pain me more to leave it unfinished. To me, this task is also a form of coping with the tragic events that have marked my life: I lost my wife and two children in the first incursion of the thought monsters, my best friend—the author's maternal uncle—died while fulfilling his duty on the field, and now, the author, a man I loved and cherished as a son, is dead as well. I was unable to reach him, being in the inhospitable depths of the wilderness of this planet, beckoned by his spirit in his final moments, requesting me to return and lead the Spiritnauts.

It was Palermo, a polymath and dilettante, who told me this story about Gustav Radbruch, a notorious jurist of the Bygone Earth, who, like me, lost a son and daughter—the former to war and the latter to a mountain accident. His daughter had left her art history thesis unfinished and he took it upon himself to complete it. My beloved son died and now, having brought his initial task to an end, I have the small consolation of knowing that his great spirit lives through his work and deeds.

Salvatore R. Constantini

CHAPTER 1: LIVING SYSTEMS AND THE UNIVERSE AS AN INFORMATION PROCESSING SYSTEM

As I stated in the introduction, this study aims to provide a scientific and philosophical explanation on how a Spiritnaut sees the world: how a man or woman, through hard training manages to project their *qi*—cosmic energy that flows freely through the Universe as an electromagnetic flow called *aether,* retained by the human body through biological processes—into a large form (40 meters, more or less) in order to battle giant monsters made of energy. These monsters threaten the lives of millions of humans that have settled in this new world, Paris-Earth, after the previous generations destroyed and squandered the Earth-That-Was and then fled into space, searching for new worlds.

In this chapter, my purpose will be to elucidate the relationship that living systems have with the Universe. I will posit that they engage in constant communication, but neither are computers in the sense that cognitive science had advanced long ago about the human brain, and then physicists about the Universe. The core of this chapter will be based on a paper I wrote some years ago, at the start of my tenure as Director of the Spiritnaut Division, titled "General information about the Spiritnaut System for the defense of the United Republic of the Paris Earth: What we do and how and why we do it."[1]

However, the first thing I will do is make an initial clarification of the nature of knowledge and a brief critique of the knowledge we inherited from prior generations of Gaia-Earth. This will be so, because when monsters made of cosmic energy attacked, such ideas were ill-equipped to study them, and Salvatore Constantini, the only one using a different framework, was ridiculed as an eccentric, until he was proven right after all laughter turned into fear and horror. Such slowness in addressing the attack cost many lives, including those of Constantini's wife and children.

1. The Materialistic Foundations of Old Knowledge and Its Failures

Old knowledge of the world, both as philosophy and science, came with a set of presuppositions about the nature of things. This was described by Ravichandran as material realism, and has the following features:[2]

1. *Foundationalism:* Knowledge can be traced back to firm foundations, which are to be understood as a series of sensory impressions and rational principles, which function as the basis for other high order beliefs

2. *Reductionism:* Things can be understood as the sum of their parts.

3. *Causal determinism:* Every event requires previous events and conditions along with a set of specific general laws.

4. *Linear causation:* Knowledge is studied in terms of cause and effects, where the latter is final and does not influence the former.

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[1] L. Armienta Palermo, *El Sistema de Espirinautas para la Defensa de la República Unida de la Paris Tierra: Que y por qué lo hacemos;* Confederacion de Universidades de la Paris Tierra.

5. *Rationality:* Phenomena are described and explained from a detached, impersonal perspective.

6. *Objectivity:* The Universe is independent of subjective consciousness, it prescinds from any observer.

7. *Continuity:* All movement is unbroken and consistent.

8. *Locality:* All causes and their effects propagate in space with a finite velocity, taking a finite time.

9. *Material monism:* Everything is made of matter (atoms or elementary particles) and its correlates, energy and force fields, and every phenomenon has a material origin to which it can be reduced.

10. *Epiphenomenalism:* All mental phenomena can be explained as epiphenomena, or secondary phenomena of matter. Consciousness is a property of the brain when the brain is viewed at a certain level.

11. *Control as an external force:* Instead of exerting influence within the system, control consists of an external force that makes a system act in a certain manner.

Complexity theorists, cyberneticians and some strains of quantum physics denounced that these features were insufficient to explain phenomena that actually happened in the world. For instance, reductionism is contrary to the emergence principle that rules mathematically chaotic systems, such as climate; fringe philosophers also denounced the epistemological insufficiencies of such systems of knowledge. Chief amongst them was philosopher Edgar Morin, who made a sharp criticism of the way in which Western thought organized knowledge, stating that an objective, reductive and abstract viewpoint, could lead to a cognitive blind spot that could result not only in the mutilation of knowledge, but also in the lack of self-criticism.[3]

The materialistic model departs from flawed premises, as most of these postulates were originated and perfected in the time of classical physics; this way of seeing the world was consistently undermined by the findings of relativity and quantum physics, and despite this, the materialist model held among practitioners, who took great pains in reshaping disruptive knowledge within the old framework in order to preserve it. In criticizing these tenets of classical science, Ravichandran stated that they are metaphysical in nature, as they make assumptions on the nature of being rather than being based on experimental data; he also criticizes the fact that they exclude subjective phenomena altogether.[4]

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[2] G. Ravichandran, *The Universe as a transcendental information processing system,* Victor Travail et Fils, 1992, pp. 15-17; G. Ravichandran, A philosophical framework for the integration of science and spirituality, Victor Travail et Fils, 1995, pp. 10-15.

[3] Morin, *Ensayos sobre Complejidad,* Universidad Autónoma Mexicana, (G. Rodríguez Prieto trad.), p. 3, 2324.

[4] G. Ravichandran, *The Universe as a transcendental information processing system,* Victor Travail et Fils, 1992, pp. 17-18.

Determinism can be countered by the uncertainty principle, discovered in quantum physics, which holds that one cannot simultaneously determine with certainty both the position and the velocity (or momentum) of an electron; any effort to measure one accurately blurs our knowledge of the other; thus, the concept of a sharply defined trajectory of a particle is untenable.[5] This is because when it is measured, it is always found localized as a particle; as measurements by an observer reduce the electron wave to the particle state. This also means that observation influences physical reality, and thus, the idea of an objective Universe is not tenable.

The materialistic paradigm was favored by old scientists because it offered easy measuring and calculation, which are useful for theoretical and experimental work—however, Old Earth philosopher Henri Bergson also argued that this perspective has prevailed for centuries because it is relatable to sensory experience, which appears to show solid, differentiable bodies that move through space.

Reductionism had as a consequence the increasing specialization of the scientific establishment, and this lead to increasingly larger amounts of data, complexity of techniques and different theoretical structures within each field, which fragmented science further.[6] This produced a set of conflicting sectors within science that could not give a unified picture of knowledge because they come from different directions and approaches and at times find themselves at odds with each other, despite studying different aspects of the same thing.

Classical physics was unable to measure motion itself, as movement is never at a stationary point; all that it could do was to measure several static points. Bergson argues that reality is motion and that as it is a continuous, temporal flux which is a felt, lived experience that can be verified by its subjects.[7] On the other hand, locality is countered by the experiment by Alain Aspect, who conducted experiments showing that when two quantum objects are correlated, if one is measured—thus collapsing its wave function—the other's wave function is instantly collapsed as well, even at a macroscopic distance and when there is no signal in space-time to mediate their connection. That is, there exists an instantaneous connection between correlated quantum objects that is responsible for their signal-less action at a distance. This phenomenon is aptly called non-locality.[8]

Varela criticizes science and philosophy, stating that they are theoretical activities after the fact. He uses Buddhist methods of examining experience, called mindfulness meditation, to make the reader realize among many things that the abstract attitude assigned to science and philosophy is that of everyday life when one is not mindful, as it seals the observer from his own experience. To him, reflection is not just on experience, but a form of experience itself.[9]

2. The Role of the Observer

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[5] *Ibidem.,* pp. 37, 39.

[6] L. von Bertalanffy, *General System Theory,* 30, (George Braziller, New York, 1969).

[7] See V. Florenzi, *Metafísica Bergsoniana e cognizione,* Universitá Lombardiana, Astronave Lombardia, 2375.

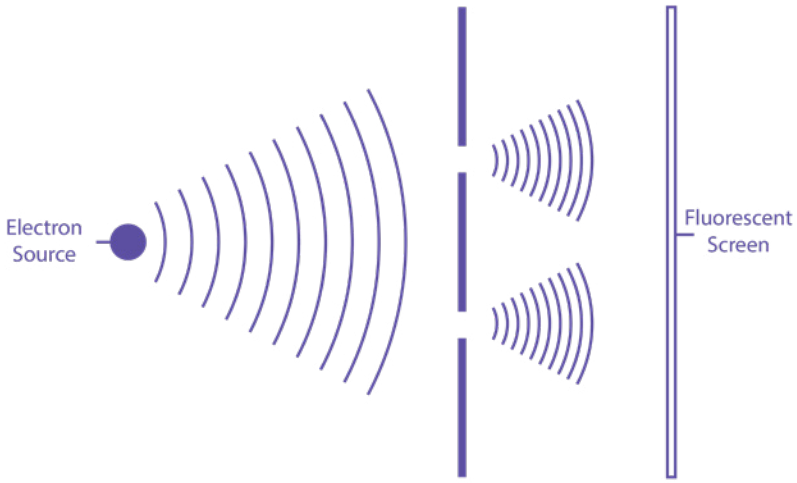
[8] Goswami, *supra,* note 4, p. 61.

[9] *Ibidem.,* p. 27.

The first to argue against the old knowledge in an attempt to build a new perspective is the fact that the Universe does not exist entirely outside of an observer, as all living things interact and are influenced by it and can affect it in ways that go beyond what can be perceived by the senses. All the physical objects that we interact with on a day-to-day basis are made of atoms and subatomic particles—at this extremely small scale, matter follows different rules than at the level of the things that we perceive.

However, both levels have in common the fact that they have rules of organization, which are affected by consciousness and the observer as a(ny) living system. Matter in the subatomic level exists as a wave and particle: The double-slit experiment- which consists of a beam of electrons passing through a screen that has two narrow slits in it—is a useful experiment that helps to ascertain the wave/particle duality of a quantum object.

As electrons are waves, the beam is split into two sets of waves by the two-slitted screen; these waves then interfere with one another, and the result of the interference shows on a fluorescent screen.[10] It also helps to corroborate the uncertainty principle, postulated by Heisenberg in the field of quantum mechanics: One cannot simultaneously determine with certainty both the position and the momentum of an electron; efforts to measure one accurately blur our knowledge of the other.[11]



The double-slit experiment for electrons

The usefulness of both the experiment and the uncertainty principle resides in the importance of measurement and whoever makes it. In his book *The Mathematical Foundations of Quantum Mechanics,* von Neumann, a foremost scientist of the Earth-That-Was, stated that in a causal chain formed by (1) the measured object, (2) the measuring instrument and (3) the brain of the human observer, the collapse of the wavefunction

[10] J. Djokic, M. Martínez, J.R. Laht, *Introducción a la Física Cuántica,* Universidad Autónoma Mexicana, Nave Tlaloc, pp. 69- 72, 2352.
[11] *Id.* p. 81.

can be attributed to either (2) or (3), and thus it makes no difference as to which one is referred to as the "observer." London and Bauer differed from this position stating that it is human consciousness which completes quantum measurement; this was followed by Wigner, and later Stapp.[12]

Of the latter position, I will extrapolate the following theorem: "Anything that happens, it does before an observer," which was postulated on the Earth-That-Was by Emily Eckhart.[13] She replicated and interpreted two variations of the double-slit experiment: a) Wheeler's delayed-choice experiment, where the method of detection used can be changed after a photon passes the double slit, so as to delay the choice of whether to detect the path of the particle, or its interference with itself; b) Radin et al.'s experiments with a double-slit optical system to test the possible role of consciousness in the collapse of the quantum wavefunction, which accounted for variables such as temperature, vibration, and signal drift.[14]

She came to the conclusion that on Wheeler's experiment the act of observation ultimately determines whether the photon will behave as a particle or wave; whereas on Radin's she noted that qualities in the observer influenced the outcome and significantly correlated in predicted ways with perturbations in the double-slit interference pattern. This led her to conclude that the internal states of the observer and how the observation is made influences the collapse of the wavefunction; thus, she enunciated a second theorem: "Anything that happens does so *because* of an observer."[15]

Now, in Exodus 3:14 (King James Version, Public Domain), Yahweh defines himself before Moses in the following way: "And God said unto Moses, I AM THAT I AM: and he said, Thus shalt thou say unto the children of Israel, I Am hath sent me unto you." If one sees this from a detached and purely binary perspective (yes or no), this is a contradiction: What am I? I am what I am. However, when we see this in ourselves, things change: I could ask myself, "Who am I?" and I could respond, "León Armienta." And, "Who is León Armienta?" "Me." From this we can derive that all observers organize in a self-referential way and if the observer affects (and is affected by) the Universe by observing it, then self-reference is one of the fundamental organizational principles we can know.

3. Observing Systems are Alive

Any observing system is a living one and the latter are self-organizing systems: they take energy and resources from their environment in order to sustain themselves by producing their own components, and this is called *autopoiesis* (self-construction).[16] Because they are thermodynamically open, to determine or recast their boundaries, living systems must accumulate energy from their environment to later expend it, which

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[12] Enciclopedia de Filosofía de la Universidad Autónoma Mexicana, *Filosofía Cuántica de la Consciencia y Cognición,* pp. 3450, 2350.

[13] E. Eckhart, *Cognition as computation and quantum fields in living systems,* S. Constantini ed., Tartu Ülikool, p. 99, 2022 (ed. original), 2410 (reimp.).

[14] *Id.,* p. 115.

[15] *Id.,* p. 122.

generates entropy and leads to the need for accumulation, in an ongoing cycle; that is, there is a transition from orderly to disorderly states.[17]

Living systems are then organized in a stabilized dynamic, rather than an unchanging state of equilibrium. Because of this, they cannot be understood in isolation, for the environment in which they develop (which includes other living systems and a geography) must be accounted.[18] Self-organization takes the form of adaptive behavior guided by cognition, the latter being information processing in the form of calculations and logical operations for decision-making and the creation of a repertoire of actions.

This process takes place in a self-referential way, or in the wording of Morin: "computo ergo sum."[19] In computing oneself, living systems posit their identity; the latter is comprised of a notion of "I" as a being animated by its self-organizational subjectivity, and a "me," which can be understood as an objectification of the individual-subject. This allows the system to process its physical body in an objective manner, while remaining a self-organized being.[20]

The first act of cognition made by an autopoietic is the distinction between itself and its surroundings, which also makes it an object of its own observation.[21] Being a subject is then a fundamental quality of living systems, which cannot be reduced to morphological or psychological singularity.[22] One becomes an observer by "recursively generating representations of our interactions, and by interacting with several representations simultaneously we generate relations with the representations of which we can then interact and repeat this process recursively."[23]

Observation is mediated by the perceptual apparatus that each system possesses and which can vary from one to the other in accordance with the environment they develop in and from which their species evolved from. This means that although all living systems observe, each does it limited by their own self-organization.[24] To this development one can add Maturana's theorem "Anything said is said by an observer," and von Foerster's "Anything is said to an observer" to Eckhart's theorems.[25]

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[16] H.R. Maturana, F.J. Varela, *Autopoiesis y Cognición,* Universidad Autónoma Mexicana (G. Rodríguez Prieto trad.), p.79, 2312.

[17] Morin, *supra,* note 3, p. 18.

[18] *Ibidem.,* p. 11.

[19] Morin, *supra,* note 3, p. 113; Maturana and Varela, *supra,* note 16, p. 13.

[20] Morin, *supra,* note 3, pp. 73 and 79.

[21] S. Constantini, "Breves reflexiones sobre la naturaleza del observador y de la Autopoiesis", *IV Congreso Interdisciplinario de Cognicion y Consciencia,* 2410, Universidad Autónoma Mexicana.

[22] Morin, *supra,* note 3, p. 77.

[23] Maturana and Varela, *supra,* note 16, p. 13.

[24] H. von Foerster, *Entendiendo el Entendimiento,* Universidad Autónoma Mexicana, (J. Reynoso, trad.) p. 283.

[25] *Idem.*

4. To Observe is to Cognize

The great Maturana tells us a great deal about what is a cognitive system: "A cognitive system is a system whose organization defines a domain of interactions in which it can act with relevance to the maintenance of itself… Living systems are cognitive systems, and living as a process is a process of cognition. This statement is valid for all organisms, with and without a nervous system."[26]

To von Foerster, cognition equals to computing a reality. In the most general sense, computation is a mechanism for ordering, which can take place on two levels: 1) when we wish to make a description of a given arrangement of things, and 2) when we wish to rearrange things according to a certain description.[27] This notion of computation brings forth a tension between what the observer perceives and what he knows, for the first one entails the creation of knowledge according to perception and the second one the recasting of perception according to existing concepts.

This leads to the notion of "Cognition → computing descriptions of a reality." As the observer defines and redefines his boundaries and interactions with his surroundings based on what he perceives and what he knows, cognition becomes an infinite recursion of descriptions of descriptions that ends only when the observer ceases. If computing descriptions is nothing else but computations, cognitive processes are ongoing recursive processes of computation that transform, modify, and in general interact with perceived physical entities (objects) or their representations (symbols).[28]

Of these recursive computations one can ascertain three cognitive processes of importance: one of *inference or logic,* where representations are made by differentiating objects from others and assigning them a meaning in relation to the observer; another of *experience or feeling,* where information is used and gained in a process of perception and movement; and another of *identity and consciousness,* where all the different cognitive processes are unified into a single thread.[29] Logic and experience interact in a circular relation: Sensory input brings forth the possibility of new signals of which new concepts can be constructed in order to understand them, but at the same time, new concepts determine the way in which sensory input is to be interpreted. At the same time, this cognitive flow is put together by identity in a type of cognition that is called cognitive coherence.

However, we must note that this does not entail the whole picture. As we observe, we also perceive, and as we live, we act upon an environment as an embodied agent, and as we act, we do so upon a repertoire of actions and experiences that have the self as a reference point. Observation must then be understood as the tension of three things: a) what we perceive, b) what we conceive or cognize, and c) how we act.

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[26] Maturana and Varela, *supra,* note 16, p. 13.

[27] *Ibid.,* p. 194.

[28] *Ibid.,* p. 216-217.

[29] Eckhart, *supra,* note 13, p. 105.

5. Humans and Their Cognition

This cognitive framework of living systems is the foundation for human cognition, but how is the former distinguished from the latter? Despite both being self-referential by virtue of their recursive computations, reflexive observation has proven to be something exclusive to human beings, which are the only species capable of self-face recognition; this has been used as a measure of higher-order self-processing.[30] Berger and Luckmann perfect this observation:[31]

> *On the one hand, man is a body, in the same way that this may be said of every other animal organism. On the other hand, man has a body. That is, man experiences himself as an entity that is not identical with his body, but that, on the contrary, has a body at its disposal… man's experience of himself always hovers in a balance between being and having a body, a balance that must be redressed again and again.*

Because we have an internal representation of all that surrounds us in order to understand it and interact with ourselves, and such interactions have ourselves as the main point of reference,[32] one can arrive at the following theorem: "Anything that an observer says, he can say it to himself."[33]

6. Computing as a Basis for Cognition

Let us take a step back from human cognition and return to one of the basic elements of this process: computing. It consists of the description and transformation of information by means of algorithms. In the broadest sense, any object can be an information processor if it receives information from another and in turn changes the information before transmitting it; this means that all types of systems, from simple biological systems, to human systems and social systems, to the Universe itself can be understood as information processors.[34]

An information processing system possesses four basic elements: input, which is the information that is to be transformed; *processor,* the part of the information system that is to perform the transformation by means of perception memory and inference;[35] *storage,* the place where all information will be kept;[36] and *output,* the resulting transformation. The concept of information was first posited with Claude Shannon, whose work gave way to information theory. In it, functional communication is based on a pre-established code with

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[30] E. Eckhart, *Cortical midline structures, mirror neurons and their quantum correlate,* in E. Eckhart. Obra completa, S. Constantini ed., Tartu Ülikool, p. 99, 2405.

[31] P. L. Berger, T. Luckman, *The Social Construction of Reality,* 50, (Anchor, 1967).

[32] Morin, *supra,* note 3, p. 62.

[33] Eckhart, *supra,* note 13, p. 110.

[34] Enciclopedia de Matemática de la Universidad Autónoma Mexicana, *Algoritmo computacional,* pp. 1284, 2375.

[35] von Foerster, *supra,* note 23, p. 105.

[36] *Ibidem*. p. 102

a limited number of possible outcomes of signs; therefore, information is the statistical property of a message, irrespective of its meaning, that is, information is a choice that reduces uncertainty.[37]

Entropy is a concept originally used in thermodynamics, but was used also in information theory as an indicator of reversibility; that is, when there is no change of entropy, the process is reversible. In information theory it is a measure of this uncertainty and is taken as the measure of the amount of information conveyed; the more that is known about the message to be produced by the source, the less entropy and the less the information.[38] To Norbert Wiener, entropy is viewed as disorder and information is viewed as negative entropy, which can then be defined as organization.[39]

In information theory, the bit (portmanteau of *binary digit)* is a basic informational unit that can have one of two values (0,1) and can be defined as the uncertainty of any of these values arising under equal probability, or the information that is gained when the value becomes known. The two values of the bit can be interpreted in several ways: as logical values, (true/false, yes/no), algebraic signs (+/–), activation states (on/off), among others. The length of a binary number is known as bit-length.

Another informational unit can be found in the quantum bit, which is the superposition of two values; that is, a quantum bit can be 1, 0 and both at the same time, and the usage of such a measure in computation opens the way for quantum computing. The bit can be contained within the qubit, but the latter can encompass much more information due to the superposition; because of this, a quantum computer can carry out operations, and solve problems much faster than a digital computer can, and it can also contain much more information.

Constantini criticizes that information theory, because of its objectivity, rests on metaphysics and produces a functionalism that does not take into account free will, emotions and first-person experience;[40] another concept of information to be taken into account is that pertaining to Gregory Bateson, which can be stated as "the difference that makes a difference." Ashby coincides with the importance of difference in cybernetics, although he does not equate it to information. He says: "The most fundamental concept in cybernetics is that of 'difference,' either that two things are recognizably different or that one thing has changed with time."[41]

7. Computing in Neural Systems

Returning to the living, complex multicellular cognitive systems, which are endowed with nervous

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[37] S. Constantini, "Crítica al concepto de informacion," *Revista de Ingeniería de la Universidad Autónoma Mexicana,* año 35, vol. 3, p. 237, 2410, Universidad Autónoma Mexicana.

[38] *Ibidem,* p. 22, 23.

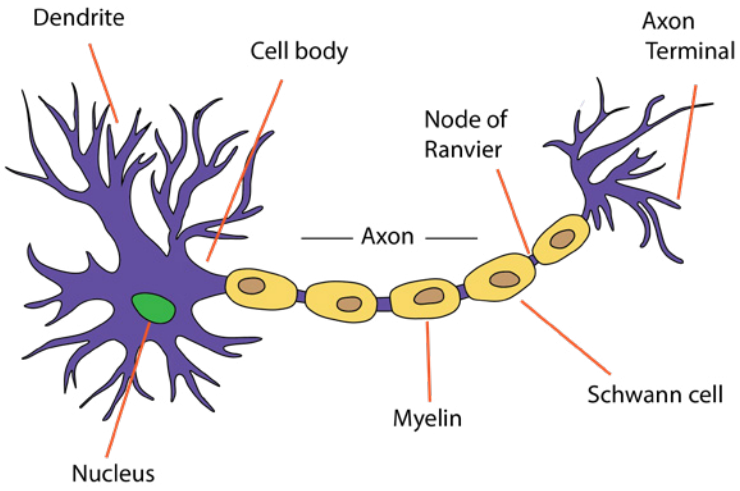
[39] *Ibidem,* p. 38.

[40] *Ibidem,* p. 39.

[41] W. R. Ashby, Introduction to Cybernetics, in S. Constantini, *Textos Básicos de Cibernética,* Universidad Autónoma Mexicana, p. 9, 2403.

systems, have a myriad of information processes taking place at each moment of their lives. A model of how neurons compute both in single instances and in clusters will be approached, as well as quantum computation by means of synapses and microtubules inside neurons.

A neuron is a cell which processes and transmits information through electrical and chemical signals with other alike cells by means of specialized connections called synapses; they can connect to each other and form networks. A typical neuron possesses a soma, dendrites, and an axon.[42] The soma is bulbous, while the dendrites and axon are filaments that emanate from it; the former branch profusely, getting thinner with each branching, while the latter leaves the soma at a swelling called the axon hillock, and can extend great lengths. Neural function is realized by the synaptic signaling process, which is partly electrical and partly chemical; these types of signals are transmitted by the axon and received by the soma and dendrites. Synaptic signals are excitatory when they make a neuron likely to fire a nerve impulse, and inhibitory when the affected neuron has the opposite action.[43]



Von Foerster states that neural machinery is functionally organized to establish from sensory information relations between observed systems and the system that makes the observation, which at the same time can modify the latter's behavior on the basis of existing information (be it of the external world or of internal states). This he takes to be the minimal case of a cognitive process, and he defines it as a "Cognitive Tile."[44]

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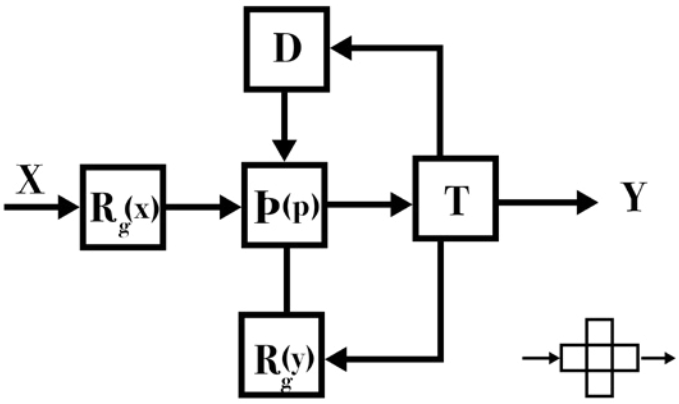
[42] Escuela de Medicina y Departamento de Ciencia Cognitiva, Universdad Autónoma Argentina, *Neurosciencia al alcance de todos,* p. 15, 2402.

[43] *Idem.*

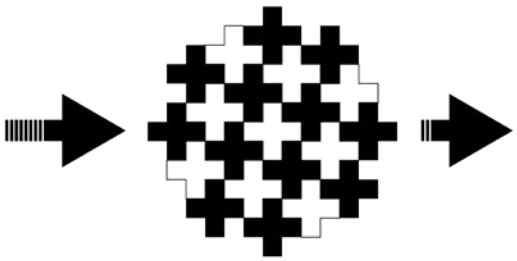
[44] Von Foerster, *supra,* note 23, p. 119.



A cognitive tile is a simplification of a cognitive process whereas an aggregate of simple processors (in this case, neurons) gives way to a specific mechanism. The left side of the tile represents perception and self-referential relations in the spatio-temporal configurations of stimuli and responses; the right side comprises what he calls one element T which translates the output into a universal "internal language" which other tiles can use; the top part has a delay loop that operates on the feedback that comes from the output, while the bottom has one loop that processes all the relational information of the system's actions in accordance with its goals. At the center of the cross, there is a finite function machine—an abstract machine that can find itself within a finite function of states, although only one at a time—that changes states according to the quantifications of the tile.[45]

Tiles may assemble one with another in order to form a tessellation and operate as a heterarchy, a non-hierarchical organization where they can be organized in different ways as circumstances demand. In the words of von Foerster:[46]

> *When in operation, this system shifts kaleido-scopically from one particular configuration of cooperating sets of adjacent tiles to other configurations, in an ever changing dynamic mode, giving the impression of "clouds" of activity shifting, disappearing and reforming as the task may demand.*



[45] *Ibidem*. p. 119, 120 and 121.

[46] *Ibidem, p. 123*.

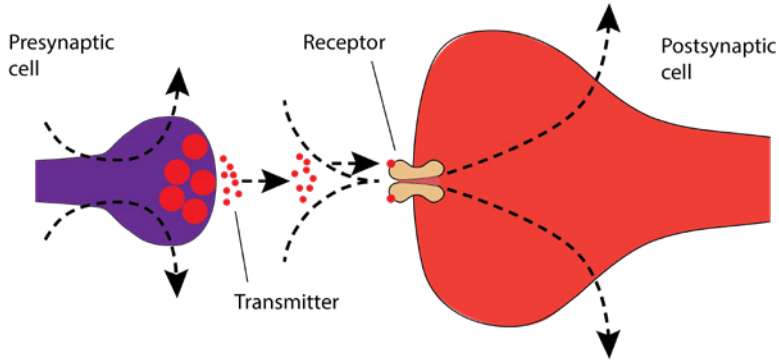
[47] J.A. Cabral, A. Martínez, P.P. Sánchez, A. Estevez, *Introducción a la Ciencia Cognitiva*, Universidad Autonoma Boliviana, p. 16, 2410.

One can take this idea of a tessellation and state that this process gives way to yet another mechanism-which Emily Eckhart called cognitive machines—which can process information in general, but also has specialized routines and functions that determine its identity and has a type of working memory that allow it to account for previous behavior. This seems to hold some water, for Stillings et al.—referring to human cognition—state the nature of the cognitive architecture of living systems as follows:[47]

> *The high degree of flexibility of human cognition requires that we think of much of the human cognitive architecture not as determining specific thoughts and behaviors but as an abstract set of mechanisms that potentiates a vast range of capabilities.*

Before the plight of humanity, there was an active interest in studying quantum information processing in nature. On the macroscopic scales—specifically in biological systems—quantum phenomena are usually subdued due to many factors, with heat interference being one of the most important, but now there have been instances of it in the human sense of smell, in photosynthesis and in the internal compass of birds.[48] Regarding the human brain, there have been theories of consciousness based on quantum computing in synapses and in microtubules in neurons; even if consciousness did not emanate from these processes, one has to be open to the idea that these forms of computation could intervene in other cognitive processes.

The first position of quantum computing in neural systems states that this process takes place within synapses, which are the interfaces for the propagation of signals between neurons; as was said before, signals can be transmitted in neurons electrically or chemically, and there are synapses for each. In the chemical transmission, there is a process called exocytosis that takes place when there is a release of a chemical transmitter called glutamate at the presynaptic terminal, which diffuses across a divide that exists between it and the postsynaptic membrane and binds to receptors at the latter. Some proposed that quantum processes are relevant for exocytosis and closely related to states of consciousness.[49]



Release of neurotransmitters at the synaptic cleft (exocytosis)

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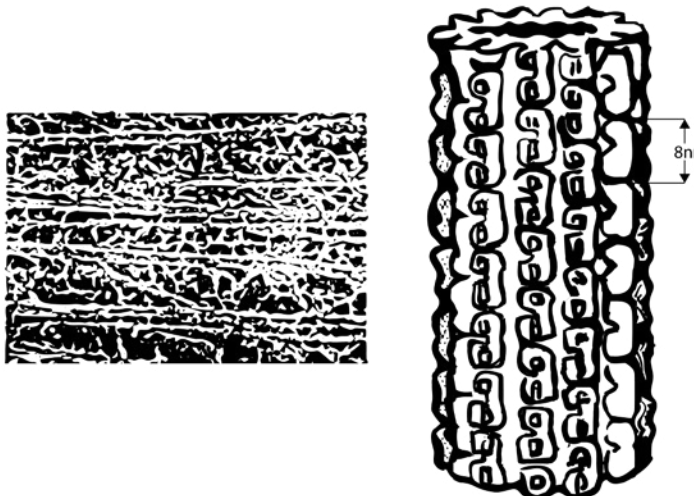
[48] J. J. Sánchez Vigo, Historia de la computación cuántica en la Vieja Tierra, *Revista de Ingeniería de la Universidad Autónoma Mexicana,* año 35, vol. 2, p. 114, 2410, Universidad Autónoma Mexicana

[49] *Ibidem,* p. 116.

[50] *Ibidem,* p. 122; This approach has been proven experimentally.

Another approach to quantum computing is that advanced by Hammeroff and Penrose in their Orch OR theory of consciousness. It takes place at the interior of single neurons, in protein networks made up of two kinds of structures: neurofilaments and microtubules, essential for transport processes. Microtubules are long polymers usually constructed of 13 longitudinal α and β-tubulin dimers arranged in a tubular array with an outside diameter of about 25 nm; tubulin states are assumed to depend on quantum events, so that quantum coherence among different tubulins is possible.



(left) Microtubules and neurofilaments, the width of the figure corresponds to approximately 700nm; (right) tubulin dimers, consisting of α-and β-monomers, constituting a microtubule.

8. Basic Cosmological Model

Archetypes are unconscious repertoires of behaviors that can be accessed by a cognitive system in their interaction with the environment. These are in part what we deem in animals as "inborn behavior" or "built in" into their cognitive systems. Human beings, being changed by their reflexive cognition, conceive these repertoires of information in a diverse way. Archetypes have been studied most prominently by old Earth psychologist Carl Gustav Jung in the realm of personal psychology, but they also have an important cosmological application.

Seen from a subjective perspective, the whole of the unconscious is comprised by archetypes: primordial concepts and behavior made conscious by a subject and which act as a medium between them and provide frames of action, behavior and knowledge to the observer by means of a dialectical process that results in either concepts or perceptually guided action, and are foundations of human action.[51] These primordial

[51] A. Estevez, *Introduccion a la Psicología de C.G. Jung,* Universidad Autonoma Boliviana, pp. 33, 40,42, 2400.
[52] *Ibid.,* pp. 7, 27,30, 58.

concepts are rarely questioned, but are reflected into myths, which across time and cultures have many aspects in common, as Jung points out. These rich repertoires of action are autonomous, personal and polysubjective.[52]

Consciousness can be understood as the unification of all cognitive processes and information into a single union of action and understanding by means of cognitive coherence; the unconscious comprises concepts, images, experiences, feelings and other cognitive contents that are not being used by the cognitive system. The unconscious can also be personal or collective.[53] Jung stated that the personal unconscious is formed by repressed or forgotten images, feelings and experiences, while the collective unconscious comprises "archaic or—I would say—primordial types, that is, with universal images that have existed since the remotest times." Archetypes are unconscious content made conscious and assimilated by the culture-and-history-bound cognitive system;[54] they are a bridge between the collective unconscious and a conscious cognitive system.

The collective unconscious is then a repository of behavior and concepts of the whole of humanity, unlike consciousness, which encompasses only a minuscule fraction. Jung states the contents of the former and its relation with the latter: "…it is sheer objectivity, as wide as the world and open to all the world. There I am the object of every subject, in complete reversal of my ordinary consciousness, where I am always the subject that has an object."[55] Both humans and animals have a preformed psych core, which serves as a basis for cognition; Jung speculates on "individual functions, especially those which derive directly from the unconscious predisposition,"[56] but I will only abide by the idea of an unconscious basic structure, which can be later filled and reconstituted by means of interaction with an environment.

Archetypes are not information in and of themselves, but rather, in perceiving and understanding them information is created. This process takes place by means of the constant repetition of typical experiences within the psyche, which at the same time is carried out by logical and experienced cognition.[57] Archetypes and the collective unconscious are then a series of abstracted objects and actions—that is, all possible ideas and behavior (what was, is, will be and could have been)—that when we interact with it, we make it a specific type of action. In relation to the observer, then, archetypes are all possible configurations of a specific idea or concept.[58] The conscious and unconscious are in continuous feedback, where they interfere and influence one another; the psyche is not homogeneous, as there are emotions, impulses and thoughts (both conscious and unconscious) that contradict each other and which are conciliated by cognitive coherence.[59]

Another interesting feature of archetypes is that they exist in a non-local plane—outside time and

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[53] *Ibid.*, pp. 3-4.
[54] *Ibid.*, p. 4-5.
[55] *Ibid.*, p. 22.
[56] *Ibid.*, p. 78.
[57] *Ibid.*, p. 31,32,40, 48.
[58] *Ibid.*, pp. 43, 44, 58.
[59] *Ibid.*, p. 104, 142.

space—and are not located within the brain of the observer. Initial interaction with archetypes then takes place by means of quantum computing and then is made actual by classical computing, both of which can take place in the human brain.[60] An elaboration of archetypes as non-local phenomena can be derived from Eckart.[61]

Because archetypes are acontextual and non-local repertoires of action that are converted into information by a contextual and localized subject, they process time in a different way than their recipients. Archetypes are condensations—so to speak—of the collective unconscious that communicate it with the conscious, and therefore, the collective unconscious processes time differently as well. Jung states this: "The anima and animus live in a world quite different from the world outside—in a world where the pulse of time eats infinitely slowly, where birth and death of individuals count for little."[62] Finally, archetypes are not repertoires that can be exhausted or fully defined; this is because they are a body of potentiality that can be defined in many ways and which transcends the context of the observer, although at the same time adapts to it.

Having seen all the ways in which living systems process information, we can see that one of the aspects of the Universe entails a local/non-local, entangled, parallel information processing system which is made by potential and actuality made effective by the wave function collapse brought forth by observations made by living systems. For this continuum of potentiality actualized by aware observation to happen, it requires certain parameters; time and space are then habits formed by the Universe, which in cognitive systems manifest as perceptual mechanisms that allow spatial and temporal reference as survival mechanisms.[63]

This being stated, the Universe is transcendental in nature, this word used in the sense that it goes beyond space and time, but also that it surpasses the reaches of individual human cognition. It is both mutually and self-observing at the same time; this may sound paradoxical to the reader, but it is the most accurate description at hand for a Universe that is in constant movement, change and flow.

This system is self-observing on two levels: 1) Living systems are information processing systems that by means of their cognitive processes create information which is stored non-locally and allows the Universe to experience itself from a subjective perspective, which may be called substantive self-observation; and 2) The Universe is formed in part by self-observing systems, which can be called formal self-observation. It is at the same time a mutually observing system on two levels: 1) Some of the living systems that form part of it mutually observe each other acting as social units, called formal mutual observation; and 2) From the perspec-

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[60] See R. Penrose, S. Hammeroff, *"Consciousness in the Universe: Neuroscience, Quantum Space-Time Geometry and Orch OR Theory" in Consciousness and the Universe. Quantum Physics, Evolution, Brain & Mind,* 36 and 37, (R. Penrose, S. Hameroff, S. Kak, eds.), Cosmology Science Publishers.

[61] See also M. Nichols, S. Vinogradoff, "Consciousness and the Quantum Hologram," *Philosophical inquiries on consciousness,* vol 35, pp. 935-936, 2012. Reedited by L. Armienta Palermo.

[62] C.G. Jung, Los Arquetipos y el Subconsciente Colectivo (Departamento de psicología de la Universidad Autónoma Boliviana) pp. 287, Universidad Autonoma Boliviana, 2400.

[63] Eckhart, *supra,* note 13, p. 108.

tive of the observer, they collapse the wave function of the Universe that turns possibility into actuality and thus brings forth reality, which is substantive mutual observation.[64]

The Universe is a flow of consciousness—understood as information created by cognition and the collapse of the wave function made by aware observers—of which living systems are part, one which feeds back to itself and that is a consequence of the relationship between the observer and the observed, between the knower and the known. This can be summarized in a very interesting way by manipulating a quote by Piaget made earlier ("The mind *organizes* the world by *organizing* itself") and stating it as a theorem: The mind organizes the Universe by organizing itself, while the Universe organizes itself by organizing the mind.[65]

Old-Earth philosopher Henri Bergson conceived consciousness as a continuous flow of change, which is temporal, ever-renewing and creative. He goes so far as to state that consciousness is time, and vice versa, although not thought of as a measure, but as subjective experience. This idea of experienced time is denominated *duree* (duration).[66] It is the indivisible convergence of many and one, an ongoing and changing temporal flux of awareness. In the words of Florenzi: "…it is a flowing that is ever new and always unpredictable; it is the continual, seamless, interconnected, immensurable movement of our awareness, manifesting, simultaneously, as both the knower and what it is known."[67]

Subjective and measured time are not synonymous: the former is a series of states of consciousness that flows, experienced time that cannot be measured, but felt; the latter is a measurement of a uniform external process that can be measured and distinguished into definite and distinct units that follow one another in a linear succession. One is quantitative, the other qualitative.[68] To him, time is not unified, and reality does not take place in a single dimension: There are a multiplicity of them manifested as planes of experience and levels of reality that possess a unique and changing temporal rhythm. Also, Bergson does not see matter and duration as two different things, but envisions the former as something similar to the latter and concludes that the external world is not split into atomistic parts, but rather is a dynamic, flowing, interconnected continuum of processes—that is, reality is a shifting, converging and interacting field of different patterns of *duree*.[69]

Consciousness and the physical world have several things in common: 1) They are dynamic systems, 2) they do not have clearly defined boundaries, and 3) their components overlap, interpenetrate and remain distinct.[70] If one understands that both time and space take place as a set of possible states that are later made into one by conscious observation, then one can think that the foundational matter of the Universe is consciousness: If conscious observation brings forth reality by means of the collapsing of the wave function,

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[64] *Idem.*

[65] *Ibidem,* p. 110.

[66] V. Florenzi, *Metafísica Bergsoniana e cognizione,* Universitá Lombardiana, Astronave Lombardia, p. xxviii, 2375.

[67] *Ibidem,* p. at 6.

[68] *Ibidem,* p. 28.

[69] *Ibidem,* p. xxix, xxx.

[70] *Ibidem,* p. xxx.

the Universe at first existed as a series of potential Universes that collapsed into one the moment in which one of them developed an observer, and after this, there is a retrocausation of its history before the collapse. Stated in another way, if a system is not observed, it develops a series of possible states that have a history of their own, and when one of those is made actual, its development is caused by the observation as much as the development that it had as a potential state.

What became actual in this primordial collapse, along with the history that was retrocaused by the collapse, was the Universe: a total information processing system that functions on quantum entanglement, non-locality and coherent emission/absorption of photons, that stores information in a zero-point plane (an archetype).

Consciousness functions as a loop: when the observer collapses the wave function he does so by means of aware observation which is information processing, and brings forth an actuality, which he understands within an internal framework of information, but at the same time, the observer that brings forth the actuality is part of an information processing system made of condensed consciousness, besides being one processor himself and part of the potentiality that collapsed into actuality.

9. The Actualization of the Universe via Living Systems

In a way, the Universe can be understood as an information processing system that is objective, subjective and polysubjective; it appears to be an evolving, adaptive system that utilizes information to organize itself and to create ever-increasing levels of complexity. All living systems are a part of it and cannot be separated from it, nor can they avoid being interconnected with it all. This system appears to have bootstrapped itself not only into existence and uses sentient beings to know about and experience itself, and in a sense, the latter are able to influence its evolution.[71]

[71] Nichols, Vinogradoff, *supra,* note 60, p. 962.

On the spaceship Lombardia, Vitaliano Altovito posited a biocentric theory of the Universe that had echoes from the old Earth and which departed from the fact that the laws of the Universe are fine-tuned to support life, and thus the Universe is designed for life at all levels, because what brings it forth from a state of probability to one of actuality is the existence of the observer. Deprived of conscious observation, matter would exist only in an undetermined state of probability, so the Universe preceding consciousness would only exist as a series of possibilities.[72]

Living systems then have a cognitive system that uses both the help of quantum and classical computing to collapse the wave function and bring forth an actual material state. This could be called the "Gaia principle," which summarized means that without life, the Universe cannot exist as actuality, but rather as a possibility. It also means that the Universe existed in a probability state until there existed a living being capable of collapsing it into actuality, and when that happened, the Universe was retrocausally created.[73]

The collapse of the wave function takes place by means of an interrelation of quantum and classical processes as a choice between existing possibilities; this can only come from awareness, because it implies a subject-object split that comes to be through the subject considering itself to be separate from the objects of experience by means of a self-referential choice that is illusory, as consciousness is a continuum.[74]

All information processing relates into a system in which there is no hierarchy, but rather a tessellation of different types of cognitive processes and agents that range from conscious to unconscious. This means that the Universe is a producer of living systems and at the same time produced and maintained by them as they observe. Put in the simplest of terms: everything small is just a small version of something big. At all levels, the Universe is an information processing system and can be studied as a whole by means of that feature, and all this can be summarized by the following theorems:

- "Anything that happens, does so before an observer"
- "Anything that happens, does because of an observer"
- "Anything said is said by an observer"
- "Anything said is said to an observer (by another)"
- "The mind organizes itself by organizing the Universe/The Universe organizes itself by organizing the mind."

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[72] *Ibidem,* p. 110.

[73] V. Altovito, *Teoría biocentrica dell'Universo,* Universitá Lombardiana, Astronave Lombardia, p. 81-83, 2375

[74] G. Ravichandran, *The Universe as a transcendental information processing system,* Victor Travail et Fils, 1992, pp. 64, 73; G. Ravichandran, *A philosophical framework for the integration of science and spirituality,* Victor Travail et Fils, 1995, pp. 27, 30.

CHAPTER 10: MEMORY I

The first thing to note about memory is that it entails many different phenomena that take place through a multitude of biological processes. Overall, memory is what generates and maintains the interactive process between an observer and the world, where the former flows as a continuum of information and the latter discriminates those of practical importance, which allow it to retain its integrity—that is, to distinguish themselves from the environment. It is the catalyst of this process because it allows the possibility of choosing the information, and is what binds one moment of experience to another by bridging the past to the present; it also operates as specific recollections of prior events or as bodily reflexes; it shapes consciously and unconsciously the present experiences of the cognizing subject.[75]

1. Different Types of Memories

What we understand as memory at the level of the cognition of living systems comprises several types of memory processes and mechanisms that are interrelated with one another and then unified into an experience of conscious self. A standard cognitive science publication tells us that there is sensory memory, which can retain sensory information for up to a second after perception; a working (or short-term) memory which can hold up to a minute, and long-term memory, which has the potential to retain information indefinitely. In human cognitive systems, short-term memory is encoded acoustically, while long-term is semantic in nature.[76]

At the same time, perceptual memory is also a specialized form of memory that forms part of these three types of memory. Memories are part of the perceptual processes of the subject and the way excess information is discriminated; they are also underneath cognitive processes. Overall, as there are different types of brain functions that interact with one another, there are correlated memory mechanisms that have a similar dynamic and which sometimes lead to specific functions. If we make a classification by function, we can categorize the different memory mechanisms into the following discernible memory types:[77]

1. *Procedural memory:* It refers to the memory mechanisms that comprise skill, habit and procedures. It is the "remembering how" we do things; this encompasses both rigid and automatic conditioned and open, context—and subject—dependent memories.

2. *Semantic memory:* It involves the remembering of facts and the information that constitutes general knowledge.

3. *Episodic memory:* It is the processing of experienced events; they are always expressed as happening to the subject and it is the contact that we have with the "past."

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[75] H. Bergson, Matière et mémoire: Essai sur la relation du corps à l'esprit, Paris, Presses Universitaires de France, 1939, p.195.

[76] T. Garza de la Garza, J.M. Treviño Garza, P. Garcia Garcia, *Introducción a la ciencia cognitiva,* Universidad Autónoma Mexicana, p. 20, 2392.

[77] T. Garza de la Garza, J.M. Treviño Garza, B. Treviño Treviño, *El estudio de la memoria,* Universidad Autónoma Mexicana, p. 32, 2400.

The conjunction of semantic and episodic memories can be called declarative memory and be used to describe the way we represent the world and past events that have befallen us. Nondeclarative memory complements the latter memory mechanisms as it applies to the way we go about things. Another classification of memory is that of explicit and implicit memories: The former are the memories that you can access consciously, while the latter are automatic memories without an aware subject.[78]

As we mentioned before, cognizing subjects are the product of the tension between action, cognition and perception and the environment that surrounds the subject. As we can see from the way we classified all these different mechanisms, the role of memory is to act as a reference point for the subject who is in constant feedback with an environment. That is, there is an internal feedback taking place in the subject, but also an external one.[79]

This means that all forms of memory presuppose a subject that perceives, acts and cognizes, but at the same time they presuppose other forms of memory. In short, by presupposing themselves in a subject-oriented flow of information, memory mechanisms are recursive, for they partake in self-similar descriptions.

2. Memory and the Observer

Von Foerster says that there are two recurring terms in discussions of memory, which are used interchangeably, but have different natures:[80]

1. *Storage and retrieval:* Refers to the storage of documents and signs that do not store information by themselves—rather, such information is constructed or recalled by an observer.

2. *Recognition and recall:* It refers to the cognitive process of creating, recognizing and recalling information from a vehicle that possesses signs.

This means that with memories, the observer is constructing and reconstructing the information, instead of the information existing in these repositories. Information is observer-based and self-referential as it arises in relation to who cognizes. This leads us to the conclusion that memory entails a reconstructive process—that is, we never recall the "same" memory twice in the same way. This also entails that there can be false memories or recollections, which can stem from a faulty reconstructive process and lead us to think we have experienced events before (déjà vu) or lead us to pass old memories as new ones (cryptomenesia).

Let us unpack this argument further.

First of all, as was said before, living systems are those that fulfill *autopoiesis*—that is, those that

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[78] Ibid., p. 50.

[79] Ibid., p. 62.

[80] H. von Foerster, *Entendiendo el Entendimiento,* Universidad Autónoma Mexicana, (J. Reynoso, trad.) pp. 102-104.

produce their own components, which they do by means of distinguishing themselves from an environment. The creation (and maintenance) of this distinction is self-referential in nature and entails cognition, a series of ongoing computations that are recursive in nature. Memory is what helps to keep the subject environment distinction through time, as it is the anchor which the cognizing subject holds on to.

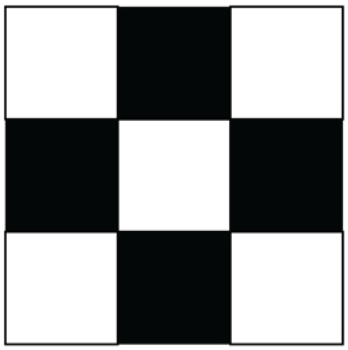
Life and cognition are codependent: To live is to compute and to compute is to live; however, both are yoked in subjectivity and the latter at the same time finds its basis in memory, which at the same time finds its basis in biological processes which give way to cognition. Life/cognition subjectivity and memory all work in a circular dynamic.

Because living systems are thermodynamically open, then the memory processes that they partake in their coenactment with their environment by means of action-perception-cognition are also bound to these laws. That is, memories in a subject are yoked by the laws of physics. Memories are self-referential in nature as well, and because they are bound to cognition, they are part of a constructive/reconstructive process in the way that von Foerster signaled.

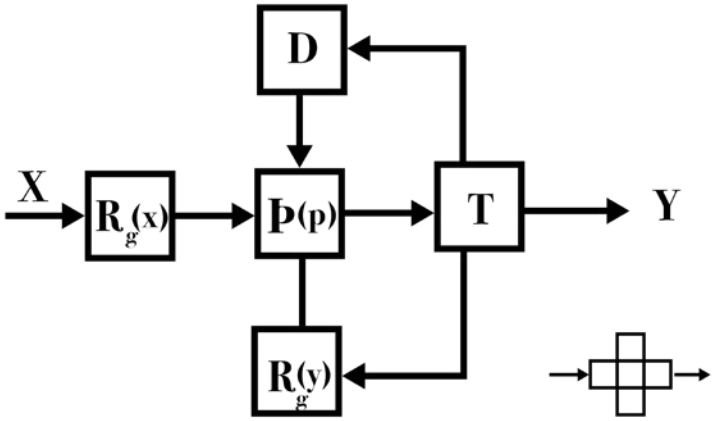
3. Cognitive Foundations of Human Observation and Memory

Now that we have addressed some general features about memory and its work in a cognizing subject, it is useful to explore the neural dynamics of said processes in human beings. That is, in this section, I will make a brief exposition of how the cognitive processes come about in the human nervous system, and then I will connect it with memory.

Again we return to the neuron, which processes and transmits information through electrical and chemical signals. Said information is encoded as bits, which can be understood as the on and off states of a neuron or as 0's and 1's. Von Foerster states that neural machinery is functionally organized to establish from sensory information relations between observed systems and the system that makes the observation, which at the same time can modify the latter's behavior on the basis of existing information (be it of the external world or of internal states). This he takes to be the minimal case of a cognitive process, and he defines it as a "Cognitive Tile."[81]

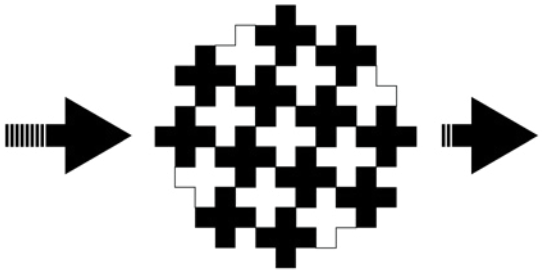


A cognitive tile is a simplification of a cognitive process that entails an aggregation of simple processors (in this case, neurons). The left side of the tile represents perception, self-referential relations in the spatio-temporal configurations of stimuli and responses; the right side comprises what he calls one element T which translates the output into a universal "internal language" which other tiles can use; the top part has a delay loop that operates on the feedback that comes from the output, while the bottom has one loop that processes all the relational information of the system's actions in accordance with its goals. At the center of the cross, there is a finite function machine—an abstract machine that can find itself within a finite function of states, although only one at a time—that changes states according to the quantifications of the tile.[82]



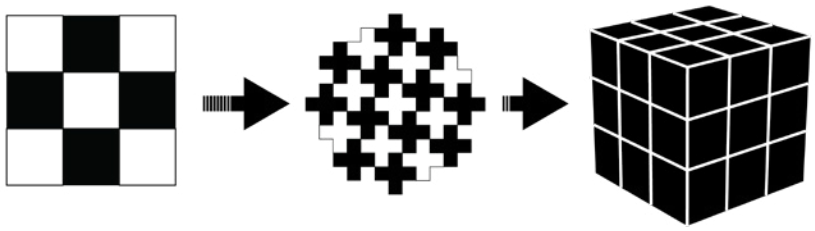
Tiles may assemble with one another in order to form a tessellation and operate as a heterarchy, a nonhierarchical organization where they can be organized in different ways as circumstances demand. In the words of von Foerster:[83]

> *When in operation, this system shifts kaleido-scopically from one particular configuration of cooperating sets of adjacent tiles to other configurations, in an ever changing dynamic mode, giving the impression of "clouds" of activity shifting, disappearing and reforming as the task may demand.*



[81] *Ibid.*, p. 119.
[82] *Ibid.*, p. 119-121.
[83] *Ibid.*, p. 123.

One can take this idea of a tessellation and state that this process gives way to cognitive machines, which can process information in general, but also has specialized routines and functions that determine its identity, and has a type of working memory that allows it to account previous behavior. Tiles, tessellations and machines all have a degree of closure, as they are functionally differentiated from other units; however, as more complex forms take place, closure becomes more pronounced. To understand this process, we may visualize it as follows:



Cognitive machines are then neural mechanisms of increasing autonomy that perform particular functions; because of the plasticity of the brain and neurons, the same tile or tessellation can perform different functions as part of different cognitive machines. These machines have functions like different types of memory, perception, face recognition, self-recognition, mirror neural mechanisms and others, and as we said before, they work heterarchically, but are coordinated by consciousness into a basic state of sentience and awareness, which unifies the existing information that different mechanisms in the brain utilize to perceive the surroundings of the subject. Old Earth scientist Ned Block made a distinction between two types of consciousness:[84]

1. *Phenomenal consciousness, or P-consciousness:* It consists of the experiential states that the cognitive system has. A state is P-conscious if it has experiential properties, and the totality of the experiential properties of a state are "what it is like" to have it. It cannot be defined in a non-circular way.

2. *Access consciousness, or A-consciousness:* In this state information is ready for a cognizing subject to use, that is, information can be used and retrieved by means of introspection and can be used for verbal communication, deliberation and self-control.

The interplay between A and P consciousness can be called awareness and consists of a mechanism that allows the coordination of all cognitive machines and their independent information processing; that is, it is a "cross-talk" mechanism.[85] Morsella and Jantz state that because there are many quasi-independent computers in the brain (in our terms, cognitive machines), which can perform several complicated actions and influence action in general, consciousness acts as a WiFi system to integrate the different processes in the brain and give way to adaptive action.[86]

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[84] N. Block, *On a confusion about a function of consciousness,* en T. Garza de la Garza, Textos Básicos de Ciencia Cognitiva, Universidad Autónoma Mexicana, p. 122, 2400.

Shevrin resonates with this and defines consciousness as an irreducible experience associated with different psychological states but is not to be confused with the latter's functions. Both definitions are correct, but they grasp different aspects: While Morsella and Jantz comprise the biological aspects of consciousness as a cognitive machine, Shevrin touches more on the informational aspects.[87] An important aspect of cognitive machines is that because each of them are functionally specialized to perform different functions, they entail different types of sign processing, and thus speak different "languages," which consciousness, in its coordinating function, must interpret and translate, with the risk of some information ending up lost in translation.[88]

Consciousness also influences identity, as the unification of information created by both types of cognition is done in a self-referential way in the unification of the "I" as subjective experience and the "me" as the objectification of the subject into the self. At the same time, identity influences consciousness as it functions as its frame of reference. Regarding the scope of the subjective, Morin enunciates two principles that are useful for this task:[89]

1. *Exclusion principle:* Only the observer can say "I" for himself, that is, only he is capable of self-reference. The "I" is something banal and unique at the same time.

2. *Inclusion principle:* It is inseparable from the latter and consists in the possibility of integrating individual subjectivity into a collective one, that is, a "we."

Consciousness has a biological component and an informational component. The latter can be understood as the interplay of four different cognitive mechanisms: one which unifies all the input of other cognitive machines (phenomenal consciousness), another that makes said information retrievable in introspection (access consciousness), another which ensures the coherence of existing information processing by uniting it into a single viewpoint (identity) and another that comprises the means of transmission of the existing information to other cognitive systems (sign processing).

All these machines then tessellate into a larger mechanism, which is the embodied human brain, in

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[85] Ezequiel Morsella, Tiffany Jantz, "Conscious States are a Crosstalk Mechanism for Only a Subset of Brain Processes" en Consciousness and the Universe. *Quantum Physics, Evolution, Brain & Mind,* (Roger Penrose, Stuart Hameroff, Shubash Kak, eds., re-edited by S. Constantini), Original year not known, Universidad Autónoma Mexicana, pp. 83, 85, 2405.

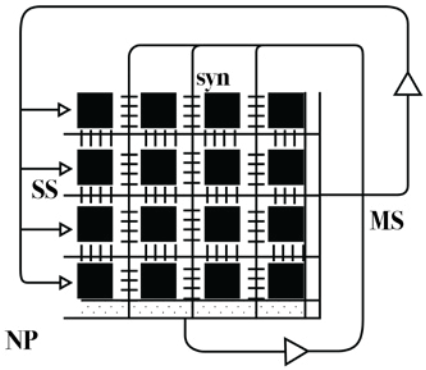
[86] *Ibid*. p. 88.

[87] Howard Shevrin, "What does Consciousness do?" en *Consciousness and the Universe. Quantum Physics, Evolution, Brain & Mind,* (Roger Penrose, Stuart Hameroff, Shubash Kak, eds., re-edited by S. Constantini), Original year not known, Universidad Autónoma Mexicana, p. 186, 2405.

[88] R. Joseph, "Quantum Physics and the Multiplicity of Mind: Split-Brains, Fragmented Minds, Dissociation, Quantum Consciousness" en *Consciousness and the Universe. Quantum Physics, Evolution, Brain & Mind,* (Roger Penrose, Stuart Hameroff, Shubash Kak, eds., re-edited by S. Constantini), Original year not known, Universidad Autónoma Mexicana, p. 344, 2405.

[89] Morin, *Ensayos sobre Complejidad,* Universidad Autónoma Mexicana, (G. Rodríguez Prieto trad.), p. 75, 2324.

which there is closure, both in the form of self-reference as a distinction between subject and environment, but also a second-order subjectivity in which the human subject is a body and has a body at his or her disposal. This closure is visualized by von Foerster, who made a model of basic neurophysiological functions, in which the N squares are tiles that synapse with others, with the space between squares being synaptic gaps. SS is the sensory surface of the organism, MS is the motor surface, NP is neuropituitary. When the organism recursively computes itself recursively, we see that the schematic on the left transitions to the one on the right.[90]



Memory as a reference point for general information processing of a cognizing and acting subject is also a cognitive machine; however, it is also the case that cognitive machines have their own memory function. At first glance, this seems to be a contradiction. However, this is so because memory as cognitive machines has a particular nature regarding others: All these machines have in themselves a temporary memory that stores information which is then channeled to the main memory, and at the same time, all of them have a form of sign processing, which is then unified by the main one and used in tandem with memory to make the whole multiplicity of systems work,[91] which are all then unified under consciousness and awareness. Because all these mechanisms imply within themselves memory, memory as a cognitive machine is self-referential.

Micro-Level Model of Memory

Memory can be understood as the conjunction of different cognitive mechanisms that function as a reference point for an observer to act within time and space, and is a dynamic process that allows a subject to construct and reconstruct their world by going back to past events and by storing information of past events. Memory is a biological process and is subject to the laws of thermodynamics, as energy is needed for it to function and when used, it generates entropy and energy needs to be replenished.

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[90] H. von Foerster, On Constructing a Reality, en S. Constantini, *Textos Básicos de Cibernética,* Universidad Autónoma Mexicana, p. 388, 2403.

[91] Joseph, *supra,* note 15, p. 325.

Despite not being touched as a topic, memory can take place in all living systems, regardless of their having a neural system or not. Memory processes can be understood in the time frame in which they take place (short, mid and long-term memory); they can be also understood by means of the function they perform, stemming from automatic reflex processes to the active recalling of subjective experience.

In human beings, memory comprises a series of functions embodied in a neural mechanism, as well as the secondary functions in other neural mechanisms, and all of these are later coordinated in a heterarchical process that leads the subject to think that a collectivity of processes is, in reality, a single, seamless thread of information. In reality, memory is an imperfect reconstructive cognitive process that can have instances of misfiring or of false memories.

OUR LADY OF RECURSION

It was a sunny morning in Mountain View, California: birds chirping, the wind gently swaying the trees and rustling some leaves, you know, all that shit. I was having a good morning so far, as I was properly caffeinated and had had a great night of sex. All was good until I heard the doorbell, and opened the door to find the human embodiment of a bad penny.

Samsara Jones. White bleached hair and eyebrows, lashes black like the night and the standard issue 2010's supermodel face: colored eyes, high cheekbones, thick eyebrows and them pouty lips. Known also as the Queen of Troubles, or in gamerspeak, "Q33n o Trblz," it was a sobriquet that she fulfilled in more ways than one. She was one of the world's foremost LoL players, and her team EzPz ruled the NA server with an iron fist.

She was the daughter of neo-neo-hippie parents—you know, former rich kids that went to existential festivals with flowers on their heads, feathers and birds and infinity sign tattoos, and "Indian" attire—that kind of shit, and listened to bands that listened to the Brian Jonestown Massacre, whom in turn listened to the actual 60's 70's. This explained her name, which meant "wandering," but also referred to the endless karmic cycle of reincarnation that people must break from. To be exact, a "cycle of aimless drifting, wandering or mundane existence," which was probably not what Mom and Dad intended.

She rebelled by being a gamer and as she was good looking she got (wanted and unwanted) attention, objectification, and of course a modeling contract and celeb friends. She was actually better adapted than most pro gamers I knew, and usually did the shallow shit that you attribute to actresses and singers: date hunks, go to parties, get shitfaced. She also dressed more like she was in a rock band. However, she wasn't just a gaming force of nature- she was also one of the most gifted polymaths I knew.

"Samsara Jones," I said.

"Elvis Jr. Jr.," she answered.

Technically I was Elvis III, as my father was Jr., but it became a nickname of sorts while growing up that I ended liking so much, that it became my legal name. Like those before me, I followed the way of the pompadour and blasted rockabilly and psychobilly in my house, heart and headphones. Although I was a self-taught polymath, I made a living as a freelancer that solved all sorts of problems for big tech companies, and sometimes foreign governments, or others. I could do this because I was a much more flexible thinker than some R&D departments or engineers. I had a crew of likeminded weirdos, who confederated to work on the bigger jobs, and we worked under the moniker of the *8 Immortals*.

"…your pompadour looks subpar today," said Samsara.

"I just woke up. So… this is unusually early in the morning for you," I replied, taking a sip of my coffee.

"I just flew in from London."

"I'm guessing this is a matter that couldn't be delved into over an encrypted email."

"That's correct."

"Come in, then, I guess. Want some coffee?"

"Would you have any energy drinks, by chance?" she said.

"Fucking gamers… You need to learn to appreciate a good cup of coffee. Why don't we start today?"

We did have energy drinks, but she did need to appreciate good coffee. As we settled in the kitchen, down came my love, groggy and probably desperate for a cup. The sight of Samsara stopped him straight in his tracks.

"Good morning, Pedrín."

"Good morning, your majesty."

Iñaki Pedro Abadezanena (don't expect me to pronounce it right) was my boyfriend, and he would be my husband if not for his intense anarchism. We bonded over our love of hardcore punk. Very Basque, so boyfriend, much gay. He was one of the most awesome engineers I knew, and was also a bit of a contradiction, as he was a staunch Basque nationalist, but also a staunch anarcho-syndicalist. He was handsome, with short salt-and-pepper hair, perpetual five o' clock shadow, and slim and athletic form.

"Another business opportunity, I suppose," he said.

We recently created a skill training program and system for Samsara's LoL team, based on Gordon Pask's Conversation Theory and its implementation in THOUGHTSTICKER. He was so innovative that decades later, it was still fresh as ever. Samsara paid diligently (and well), but she kept tinkering with the request, being more of a nuisance than actual trouble.

Pedrín and I looked at each other.

"What?" she said. "Money don't spend?"

"It's not about money," said Pedrín. "I'm curious to know what brought you here from wherever, when an encrypted email would have sufficed. Verily, it must be something illegal or something that would be, in an ideal world."

"I just happened to walk by," she said with a sheepish smile.

"From London," I interjected.

"Fine! But it's not illegal."

She started to pull notebooks out of her black military bag. She turned on her laptop and brought out a portable holographic projector. Pedrín started reading the notes and whistled, then proceeded to grab a cigarette, light it, and take a deep puff.

"Oh my sweet Lord Jesus," he said, letting all the smoke out and doing the sign of the cross.

Samsara kept messing with the projector until it finally gave her what she wanted: a massive neural network projection. There was this old, really shitty movie called *Iron Man 3,* from the superhero heyday, and in it, there was a scene where the villain shows a hologram of his neural network. Samsara's made it look like a poor imitation. More than an organized network, it looked like a cluster of constellations—it was a 3D map of the neural composition of the whole human nervous system.

"Oh, you crazy bitch," I said. "You did this?"

"Yes," she said with pride.

"Amelia," I shouted over my shoulder. "Get your ass down here right now!"

She came almost immediately down the stairs, in full gym gear, ready for her morning run.

"Samsara, you remember Amelia Clock, my Padawan learner."

Amelia was my apprentice, a polymath like me, and aided me in many things. She was quite good at drawing and sculpting, as she was with electrical circuits and computer programming, and more. She was my pride and joy. She was the daughter of a neglectful techie business couple that lived down the street, raised mostly by au pairs that spoke Spanish. As she grew up she saw me and later Pedro tinker with stuff, and she struck up these deep conversations with the two of us. When she was 15, she emancipated from her parents, who wanted to move to New York. Ever since then, she lived in our house. She loved to work out, and painted her hair all types of colors, and tried all sorts of pixie cuts. She was non-binary and loved to dress androgynously, sometimes in pseudo-suits with ties and bolo ties, and other times in elaborate, wispy dresses.

"Amelia, this is, as you know, Samsara Jones, gaming superstar and blah, blah, blah…"

Despite knowing her, Amelia looked a bit star-struck.

"Get your shit together, goddammit," I said, tapping her head gently and pointing a finger at the hologram. "Will.you.look.at.*that?"*

"Sweet Yoda," she said in awe.

"How did you do this?" I said.

"PET scan, CAT scan, heat signature analysis, a lot of shady coding for processing that shit, and also, I injected all my nervous tissue with a non-lethal, non-contagious virus that made these proteins that turned my brain cells fluorescent. I correlated all these things and others, and this popped out."

"As educational as this is, this isn't PBS. What's the plan?"

"I want to use this to create a strong AI in order to produce a sparring partner."

"One," I said, "you can't create strong autonomous AI. Two, all of this—very impressive—work, just to create a sparring bot?"

"One," she said, "yes you can. Two, *yes.*"

"You can't make a strong AI, at least not in a computer, because consciousness- and we could talk for days on end about what I mean by that- comes with an embodied, subjective, cognitive system, with a memory capability that goes beyond store and recall."

"Also, Searle's Chinese Room Argument, boss," said Amelia.

"Yes, thank you. A program can't give a computer a mind, regardless of how intelligently it may make it behave, because computers don't process meaning, only symbols, which in the end are pure distinctions. And this is why she's my Padawan learner."

She beamed proudly.

"Well," she said, unimpressed. "If someone can make it happen, it's you lot."

Both my mom and Pedro's dad were having serious health issues and bills were threatening to pile up. As uncomfortable as this request made me feel, we needed the money. Besides, if it was enough, I could also start a small fund for Amelia's undergraduate education.

"How much?" I inquired.

"8 million, plus equipment," she said.

More than enough.

"Half up front and half when you finish. I keep the rights to the technology, which will be of my sole personal use. If I do commercialize it, you guys get 10."

"15," I said.

"Whatever, man," she said after taking a small sip of coffee, actually appreciating the taste and deeming it good.

"We might use some stuff that's prototype, which is not yours," said Pedro, my man.

"Deal."

After hammering out some other small business details, and putting it all on paper for my lawyer to formalize into a contract, with some vague terms as to what the request really was, Samsara returned to the problem at hand:

"I have the neural map—I use it to create programs that work well with inductive and deductive logic, but there's already a lot of misfiring, and it goes bonkers when I try to run it by abductive logic."

"Of course it can't," I said. "You want me to work on an algorithm."

"Duh."

"To get what you want, or whatever that can come close to it, you have to get two assumptions out of the way. One: The brain is not a computer, but rather is a body that perceives, cognizes and acts, with subjective memory as a reference point, not a retrieval mechanism.

"You want strong AI? You need a body and an environment. You also need a memory system that works like one of a cognitive system, where information is not recalled, but rather rethought and constructed.

"Two: The world might not be made strictly out of matter, with consciousness being an epiphenomenon. It might be the other way around."

"Yeah, well, that sounds sexy and whatever, Luna Lovegood, but you need abductive logic for that first thing. And it seems that you need all those things to get abductive logic."

"Recursion is key," I said. "Organize everything in a self-referential, self-similar way."

The room went silent.

"Damn, pompadour," Samsara said, "You *scary*. You worked out something that I've been tackling unsuccessfully for two months in *10 minutes*."

"Of course I am, it's what I do for a living. Listen, you need three dimensions of self-reference to make this work out. This isn't a thing that can be handled as an externality."

"Go on."

"First level. The system must calculate self-reference in a way that it distinguishes itself from the environment. Second level. Otherness. It's able to distinguish and empathize with others. Third level. Self-recognition. It must be able to distinguish itself in a mirror—it must compute that it is a body and has a body at its disposal."

"On the hardware front," said my man, "we can use a prototype of neuromimetic circuits that I worked for at IBM, and that I improved where they failed. We'll need a really top-notch 3D printer. We can get some perceptual programs and algorithms from some friends of mine that handle waifu bots, and a couple more things, but overall, I think we have something workable."

Samsara left her notes and laptop, which were a copy and explained all of her work so far. She set the condition that we wouldn't inform the rest of the Immmortals. It was just Pedrín, Amelia and me. As we spent a week prepping the workshop, which consisted of the house next door, our toys arrived in the mail.

Pedro went to work with 3D printing all these small-ass hyperdetailed neurons, which were encased in this artificial skeleton, a protective frame and the perceptual system out of a high-end waifu bot that came in the mail.

I worked both on a memory interpretation and abductive logic algorithm. We tested them constantly with different degrees of failure, but as time progressed, we got closer to the goal. Step by step, Amelia, being more of an artist and humanist than I, took advantage of Samsara's occasional visits and made the waifu bot's upper body encasing almost identical to her. The waifu bot we were using came with arms and legs, but we took them out in case we ended up creating a murder bot. This wasn't the Age of Ultron, you know.

It took us a year and a half in total to get a working prototype of Samsara's request. The client came, of course, to the maiden voyage, making time out of her busy competition/advertising/modeling schedule. We gave it a try and turned it on, and the robot responded in a very human way, eerie shit that pricked the hair on the back of your neck and made your nuts shrink to the size of raisins.

Samsara was enthralled and stepped closer to our creation. She put a mirror in front of it and asked.

"Who is that?"

"Me," the bot answered.

"Who are you?" Samsara asked.

"You," said the robot.

Undaunted, Samsara plugged Samsarabot to a keyboard and mouse, pursuant to my no-arms policy, and we pitted her against the original in a series of three games, where the latter was victorious, but you could see that each time, the former adapted. Samsara was impressed, but not entirely happy.

"It doesn't have my experience…"

Hoe, don't do it—!

"We need to give it arms. And my memories."

Oh my God.

"Absolutely not," I said. "No fucking way. Tomorrow you're taking that thing and getting the fuck out of my house. I completed what you requested."

"Fine," she said, irritated, "I'll pay you today."

"As you should."

Pedro, Amelia and I would split the money and homegirl would have enough funding to get to a PhD if she felt like, or maybe some startup money.

"Let me sleep here. It'll be midnight soon and it'll be really difficult to move my shit."

I didn't like this. I was sure she'd try some stupid-ass stunt. Amelia looked at me with puppy eyes, while Pedro reasoned it was the human thing to do. We let her stay in the house and after a brief supper, we all went to sleep. Amelia woke me at 6 a.m.—she'd heard a loud scream coming from the house next door, which was near her side of the house. We all rushed to the workshop to find her right arm with three makeshift plugs connected to the bot, which had arms and blood on the fingertips.

My own abductive logic threw out this result: This dumbass had probably pre-sequenced her memories before coming here and somehow put them into the bot. She also gave it arms. Then she ran some matches and the bot probably improvised some plugs, rammed her into her arm already plugged to it, in an attempt to overtake the real Samsara, as it realized it wasn't the original, but had the compelling need to be her… and now we had a convulsing superstar gamer who tried to play God, writhing on my carpet floor and staining it with blood.

"We need to unplug her," said Amelia.

"No," I said. "If you do it, she'll probably die from the shock."

"If we don't, the bot will probably kill her and supplant her."

"I think she's gonna win this fight," I said.

"Oh," said Pedro, giving me sass, "now you have faith in mankind?"

"Not really," I said, "it's just that she's better designed. I believe that humans have a fourth degree of self-reference that involves the brain not only engaging in classical computation processes, but also in quantum computing with the Universe or whatever the fuck. This explains things like imagination and feelings, which aren't explained in terms of *yes* or *no* or differentiation, but rather as shades of something, or sometimes as indescribable things. For instance, Nirvana is just a pure state of QC. She didn't map the quantum processes, just the classical computing to which it's correlated."

"So, basically, this is a classical computer versus a classical/quantum hybrid."

"It's obvious who'll win."

Suddenly, the robot's face changed into one of despair.

"I'm not sure I want to play this game anymore, *onee-chan*… b-be gentle?"

It turned down as Samsara moaned and groggily tried to get up. I looked at her with suspicion.

"It's me, you asshole."

"How many fingers am I holding up?" I said, flipping her the bird.

"I don't know about you," she said, crossing her arms, "but I'm holding two."

As she said that, the bot flipped me off with both hands.

"So, you're a technopath now?" I said, unimpressed. "You've now made the full transition to a power-hungry, corrupt robot that will stop at nothing to get her way. Congratulations, honey—you're Hillary Clinton."

"Not only that, my reflexes and temporal perceptions went out of whack. For a moment I experienced a minute like it was a day. We need to run some tests."

"No, you need to pack your shit, get the fuck out and never come back."

"What happened to that?" Amelia said, signaling the encasing.

"It tried to assimilate me, but I did it to her," she said poking at her raw arm wounds.

"So you turned a horrorbot into a horcrux?" I said.

"I made a secondary AI that maximizes my reflexes and allows me some vague control of technology from a distance. Check this out."

I got a message on my cellphone. It was from Samsara, and read *Fuck you*. She looked at me, smiling sarcastically, waving her empty hands.

Eventually, the Queen of Troubles did get the fuck out of my house. From what I later found out through Pedro, who still kind of talked to her and did an odd job or two for her, she improved the plugs and reduced the robot into a pocket supercomputer that piggy-backed into her nervous system, subverting the need for the original waifu bot torso. She encased this supercomputer into an artificial radius and ulna and installed it into her arm, later covering it up with a tattoo sleeve. This was an insult to the art of tattooing as I have a right arm sleeve that I carefully curated, chronicling my successes and failures, and she was just a pampered power-hungry kid.

Time passed. Amelia went to MIT and was about to finish her first year and come back home for the summer. On a sunny, windy morning like that of the fateful day when the devil came knocking on my door, I was having cereal beside Pedro, enjoying my coffee, while he had French toast and was reading the paper.

"You think we opened Pandora's box?" said Pedro.

"Well," I said, "so far the devil just stuck to winning everything you could possibly win on League of Games, and forcing Faker into retirement by beating him so bad that he had a meltdown and started to cry midgame. I mean, fucking Faker, who I thought could out-robot anyone. Which is kind of disappointing for what she can actually do, but I'm extremely grateful that she isn't doing something worse, like getting into the stock market."

"For one, I'm worried about what could happen if someone found out about her and got to her tech."

"Why do you say that?" I asked.

He grabbed the newspaper and showed me an article:

SUPERSTAR GAMER DIES IN PLANE CRASH.

"Well, sheit."

TOMORROW

I had finally finished it. I had perfected a memory referencing device. I took a sip of my ristretto and a puff of my cigarette in celebration. It was the 29th, and my love, being an *Argentina pura y dura,* made me ñoquis, as it was customary to eat them on such a day and leave money under the plate to attract luck and prosperity. As money is rarely used nowadays, the spaceships being economies based on resources, I put one of my tools next to the plate to attract industry and prosperity.

This tradition stems from the time of the Old Earth, in countries called Argentina and Uruguay, which had a great deal of Italian immigrants by the late 19th and early 20th century. It was also based on the legend of Saint Pantaleon, a young Nicomedian doctor, who after converting to Christianity made a pilgrimage to Northern Italy, where he performed miraculous healings and for which he was canonized. On one occasion, this saint asked for bread from some Venetian farmers, who invited him instead to dine at their humble abode. He was grateful and thus predicted a prosperous year of crops and fishing.

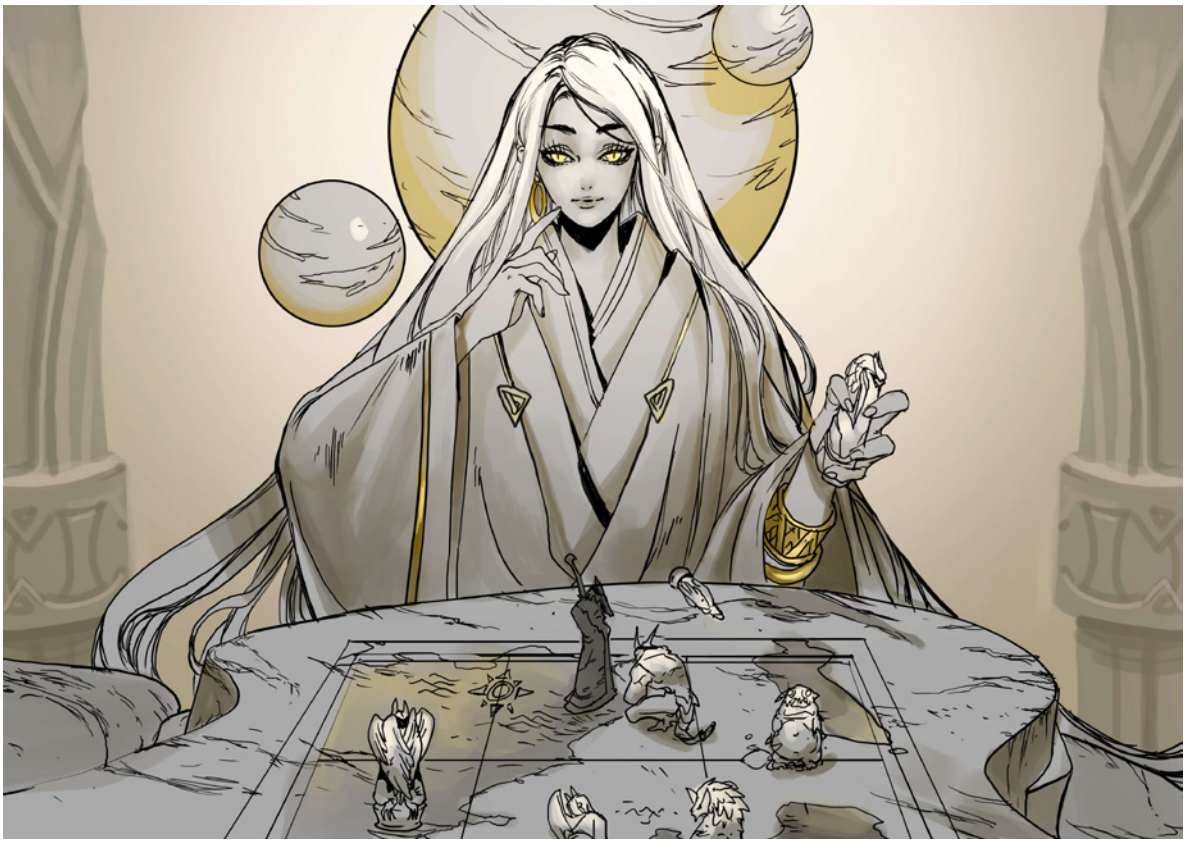
This episode took place on a 29th day and thus was represented by a humble meal made of ñoquis. It was interesting to see a tradition persist through time and space and be transmitted from one planet to another, despite many people not knowing the details well or at all. Eladia served me yet another portion which I could not have with red wine, because that day I was on duty. However, she was drinking for the both of us to make up for it, as she had almost finished the bottle.

"Put a child in me, lover," she had told me many times in the past year after I had a difficult injury.

Being a Spiritnaut, I had no guarantee of living to the next day—a surprise strike and a bad day could do me in. This was one of the reasons I was reluctant to acquiesce, but after finishing this *Mnemotrón,* I was positive. I would do it tomorrow, for my shift was ending tonight and a new relay would come.

This device would allow my nephew León and my unborn nephew—whose birth I had predicted—both pilots (or pilots-to-be) to access my memories and tactical analyses I made for them, which would give them an edge and improve their chances when fighting her.

I was known far and wide for my prophetic dreams, which were very accurate. For instance, I predicted that León would be a second-generation pilot and that he would be a formidable one, which he was already living up to the expectation. *La Bestia,* they called him. I had made a systematic reflection of all my battles, including what I needed from my support that I didn't get. This would be my gift for them.



What seemed to haunt me was a recurrent dream that I withheld from my beloved. In it, all the active first-and second-generation pilots were pieces on a chess board and were playing against a woman with white hair and eyes of gold and purple, like the skies and seas of the Paris-Earth.

She would move pieces against us and we would take them out, but she always generated more pieces, while ours developed cracks and fell apart. I was a knight with a small hole in his chest, and every time there came a piece that would know about this weakness and exploit it. And every time, the dream would end the same way: I would take the hit and crumble.

I had thought about it. What was the purpose of leaving my love alone in this world with the burden of a child? Why would I burden my sister and brother-in-law? Then I realized that I was being selfish. The choice of having this kid was hers *and* mine. And even if we did and I died, maybe I would be lucky enough to witness the birth of this baby.

"Did you finish it?" Eladia said as she hugged me from behind while I washed the dishes.

"I thought about it…" I said.

"Yeeees?" she said expectantly.

"Let's have this kid."

She turned around and looked me in the eyes. She had these beautiful eyes that held me captive from the moment I contemplated them: one blue and the other green. She kissed me with such intensity that all my blood rushed into my head and I felt dizzy from the lack of air.

"Tomorrow," she said. "Remember, it's bad luck to fuck during your shift."

"Yes, darling, I know."

Suddenly, an alarm sounded on my cell phone: it was a thought monster. I answered the call and heard Constantini's voice.

"Palermo," he said, "we've got shit."

"How many?"

"Two. Type 3, barely."

"Who's on my team? I know Texcatl hasn't recovered."

“The same as the last couple of times: your nephew and Buchi on support.”

“Nice. ETA?”

“25 minutes.”

“I’ll be there in 5.”

I hung up the phone and looked my darling Eladia in the eyes again.

“Tomorrow,” she said.

“Tomorrow,” I repeated.

I ran towards the battle station. Upon my arrival, we engaged in the necessary preparations: Deep shower, circuit suit and the silk robes. They said that an armor prototype wasn’t ready yet.

I saw my nephew as I was being fitted in a black, skin-tight suit with all this silver lined circuitry.

"Hey, León."

"Hey, Uncle. What's up?"

"Nothing, inventing things like always. After we're done, remind me to give you something that I've been crafting for you and your brother."

"Thanks," he said.

His jaw was tightly clenched and his eyes looked fierce and determined. He got into this focused trance where it was wise not to engage in idle chit chat. That boy was born ready to fight whatever and whoever was dumb enough to partake in confrontation. Buchowski arrived in full gear, looking nervous and stressed, which was his natural state. It was unnerving at first to deal with this punk who constantly looked like he was about to throw up, but he did his job very well and never faltered. He was growing on me.

"Buchi," I said, instead of the usual Buchowski.

"*Jefe,*" he said, and his voice cracked a little, moved by this seemingly small gesture.

"We're ready, sad-eyed hermit," I said.

"You bitches ought to be. They're at the outer limit. Keep them there. ETA at 15 minutes. Codename: Rómulo and Remo."

"Let's ride, boys."

"Yessir."

30:00 LEÓN, 20:00 PALERMO

We got into our vehicles and started to focus and manifest corporeal form. Buchi was riding backpack with me, another first that must have made him ecstatic, and for a single second, his readings were all over the place. As the youngest of the Spiritnauts, these kids of the second generation looked up to me as being the most approachable of their elders.

27:00 LEÓN, 17:00 PALERMO

We were in the forests to the north of Priština, which I loved visiting when off duty, for their musky scent and the mushrooms I could find there. *Sad-Eyed Sennin* didn't like that I ate foreign stuff, on or off duty. We could see two shiny figures in the dark night: two anthropomorphic wolves, roughly our size, which inspired the old man to name them after the foundational myth of Rome, a great city of the bygone Earth.

León was on my right, wielding a longsword, while I was wielding a gladius, unwittingly fitting for the occasion, it would seem.

"Okay, boys—let's get to it," I said. "León, take the one on the left. Don't go nuts, measure him first."

"Yessir."

My nephew wasn't exactly the rash or impulsive kind, but when he initially engaged the enemy, he did so too intensely and thus, he spent too much energy, but also showed himself. As of late, these bastards were developing adaptive tactics, and thus we were unable to have the upper hand in the overall conflict.

Sad-Eyed Sennin had a theory that they could relay information to each other when they died, sort of like a collective memory, or a memory relay process similar in some ways to the device I had invented.

My wolf was a very good fighter and so was the other one: they had the same speed-aggression approach that we did and thus, they could keep up. Something was off, though. It wasn't only that they matched us- they seemed to be aware of the timing of our attacks and of our footing technique.

"They're very good," León conceded.

22:00 LEÓN, 12:00 PALERMO

"It's not only that," I said, "it looks like they know all of our techniques. So—use the unorthodox! Switch things up."

And we did, but they were still one step ahead. They appeared to be stalling, trying to tire me, even destabilize me, as if they knew I had a shorter fuse than León. But also, my wolf was keen on attacking my right side, as if he knew I had an injury in my intercostal vertebrae that never healed fully and which hurt whenever I strained myself.

18:00 LEÓN, 8:00 PALERMO

"Listen up," said the hermit. "Start retreating towards the city. I'm going as backup. Texcatl's on his way too, and Rodolfo as support."

"All of you are injured," I said.

"I'm the least injured," he said. "Start retreating and I'll meet up. We can't afford to lose or injure any of you. Your relay is being notified and they're coming ASAP from Nuevo Veracruz."

"Roger," we all said.

"Okay, people, you heard the man."

In that moment I felt something pierce me in the chest. Not exactly where my injury was, which I was covering very well, but rather in a place that crossed with my weakness and maximized the damage.

"*Mierda,*" said Buchi.

"Boss—" said León to Constantini, "—Palermo took a heavy hit. Buchi, keep him stable, focus on him."

"Si, *weón.*"

"Old man," said León, fending off the two wolves, "ETA?"

"Fucking now," he said as he punched one of the wolves so hard it made it stumble, and with another it made something inside of it crack.

Meanwhile, Buchi was tending to my wounds and stabilizing my energy levels. In my pod, the EMS machine was injecting me with serums and using my own energy to telekinetically massage my heart.

"He's bleeding internally—he has a grazed heart and his right lung is punctured."

"You ain't dying on me, man," said León. "Mom's gonna have my ass if I let you die on the line."

"*Don't tell me what to do, you snotty punk,*" I said telekinetically. *"I'm trying really hard here not to."*

With one wolf on the ropes, *Sad-Eyed Sennin* and León were hard at work subduing the other. León was trying to pin it in one place long enough for the heavyweight to land a hit.

"We gotta make these boys fuck off soon. I only have, like, six minutes."

And barely at 60% of your strength, I thought. It was clear that he wasn't at full force, as that 1-2 would've killed that shit under normal circumstances.

León was going full beast on that thing, holding nothing back, and his levels were at a dynamic equilibrium, but very close to veering out of control. I was doing breathing exercises to control my vitals, but the punctured lung was doing quite a number on me. In one decisive moment, León managed to pluck an eye out of the offending monster, but the latter managed to claw deeply into his arm and work its way onto his shoulder.

Being at a standoff, Romulus grabbed Remus and made a run for it.

"León, grab your uncle with your good arm. Buchi, keep him alive. We're going to make a run for the city."

I was still in corporeal form, in part, because it was proven to keep pilots alive, despite the energy expenditure, which could always be taken by the support. The shock of losing corporeal form while seriously injured had killed two pilots so far.

"Boss," said Buchowski.

"What?"

"We need to crack him open. That graze in his heart is getting worse."

"Are you fucking touched, *pendejo?* You want to operate on a pilot while in corporeal form?"

"I want to keep the fucking pilot alive, sir. One of his heart strings could burst at any moment."

Constantini threw out a long slew of curses, still making up his mind.

"We're two minutes from the city," León said.

"He doesn't have them."

"Fine!" Constantini barked. "Crack him up."

Buchi said a small prayer to St. Pancrace, whose day was the 29th of each month, and was one of the reasons why Argentinians cooked gnocchi on that day. Though Buchi was Chilean.

Before he could open me up, there was a sharp pang of pain that cut across my chest.

"*Puta madre,*" said Buchi, "he burst a string."

"You hold on, you shit," said Constantini, deeply concerned, his voice cracking. "I'm not losing you."

Jesus, man. It's not like I fucking want to go, I thought, but I was so overtaken by the pain that I couldn't communicate telepathically. Buchi was sustaining my corporeal form by himself. He should be dead tired by now. I felt exhausted and dizzy and my body was completely numb.

Everything was fading to black.

At first I saw a tiny speck of light, then as I saw it with greater detail, it started to feed upon itself, like a magnetic field. Then at the same time it reverberated with other like fields, which at the same time constituted a larger field, and so on, until those larger fields started to feedback into the smaller units and so it became an information process that departed from the smallest speck to the largest util I realized that what determined which was the smallest and largest unit was my own observation.

This meant that there was no small or large, that simply my understanding of things shaped the way I saw the Universe, and vice versa. As I kept observing all these units feeding back into one another, I realized I was watching a visual model of the theory I had made of the Universe as an information processing system that was the basis for the Mnemonex, the memory referencing device I had made for León and my nephew for them to see all my fights and my thoughts about them...

Wait a minute…

I started to watch one of the memory units and I realized that this unit created smaller units and had a feedback that was a bit different from those that I had identified as humans. These smaller units eventually dissolved, and the information gathered returned to the source. This was isomorphic to the way the overall system worked.

Fuck.

It all made sense now.

I had to tell Constantini.

I can't take this with me.

They need to know.

Suddenly, I took a breath of air, and was myself again.

"Holy shit," said Buchi, crying, "he willed himself back to life. He's back. *Gracias San Pantaleon.*"

I was scrambling to communicate to someone, and León, being the closest to me in affinity, was the best option.

"León," I said, "Constantini was right about the memory of monsters. One dies, others learn. Tell him. Romulus and Remus are tailored to kill me."

"I'll tell him!" said León, crying as well.

"Proud of you. You did well."

I faded out. Again.

I saw Eladia in all her glory, lying on my bed, in black lingerie with white ribbons. It was my favorite. I tried to get closer and closer, but couldn't.

I came back.

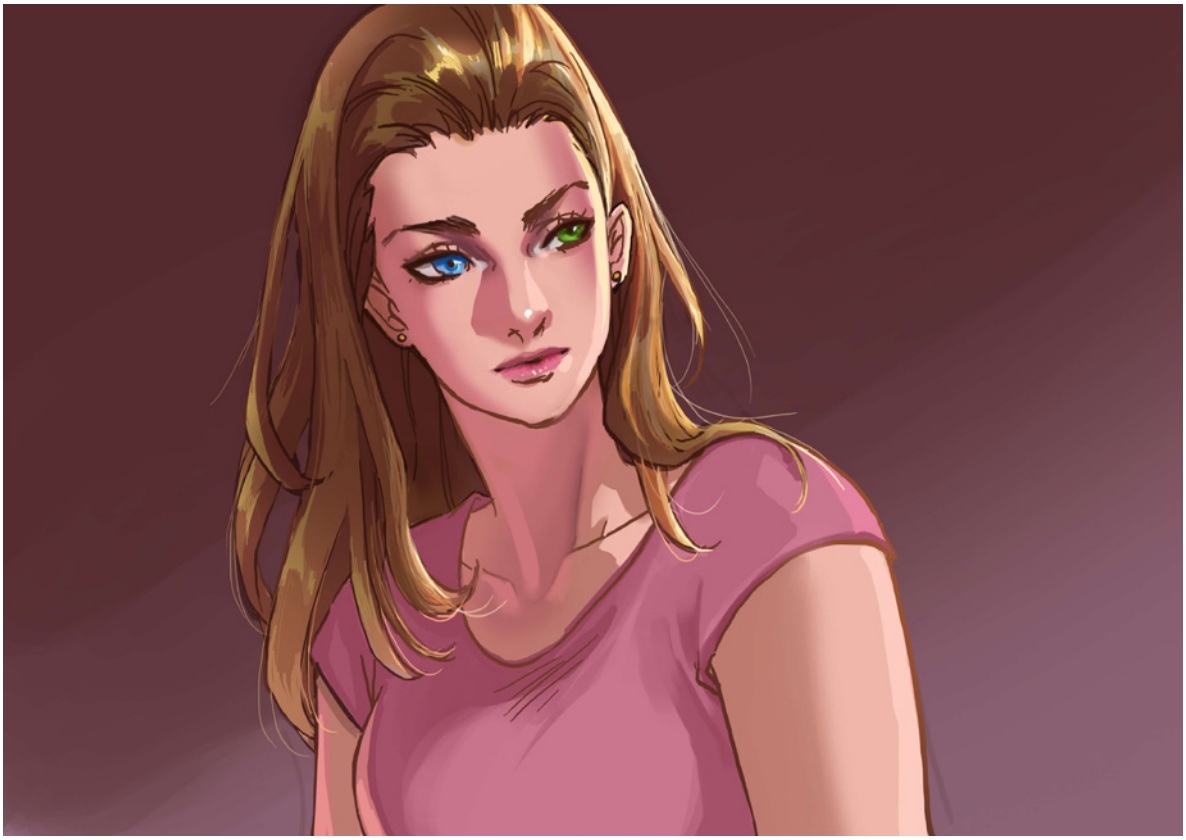
"Tell Eladia. Give you. Gift. *Tell her…*"

"Yes," León said, crying, "what else?"

"*Tomorrow.*"

Unlike the prior fading out, this time I felt a nonviolent pull and blackness, like when someone knocked you out cold. I could hear screaming from afar. I could also hear Eladia's voice very clearly. She kept repeating one word:

Tomorrow.



THE MAN OF MEMORIES

HOW TO READ

The overall story is told by smaller stories or fragments that take place in different years, all of which take the viewpoint of Rodrigo Clemente Ascencio. Because memories have this non-linear quality to them, despite people always wanting to arrange them in an objective order, I have decided instead to give each part of this story a song, and have the reader decide how to read the stories according to how they would arrange the songs into a playlist. The songs are the following:

Year of the Fall: Wolf Alice, "Moaning Lisa Smile"
Year of the Quake: Dandy Warhols, "Bohemian Like You"
Year of the Flood: The Mars Volta, "Vicarious Atonement"
Year of the Fire: Brian Jonestown Massacre, "Tunger Hnifur (heavy knife)"
Year of the Fall: Dead Weather, "I Feel Love (Every Million Miles)"

Also, if both fragments of the *Year of the Fall* together are read as one, listen instead to Dead Weather, "Will There Be Enough Water?" (Try to find a live version, it's much better.)

YEAR OF THE FALL

At first I didn't like her, nor did I think she liked me. Well, no, I don't think I phrased that right: At first, we were wary of each other. My kid brother Dago was a well-known musician (among other things), and had a notorious musical career with Techne Jupiter. On occasion, I played the bass for him on some record, or filled a slot while touring, but I had never been let fully into the band. I had always gone my separate way. I met her some years ago, while touring, when she was opening for the band on the European leg of the tour, but we never really talked or hung out.

I think that this happened because in a way we had an intuition into each other's secrets and thus weirded each other out. It took Dagoberto to get us to meet and get acquainted. He called me to ask me to serve as bass player for his project with Hanni Lundstedt, and also to contribute as a writer. After some awkward meetings and clashes, Dago's patience was rewarded, and things started to take off. This also benefitted me greatly as it helped me overcome a strong bout of writer's block, as I had been at a loss regarding the topic of my second novel.

I should state that despite considering myself a writer first and a musician second, these two areas of my life tended to feedback constantly; I struggled stubbornly over the years to keep them separated. I had an easier time writing poetry than prose and fiction, because it was hard for me to write the latter when my life resembled it so much. Imagination was hard to come by when you did crazy shit like me.

I called myself a *Mnemonaut,* someone who could visualize and manipulate the memories of persons and things by inserting—or removing—himself into and from them. When I met people and touched certain objects I couldn't help but feel their memories, and sometimes, those who were sought could also reach back. Hanni was a weirdo like me, but of a different ilk. In her case, I realized she had a high degree of temporal awareness, as her memories had a flow that I had never seen before- she could talk to older and younger versions of herself. As it takes one to know another, she also realized I could move within memories.

Although at first this was a source of friction and division, it ended up fostering a great friendship and working relationship with Dagoberto, who acted as a mediator and keeper of secrets. We recorded a concept album about Hanni and her childhood, called *Self-referential Infinite Lotus Blossom,* went on a short tour and in light of its success, went on to carry out a longer one. It did smart a bit that some fans kept comparing it to Techne Jupiter, or expecting something that resembled it. My brother and I also took the chance to mend a couple of rifts we had between us.

But constant collaboration didn't end our clashes—it transformed them into heavy flirtation, battles of wit, and an on-and-off relationship. One of the things that united us was our weirdness, which gave us a window into the other. One thing that I admired about her is the way in which she was built: I saw an object or a person as a self-contained, four-dimensional continuum, an aspect of which I manipulated. Because she could talk to her older or younger selves, she was a five-dimensional continuum that not only encompassed time, but possibilities and God knows what else.

This translated into the fact that, like those of my kin, I couldn't insert myself into her memories or objects which she was in close contact with for a prolonged period of time. This meant that I couldn't insert myself into her memories in order to know about her, which I had to admit, sometimes I did, for instance, to know the coital preferences of a lover or a girlfriend without too much trial and error.

However, this side effect was a two-way street, as every time she attempted to get information about me (or *my* preferences, for instance, as she once tried) with her older selves, the communication channel got all garbled and messed up, unlike when she tried that on "normal" people.

The smell of clove cigarettes distracted me from my train of thought. It was noon and despite our best efforts, we had been unable to get out of bed—we'd had great sex all of the previous night, after a really good Italian dinner, and this morning we woke up at eight, had sex, slept a couple of hours, had sex again and then talked some more over some cereal that I kept on a minifridge in my room. But now, I needed heavier food and a shower.

"Maybe we should order some pizza."

"Maybe. I should take a shower, while you order."

"Maybe I should take a shower too."

"Maybe you're right."

It was late November and we were in some hipster coffee shop down in the Mission, which my brother had started to frequent because they sold this really good coffee, and by that I meant fucking heaven in a cup. I was with this Hanni chick, who opened for my brother's band on their European tour a couple of years ago, and my brother had gone to fetch our order.

"Why did we have to travel so far for coffee?" she said, with her Finnish-flavored English.

"Well, it's very good."

We coincided sometimes and got along, but we had never been more than acquaintances. She visited my brother Dagoberto for some days when I was out on a book tour for a book of poems that I had published recently. Some months later, he was convincing me to join them as the bassist for a new band that they were crafting.

"Okay," said my brother as he came back from fetching our order, "I got everybody's poisons: Double expresso latte for Rodrigo."

"Thanks, bro," I said.

"Cappuccino for Hanni."

"Thank you."

"And a ristretto for me."

"If you can call that a ristretto," I said. "That thing's so dense that it's giving me jitters just by breathing near it."

"Oh my God," said Hanni after taking a sip, "this is so fucking good. Worth the trip."

"Told you," Dago and I chorused.

We were quiet for a bit, having our coffees before I decided to break the ice.

"Why do you guys want me for a bass player? I mean, I'm not bad, but you had in…"

"Well, you filled in their absences with great dignity, and also, you're an accomplished poet and storyteller."

"Then again, so is she," I said, pointing a finger at her and watching her flinch a bit.

Despite being only acquaintances, I respected Hanni for her music, which was fresh and innovative, and her lyrics, which were elegant and introspective. I found her to also be very intelligent and articulate, and of course, good looking.

"You guys should work together," he said. "I think you can complement each other. And you're also a great bassist."

"I…"

"Just take the fucking compliment," Hanni said impatiently.

"Fine," I said. "What is it that you guys have planned?"

They started describing the project: a concept album about a person that could self-communicate in time. That is, that could talk with older and younger versions of himself. This character acquired such power because of a burst aneurism and some near-death experience that came with such a condition. They threw out a slew of musical ideas that they had about the album, mostly time signatures and pedal work. It was a very interesting story and concept in general, but there was something that was messing with me.

I couldn't read her. When I came into contact with people—be it a handshake, hug, bumping into people, whatever—I always got a residual memory, or the feeling that I could read their memories if I wanted to. The same thing happened with objects that people have handled for a while. The only exception to that rule was my immediate family, from whom I only got the equivalent of static. Now I was confronted with this woman, who I couldn't read at all.

I couldn't catch a thing either from her empty cup, which I took from the table, along with my brother's and mine, and went to fetch the following round of coffee. Just to prove I wasn't losing my mojo, I got some memories from the hipster tattooed barista woman, who happened to read Sartre on the BART this morning on her way to work. The whole thing was messing with my mind.

After I brought back the coffee, we talked some more about the concept. Hanni and I clashed several times about stuff and Dago was cool and collected, and that was also fucking with me. I mean, she had great ideas, but we just couldn't help but snap at each other, and she couldn't take a goddamn suggestion to save her life. As I was struggling to regain my composure she went to the restroom, and I took the chance to tell Dago my problem.

"I know Dad fucked around when he was younger."

"No, dude, she ain't related to us," he said cutting me off, almost reading my mind.

"I can't read her, homes. Not one bit. It's freaking me out. She's trouble."

“She’s not trouble.”

“I know trouble when I sees it.”

“I know you are the eldest, but you don’t know shit. Besides, she said the same thing about you when you went to fetch the coffee.”

YEAR OF THE FLOOD

"I still can't believe you guys bought this building before rents became ridiculous," said Hanni as she was tuning her guitar.

"It was sheer luck, really," said Dago.

It really was: Dago and I bought this six-story building in SoMa with the help of Mom and Dad and some other friends back when Dago had some money with the record company in the advance of his second record and band merch, while I had the advance of my first novel. We all pitched in and bought this early twenty century building of light brown color: The Carmen Building, made in 1908.

Because it is really close to Union Square and is surrounded by restaurants, bars and coffee shops, it was an ideal place to rent for workspace, which we did for many years to a company and made good money at it. Dago converted three floors into studio space after the company moved out and made a partnership with an indie recording company, House of Falling Petals to create his production company—Clemente Ascencio Productions—with our brother Oscar, who helped manage it.

The first floor was the lobby of the building, then three floors of studios, and the upper two floors had living quarters. This was where Dago, Hanni and I made our nest. Each floor had two rooms: the top one had a kitchen and the lower one a small living room, and each room had a private bathroom. We still had a missing room, as Oscar liked to stay elsewhere in Oakland, closer to Mom and Dad.

We were still preparing some stuff in the studio, and while Hanni and Dago were tuning, I started to play the tune of Muffin Man by Frank Zappa. Hanni heard that and followed suit and Dago took it as a provocation—you see, he wasn't a big fan, he was a massive one. Hell, when the Jupiter Techne broke up, he had a brief stint with Zappa Plays Zappa.

"You guys serious?" said Dago, somewhat offended.

"You up for it, man?" I said.

"Duh," he said.

After a couple of loops of the riff, Hanni and I began to sing part of the lyrics.

"*Girl, you thought he was a man,*" sang Hanni, struggling not to laugh.

"*But he was a muffin,*" I quipped.

"*He hung around till you found, that he didn't know nuthin',*" we sang together.

"*Girl, you thought he was a man,*" Hanni again.

Then me: "*But he only was a-puffin'.*"

"*No cries is heard in the night, as a result of him stuffin',*" sang both Hanni and I.

Then entered Dago in full force, delivering a ground-shaking solo that was similar to one made in the 1977 live version, but also adding many intricate elements proper of his style. My brother was a guitar savant, with whom it was hard to keep up, as he was the biggest workaholic I knew. The year we released *Self-referential Infinite Lotus Blossom,* he also recorded eight full-length albums, four of which he released through our production company, and wrote a movie script. He practiced for hours on end, applying a high standard to himself and expecting it from others when working with him.

I thought I was more relaxed, although I had my moments where I worked for days on end and times where I just walked around and read books. Dago finished the solo and then we heard a voice:

"I recorded that, in case you want to work on it as a serious cover, or maybe release it as a B-side," said Jack, our engineer.

"Thanks, man," said Hanni.

We had been working for a week now on the continuation for our band's (Rinri Kitei) first release, *Self-referential Infinite Lotus Blossom*. We had agreed that we would do this one about me and my ability to influence memories in a self-referential way, and I spent a lot of time telling Hanni about my life and experiences in order to get her acquainted with the concept we were about to tackle as a team, much in the same way that we did in the first album.

We were bouncing some ideas today, without something concrete in mind, just messing around. We had made some progress, and already had two very solid songs. We had a good working rhythm this time, which was not always present on the first record. I was fumbling with my bass and Dago was doing this droney riff that kept echoing in my head over and over… *and over… and over…* I closed my eyes and heard Hanni's voice reaching out to me from the depths of the echo. She was humming something that I couldn't quite make out.

I kept my eyes closed. I stopped hearing Dago's riff and only heard her humming. Obsessing over her voice, my fingers started to play this very slow and sensuous bass line. Everything was quiet at first, but as I kept playing, Dago started to do some shoegazey stuff and Hanni started to sing in this hushed and slow manner. I opened my eyes and I saw her swaying in the booth, singing in the mic about pretending to be sorry about who you were and hiding it from others, as I initially did.

As she moved back and forth, dancing slowly, I changed the pace and played a more energetic bass line, which Dago took as a chance to do a solo and to which Hanni made a couple of interventions, using a lot of

pedals to distort her voice as she screamed, but for the most part we stood by the development of the solo. After he finished I resumed the slow pace and Hanni started to sing slower and slower until the song finished. Jack told us the raw cut lasted some 15 minutes. This would make a nice template for a song.

"Holy shit, what was that?" said Dago, wiping the sweat from his forehead.

Hanni got out of the booth and walked towards me, coming face to face, looking straight in my eyes.

"What do you wanna call that?" I said.

"*Superfluous Repentance,*" she answered.

December passed, and we invited Hanni to spend Christmas with us in Oakland, in the house where my parents still lived and in which my five brothers and I grew up, to which she agreed. Mom was delighted to have her come along, as she treated her like the daughter she never had- I mean, us brothers brought a girlfriend over every once in a while, but I think we had never brought a friend.

Dago and I stayed in our house in San Francisco, while Hanni stayed with my parents, along with my brother who lived in New York. My other brothers lived across the Bay. By mid-January and despite a massive fight before New Year's, Hanni and I were on speaking terms and committed to making this project work.

Granted, Dagoberto didn't know how to take a no for an answer, and he was grabbed by this vision. One day, I came back from walking around Yerba Buena Park, and he rounded up me and Hanni in the kitchen of the studio with a six-pack of beer and a bunch of takeout from Mission Chinese Food.

"Okay," said Dago, "I just want to know what it'll ta—"

"You unnerve me," we both said to each other at the same time.

"That much I got across, you assholes. I know why, as do you, but you don't want to tell each other."

"Yes."

"Allow me. *Hanni* is the character in the story we're developing. She can talk with herself at different moments of her time span and she can foresee events and know people because of this. She's unnerved because she can't access information about you. She can't talk about you with her future selves, she only gets static.

"*You,*" Dago said, pointing a finger at me, "can see the memories of people and things and insert yourself within them for various purposes. You're creeped out by Hanni because you can't read her or any object she touches for a prolonged period of time.

"*Deal with it,*" he said.

Dago left the kitchen for a moment, while Hanni and I looked at each other with embarrassment. We had antagonized each other at every turn and moment, while having so much in common. My brother came back holding a chess board, a clock and a bunch of books which were brand new.

"You love chess, Hanni," he said.

"I do."

"You don't know jack shit about chess, right bro?"

"Other than the raw basics? No," I answered.

He gave me one of the new books, which was an intro to chess. I knew what he was trying to accomplish. My head was gonna hurt big time.

"We'll do a demonstration," said Dago, giving me one of the new books. "He'll play three blitz chess matches. One without using his ability, another in which he reads some of the basic books I bought and another in which he reads your advanced stuff."

As she accepted and we played the first match, I saw how passionate she was about chess. Her facial expression changed completely when she was in chess mode and in less than five minutes she kicked my ass. Dago gave me five books, some introductory and others stating intermediate lessons and the like, and I got to work. To insert myself within an object I encompassed the totality of an object's memory as a cone, and made commands on it—like computer code—in which those books that Dago bought before Christmas were loaned to me for reading and thus, I knew their contents already.

Second match: I opened with a Budapest Gambit, which rattled her a bit but didn't hinge upon her confidence, which led me to take her queen early on, and because she had castled before I surprised her, many of her pieces were restricted, and thus she realized that she was into some deep shit. She gave up eventually.

Next, I read some three or four books which were very advanced and did the same with them as well as the board. As I had assimilated a ridiculous amount of information in a short period of time, my head was beginning to hurt big time, a small imperceptible thumping that very quickly became a screaming headache. It happened whenever I overexerted myself, like now. The third match had Hanni in a virulent and aggressive mood and I was in an urgent need to finish this before it started, so I wasn't feeling peaceful.

As her pride was at stake, we went all out on the board, with Dago watching, fascinated by the whole exchange. At her every move I had a response and despite her putting in all her effort, we ended the game in a draw. She looked at me intensely for what seemed an eternity, a gaze so deep that I thought it was going to melt my face. Then she uttered some words, without diminishing the intensity:

"Wanna bury the hatchet?"

"Sure."

The best way for me to get rid of these headaches was by taking a 14-hour nap and drinking a healthy amount of alcohol. For that reason, the moment I was heading back to my room, Dago lifted a bottle of rum with his left hand.

“Okay, gimme that, bitch,” I said as I snatched that bottle from Dago and took a long swig.

“See you tomorrow,” said Hanni.

“Sweet dreams, my love,” said Dago sarcastically as I went up the stairs to my room.

“Fuckity bye,” I said.

While getting the cereal in the morning, I had slipped a note under the door for Dago to see: "Dude, I need backup. Bring food and ammo. Represent, motherfucker." Instead of ordering pizza, I joined Hanni in the shower, and not wanting to leave the room and mess up the sexy magic, she was okay with lying in bed naked, save for a shirt of mine that she'd thrown on, her recently dried raven hair sprawled across the pillows, bearing all her scars and her tattoos without a care in the world, with the sun shining through the window and its light streaming all over her. This. Sexy. Bitch.

Dago knocked on the door. I asked him to represent, and man, *did* he: He brought me two boxes of some high-end pizza that Hanni loved, two bottles of red wine and a box of condoms.

"My man," I said, taking the supplies and giving him a fist bump.

"You know it, bitch," he said, bumping my fist and putting his sunglasses on.

As I turned around to put one of the boxes on the bed, so we could devour the pizza, I saw that she had put on a pair of my boxers. She grabbed a slice and got back to bed, moving like a sovereign. As we were lying in bed eating pizza, I saw her most recent tattoo, a Bukowski quote—*You have to die a few times before you can live*—tattooed on the right side of her rib cage, which was heavily scarred.

The background of this was a car accident that she'd been in at 19, where she broke many ribs and other bones, and went into cardiac arrest several times and had to be revived. This event brought up many things she had caged and repressed, and she had finally made her peace with that, or at least a significant part of it, as she had issues with self-confidence because of the many resulting scars of that accident and the subsequent surgeries.

Although we were both unusual, we had similar backgrounds with completely opposite reactions: Hanni's mother was a psychiatrist, and she never accepted what her daughter told her, choosing to take her to likeminded peers and have her chucked full of pills. On the other hand, my family had a much richer cosmovision and embraced my peculiarities fully, and never made me feel like a freak. My father was a psychiatrist as well and he started to develop physical and mental exercises for me to control my emotions and thoughts, in order to conduct myself in life with control and responsibility.

"So, Rodri," Hanni said with a mouthful of pizza, "I've been trying to rationalize a basic framework of how you and I can do our own thing. Care to listen?"

"Sure," I said, "Lay it on me."

"Okay, so one thing that I learned from my mother is that people have the tendency to think in solids: They view Time as a linear succession of events, Matter as a differentiated set of objects that follow determinate

rules of behavior and, more importantly, they think of Memories as a definite and clear set of information that follow a linear logic (cause-effect-endoffuckingstory). They do this because it gives them certainty. It reassures them that in the end, everything is controllable, certain and knowable, when in reality it's the complete opposite.

"It's not that the Universe is chaotic. The term itself is an invention of the human mind to denote things that follow no discernible pattern, the latter being an idea created from a linear standpoint. Everything in the Universe is organized and has a set structure, which at the same time follows a proportion—the things that can't be understood by the human mind are called chaotic, but in reality, they're just a different type of order.

"What I'm trying to say is that time is not linear, and matter is not differentiated. Rather, it's more like an interconnected whole. And memories are not definite, but malleable and ever changing."

"That makes sense to me," I said.

"Boy, we have the weirdest post-coital conversations," said Hanni, smoking a clove cigarette.

As I was having a lukewarm slice of pizza, using her abdomen as a table, she tried reaching for the last slice in the box, but I moved it out of her reach with my foot.

"You're such an ass," she said.

"Nope, I'm *dat ass,"* I said as I made the facial expression of that Rich Boy meme. We both laughed.

"As I said, that explanation makes sense and it echoes with the way I've understood my ability."

"I'm all ears," she said as she managed to procure the last slice.

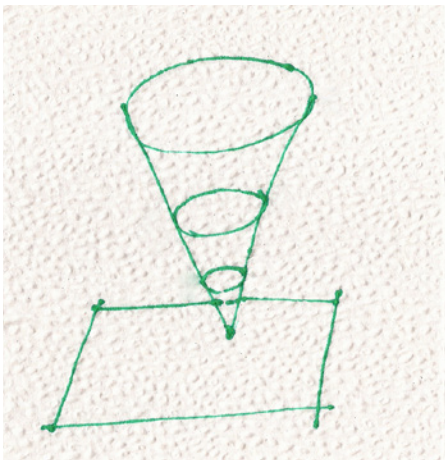
"So, I turned to all kinds of thoughts and authors in order to rationalize the way I did this thing. I came to the conclusion that the Universe was something like a massive computer, and that Time, Matter and Memories were constraints it placed upon itself in order to be able to process information and learn about itself. People were, in a way, autonomous programs that possessed free will, and through which the Universe experienced Otherness and the Self.

"What I've derived from my experience is that memories exist outside of time and space on a non-local plane of existence, where all the Universe's information is stored and of which I can only access that which concerns my lifetime. If memories existed only in the human brain, I would not be able to use my abilities on objects.

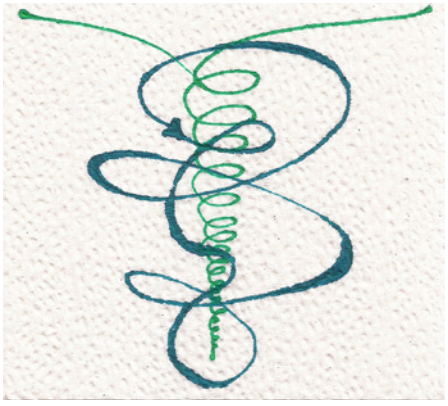
"I use my ability when touching the affected subject or thing, and I've theorized that this happens through quantum entanglement, which isn't constrained by time. By inserting or removing myself from

someone or something's memory, not only am I affecting information, but also time and matter. However, the Universe as a computer is primordially made of consciousn ess, not matter, as the latter is secondary phenomena. A movement in consciousness is one in time, matter and memory, which don't have a separation other than that which humans make of it.

"I've found that Henry Bergson's inverted cone of memory is a useful heuristic schema. However, there's a difference in how I see and affect people and objects. People, I found, generate and constantly update their own cone of memories, whereas when I see an object, I'm the one that generates its cone. This is why delving and inserting myself into objects consumes more energy. Here," I said while grabbing a napkin and pen, "let me sketch you the cone."

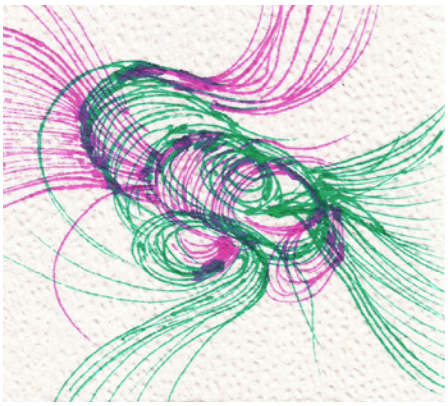


"As you know, I can't read my kin, I guess due to them having my ability as a recessive gene, which would be like trying to read myself. I can see my memories in a systematized, detached way, but I can't read myself, and I can't do it to you either because you're a memory system that constantly moves through its own timeline. It's like the cone collapsing onto itself, or some weird thing. I was recently hitting the bong with Dago, and I came to the theory that your 'cone' would behave much in the way of a tornado, like this."



“But even if I wanted, there are too many variables in trying to see or modify your memories. You aren’t a woman, Hanni Lundstedt, you’re a tornado with skin.”

As she and I canceled each other out, I started to think about what our interactions would look like and the best I could come up was this:



“Do you think we’ll ever get out of this bed?”

“I don’t really mind if I do or don’t.”

“Me neither.”

“I don’t think I’ve ever had so much sex in such a short period of time.”

“I don’t think I have. This really breaks the back of my past experiences, and man, I had times when I was fucked up.”

“I’m not a nun either, man,” she said while blowing some smoke rings with a newly lit cigarette.

“How many of those have you had?”

“A pack, I guess. This is the last one.”

“I’ve got an almost new box of mini cigars and some wooden matches.”

After she finished hers, I fetched my Cohiba minis, and grabbed one and lit one. I gave her one and we smoked them calmly in silence for a while. She had her head and one hand on my chest, caressing it, and after a while the caresses started to get lower and lower.

And we never got out of the fucking bed.

THE COURTSHIP OF CONCEPTS

Hei!

My name is Pixie Ford, and I'm the hero of this story, or at least I believe myself to be so. There are many things in my favor which guide me to such a conclusion:

Good health? *Check*.

Age? A glorious 27, man. *Check*.

Successful? I live well, I've got two award-winning novels and a rapidly increasing following. *Check on that*.

Tragic backstory? Came from a broken home. Got adopted by this brilliant philosophy professor, who I will love forever. *Check*.

Superpowers? Of course! I can materialize imaginary objects for short periods of time. I usually do it as 3D sprites (imagine Minecraft) because it's the most energy efficient way.

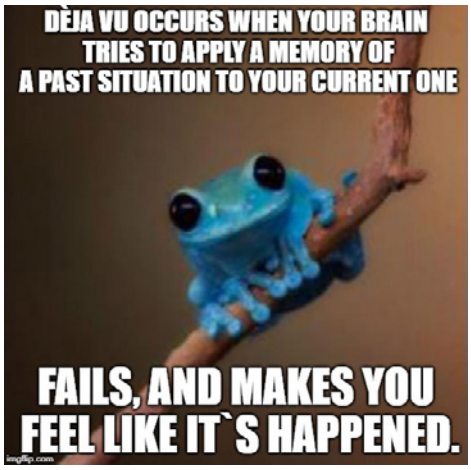
Good looking? *Fucking. Check*. I am not one of your skinny ass bitches with the high cheekbones and them pouty lips.

So yeah, I got all the trappings of the hero type. You also have my sisters Polly and Penelope, and of course my dearly departed Dad, Malcolm, who I still feel around us, like a benevolent spirit or memory. Something like Obi Wan or Yoda on *The Return of the Jedi*. I live in my dad's former apartment, which now houses all three of us. Now that I think about it, they fit the hero archetype too: they're good looking, they had the mentorship of Malcolm, they're young and empowered. For instance, Polly can create objects out of thin air, while Penelope has the power of workaholism, perennial resting bitchface (although science has proven that it's more of a social construct) and the manipulation of dimensional space. She's also killer at Texas Hold'em. I think we're a superhero trinity, like Boyscout, Batsy and Wonderbra.

Come to think of it, I also have a superhero origin story: I got my powers because I was hit in the head by a homerun baseball, while I was walking outside the stadium. I heard the crowd roar, and then it all went dark. I had a fractured skull and some nerve damage that manifests itself on occasion by a lack of sensation in my right hand and some disorientation. Someone also caught that on video and uploaded it to YouTube, where it went viral.

Some hard trauma awakened these things in us: Polly was hit by lightning and Penny was run down by a car. Polly got some cool scars, while Penelope had some bolts and platework, which makes her feel sore during the winter and doubles her crankiness. What I don't know is if those things also brought something else with them: Polly has these prophetic and sometimes LSD-like dreams, and Penny has incredibly lucid dreams where she builds and imagines all types of structures and images that fuel her awesome success as an architect.

I keep having déjà vu. Not in the sense of *The Matrix*, of course, but some thorough meme research led me to a useful definition:



Because… science.

I also found some very useful stuffs on Wikipedia.

Déjà vu

From Wikipedia, the free encyclopedia

For other uses, see Déjà vu (disambiguation).

Déjà vu (/ˌdeɪʒɑː ˈvuː, -ˈvjuː/ (listen);[1][2] French pronunciation: [deʒa vy] (listen)) is the feeling that the situation currently being experienced has already been experienced in the past.[3][4][5][6] *Déjà vu* is a feeling of familiarity, and *déjà vécu* (the feeling of having "already lived through" something) is a feeling of recollection.[7][8] [9] Scientific approaches reject the explanation of *déjà vu* as "precognition" or "prophecy", but rather explain it as an anomaly of memory, which creates a distinct impression that an experience is "being recalled".[10][11] This explanation is supported by the fact that the sense of "recollection" at the time is strong in most cases, but the circumstances of the "previous" experience (when, where, and how the earlier experience occurred) are uncertain or believed to be impossible. Two types of *déjà vu* are suggested to exist: the pathological type of *déjà vu* usually associated with epilepsy and the non-pathological which is a characteristic of healthy people and psychological phenomena.[12][8][13][14]

A 2004 review claimed that approximately two-thirds of the population have had *déjà vu* experiences.[15] Other studies confirm that *déjà vu* is a common experience in healthy individuals, with between 31% and 96% of individuals reporting it. *Déjà vu* experiences that are unusually prolonged or frequent, or in association with other symptoms such as hallucinations, may be an indicator of neurological or psychiatric illness.[16]

Déjà vu doesn't help predict the future, with researchers in 2018 concluding that over half the time these experiences are just feelings and were no more accurate at predicting the future than random chance.[17]

Explanations [edit]

Memory-based explanation [edit]

Research has associated *déjà vu* experiences with good memory functions.[28]

The similarity between a *déjà-vu*-eliciting stimulus and an existing, or non-existing but different, memory trace may lead to the sensation that an event or experience currently being experienced has already been experienced in the past.[21][29] Thus, encountering something that evokes the implicit associations of an experience or sensation that *cannot be remembered* may lead to *déjà vu*.

In an effort to reproduce the sensation experimentally, Banister and Zangwill (1941)[30][31] used hypnosis to give participants posthypnotic amnesia for material they had already seen. When this was later re-encountered, the restricted activation caused thereafter by the posthypnotic amnesia resulted in 3 of the 10 participants reporting what the authors termed "paramnesias".

Memory-based explanations may lead to the development of a number of non-invasive experimental methods by which a long sought-after analogue of *déjà vu* can be reliably produced that would allow it to be tested under well-controlled experimental conditions. Cleary suggests that *déjà vu* may be a form of familiarity-based recognition (recognition that is based on a feeling that an event or experience currently being experienced has already been experienced in the past) and that laboratory methods of probing familiarity-based recognition hold promise for probing *déjà vu* in laboratory settings.[29]

Dream-based explanation [edit]

One theory of *déjà vu* attributes the feeling of having previously seen or experienced something that is currently being seen or experienced to that of having dreamt about a similar situation or place and then forgetting about it until one seems to be mysteriously reminded of the situation or the place while awake.[36] The spontaneity of these types of *déjà vu* "moments" can catch many people off-guard, especially when they get the sensation from visiting a specific place they have never been to before, to the point where they are in a temporary state of shock and disbelief.

To me, this isn't entirely the case. It feels entirely different, as if I'm living some events over and over and over and sometimes I know exactly what will happen and then course through it like going over a save point too many times in a game. It's like if the Universe can't get its gameplay together and yet, another reason as to why I'm the hero of this story.

However, today wasn't a day for advancing the main storyline—it was sidequest time. For the first time in forever, Polly and I convinced Penn to leave work behind and go thrift and book shopping. Ever since she got this sick job at this big ass architectural firm, she's been increasingly distant. I mean, busy I understand, we all have work and take it seriously, but she was changing her ways for the worse, becoming angrier, moody and less communicative. Despite being completely different, she and I could always talk, but I keep feeling that I'm losing her, like she's being seduced away from Pollster and I.

Because she can create anything she wants, Polly cheats a bit at life by creating vintage clothing that she later sells to hipster boutiques for a hefty sum. So, on our outing, we first accompany our sister to sell some garments and score some well-deserved Benji's, then to a thrift shop and to three different bookstores. Then we grab some late lunch.

Original gangsta.

Polly had made a big sale two days prior to the outing, so she only had a boutique to visit. *Savoir Vivre* is a very small boutique some eight blocks away from home, and also the most expensive of the ones that usually buys from my sister. While she and the shop owner, a flamboyantly well-dressed man in his 60's with an impeccable hairstyle, bespoke suit and beautiful nails (which were artistically painted) were haggling, Penelope and I were looking around. To him, everyone is a "darling" and as he was on his sixth use of the word during the convo, Penelope discovers this beautiful mint-colored dress from the 1950s, which was crafted for the time where women actually had hips.

“Dude,” I told Penny.

“Oh.my.sweet.lord,” she says in awe.

“I know,” I say, enthralled, “it looks like it would be a perfect fit.”

“Yo, Henry!” I say. “How much is that green dress?”

“Oh, that would be 600, darling, but it won’t fit you. I’m afraid it requires… a bit more hip bone.”

“I know, but I think it would fit her,” I declare, pointing to Penny.

He gives out a girly yelp.

“Can I try it?” asks my sister shyly.

“Of course, darling.”

As she comes out of the dressing room, she looks gorgeous. The light tone of the mint green brings out her brown sugar skin and her long curly hair.

"You look divine, darling," quips Henry.

"Totes, man," says Polly, giving him a thumbs up.

"I'll tell you what. Because skin and bones here is my absolute favorite," he says, pointing a flamboyant finger at Polly, "I'll give it to you for 500."

This is the part where we haggle—

"Deal," Penelope says without flinching.

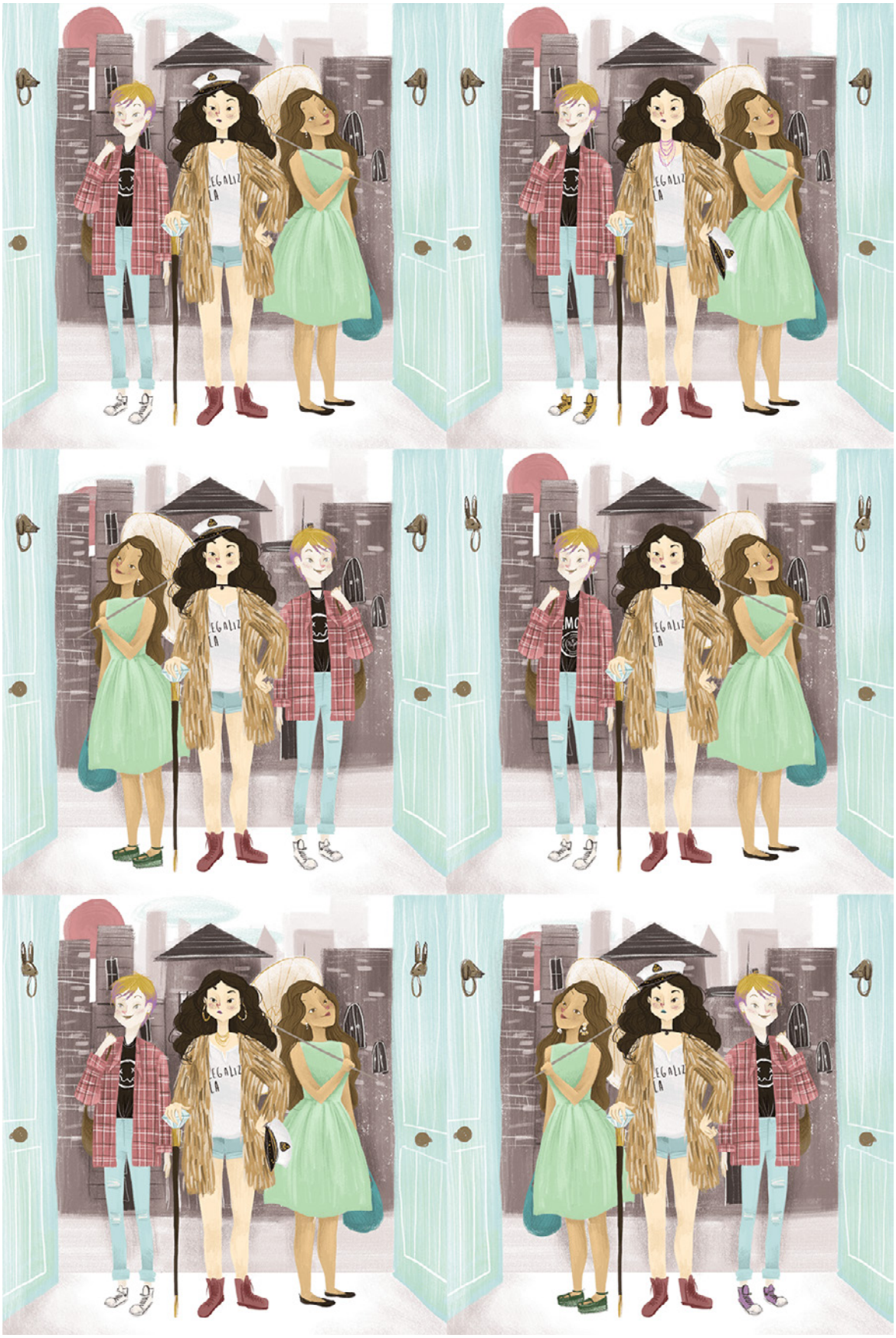
Or not.

"I'll wear it," she says, "just give me a bag for my clothes."

Our next stop is the thrift shop. Polly's keen on finding some new weird t-shirts, and I usually just ruffle through stuff for the lulz. Sometimes we would find ridiculous stuff at an unbelievable prize and other days it would be a boring and barren wasteland. Today, as it turns out, is a very interesting day: I find this really awesome fur coat for 50 bucks (and it doesn't smell like piss) and a pimp-like wooden cane for 15, a sparkly Michael Jackson glove for the same price, and a general's cap. I buy it all. Polly finds this beautiful Japanese parasol, which she bought for Penny, and also some cool punk band t-shirts.

We make our way to the first bookshop:

- A girl with a pixie haircut and some dyed locks, flannel over a t-shirt, and torn jeans
- A girl with dark skin, beautiful, flowing curly hair and a lovely, vintage emerald dress and a Japanese parasol
- And *me,* rocking a *Generalissimo pimp* look, with a t-shirt that says "LEGALIZE LA."



The next stop is my favorite bookstore, Sweeney's Books, which houses five stories of all manner of books, old and new. As we walked into it, we were greeted by Anette, a lovely, blond Southern lady who's known us for years.

"Y'all went thrift shoppin'," she says.

"What makes you think that?" I say, pointing a sparkly finger at her.

"Well, I had a hunch."

This glorious establishment was founded by Sweeny Rabinowitz, a bulky, balding, hairy man, who was perpetually smoking a cigar. Sadly, he's no longer with us, but his daughter Layla runs the store, which is a four-story that's dwarfed by larger and stockier buildings, and it has a pastel blue and white sign.

"Honey," Anette said to me, bringing me back to Earth, "if you want I can take your bags and store them."

"That would be lovely," Polly said.

"Thanks," said Penn.

"I can take your coat too," Anette said to me.

"You mustn't," I said, "for I alone must bear the burden of being a Generalissimo Pimp."

"Suit yourself," she said with a smile.

When you walk in through its doors, the first thing that you find in Sweeney's Books is this massive space riddled with shelves and Doric columns that reach to the ceiling. Then you also see a cross section of three of the five stories that comprise the building. On the first floor you can find novels, young adult and contemporary lit; on the second there's an extensive section on critical theory, comic books, photography, art and architecture; the third floor has books on sociology, political theory, linguistics, cognitive science and psychology; the fourth floor is the domain of the classics, history, and books in other languages; and the fifth floor is for the antiquarian.

I took this one from the second floor.

As we walked inside this ever delightful sanctum, Penelope lunged straight to the architecture and photography sections, while Polly went for the comic books, and I stayed for a while on the first floor, getting not only some recent books, but also some journals for writing, as I was running low on them. Polly kept popping in and out in order to show me stuff and I eventually followed her back to the comic book section.

As my sister showed me some of the new stuff, we saw Penelope sitting down, reading some architecture books, in her new fancy ass dress and all. Some things never change, I guess. Then she ghosted in on us like she always does, as she's able to move ridiculously fast by making the distance between her and a target smaller or larger. We were largely used to it, so we didn't get scared or surprised.

"You forgot your books," Polly says.

"No problem," Penny replies.


LOS PASOS de LOPEZ
JORGE IBARGUENGOITIA
RELAMPAGO
PEWCHITECTURE
MODERN ARCHITECTURE
FIFTY MODERN BUILDINGS
THE WORLD
FUTURE ARCHITECTURE
100 BUILDINGS

"What time is it?" asks Penn.

"I think it's past two, almost three," I reply.

"Dang, I wanted to go to Dragonfly Books," says Polly.

"Well, we could do it after lunch," says Penelope.

"I'm hungry," I say.

"Me too," both my sisters say at the same time.

"What about them books and stuff?" says Polly, "if we go back to the house and then somewhere, we'll end up eating practically at four."

"I can whip out some drones," I say. "I left a window open so we could have that option."

"Nice."

We proceed to pay for our books and get our bags back, saying goodbye to Anette on the way. We make our way to an alley and after checking whether it was deserted, and nobody was there, I conjure some drone sprites, which I had previously programmed to go back home through the window I left open. I also make a sprite that would put everything in order.

I usually create sprites after specific models, because making them from scratch on the spot is a bit energy expensive. This particular model is made similar to the Mario Bros 8-bit sprite, but instead of a cap it has a Stetson and a white shirt, blue pants and boots. I call it Paulino, after the song "Viejo Paulino" by Luis and Julian (I had a boyfriend heavy into that music).

"Okay, listen up, Paulino," I say in an authoritative tone. "You're gonna take all that stuff and put it in the living room. Pile up the books neatly and fold the clothing you see in the bags, and leave it all up on the main table."

The sprite gives out a small yelp and salutes, then proceeds to jump on one of the drones, all of which have bags hooked to them.

"This is why I love shopping with you, man," says Polly.

Penelope grabs us both by the collar and by taking only a few steps, makes us walk right through a mile and a half, into a collection of restaurants that we all favored.

"And that's why I love riding with you," says Polly. "You're quite the timesaver."

We agree on *Toledo,* this Spanish restaurant we know well, where we could share some tapas and paella and split a bottle of wine three ways. After some negotiations we agree on a lamb and rabbit paella and Penelope orders the wine, as she's at fancy ass dinners all the time and had to learn about wine pairings in order to impress people.

"When was the last time we had the chance to hang out?" I say.

"I think it was some three or four months ago," says Polly.

"I'm well aware that I don't hang out as much anymore, you assholes," says Penny, taking an angry sip, "but I didn't tell you shit when you went missing three months on a book tour."

"Oh, you mean, despite how I did manage to squeeze you guys in three times during that period, even though I was so tired once that I actually passed out before dessert?" I say. No angry sip.

"Look, this is no competition," says Polly in a conciliating manner, "we're just saying that you've been too distant, even when you're talking or texting or communicating. You're there, but you're not. You're…"

"…getting my first building. Downtown. My design's been approved."

"HOLY SHIT," both Polly and I say, while lunging for a hug.

"I'll try to put in more time. I know I've been an ass."

"You've been working yourself to death," I say, "and we just worry sometimes. You missed Dad's birthday."

"Bullshit!" says Penny. "That's next week, on the 5th of November."

"Honey," I say, "we're on the 12th of November, which was last week."

She starts to well up and is about to shed tears. We all celebrate Dad's birthday, as he made a great difference in all of our lives. It's been four years and we're healing somehow.

"Oh my God…"

After a sad silence where we shed small tears remembering him and his greatness, Polly breaks the silence.

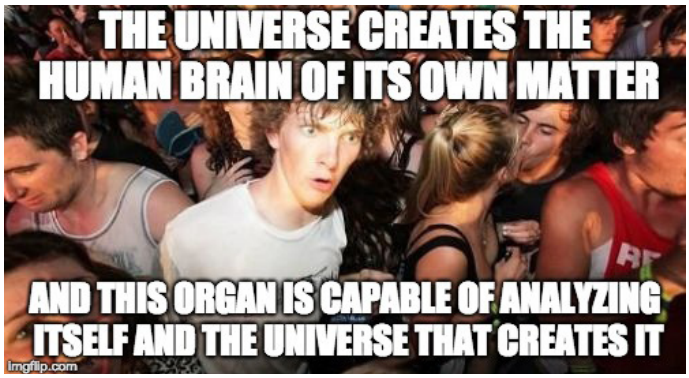
"Bless his heart, he could never wrap his head around your pioneering use of memes," she says to me.

“He also loved it when you sent little *Paulinos* over to his bed with the coffee and the paper.”

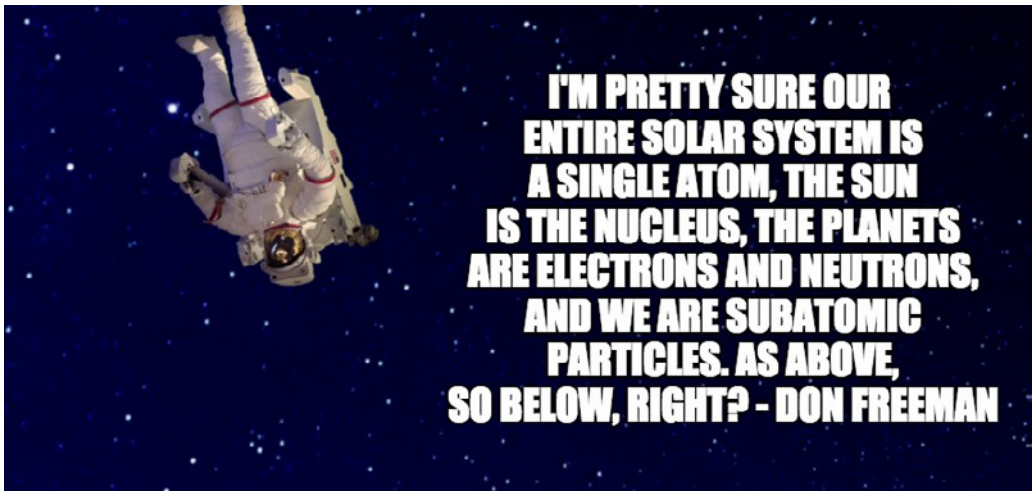
“To Malcolm,” I say, raising my glass.

“To Malcolm,” my sisters echo.

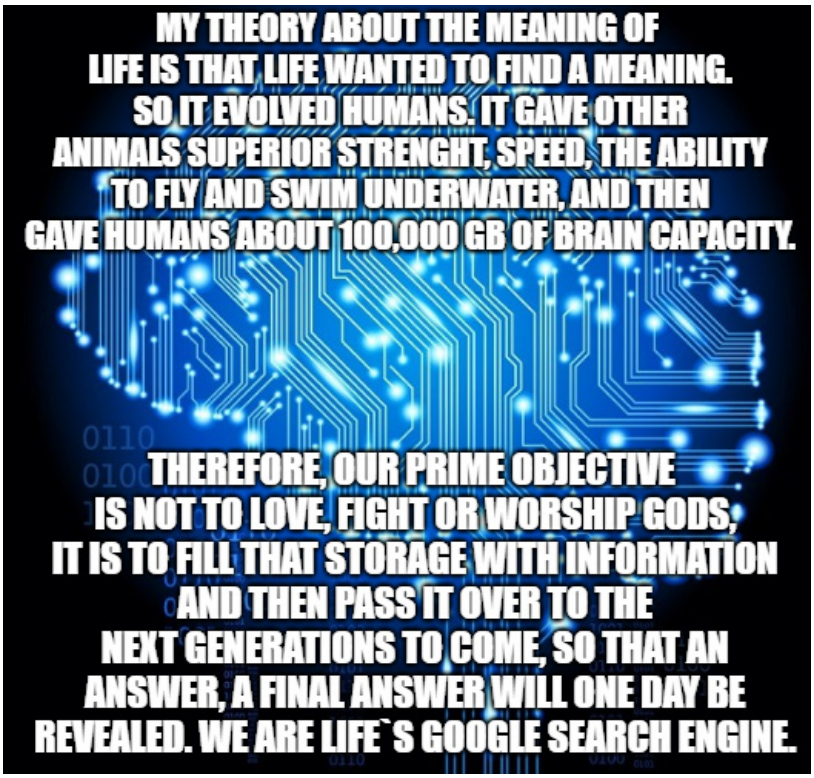
Being a philosopher, he made us read all sorts of texts in order for us to create a full and well-rounded opinion of the world. He really liked Bergson and his cosmological stuff: duration, élan vital and matter being a condensation of duration. I took a lot of that stuff as a building block for many of the ideas that I espouse in my essays and novels. For instance, I depart from the idea that there is a degree of self-similarity between all living beings and the Universe and somehow that cognitive output helps it understand itself.



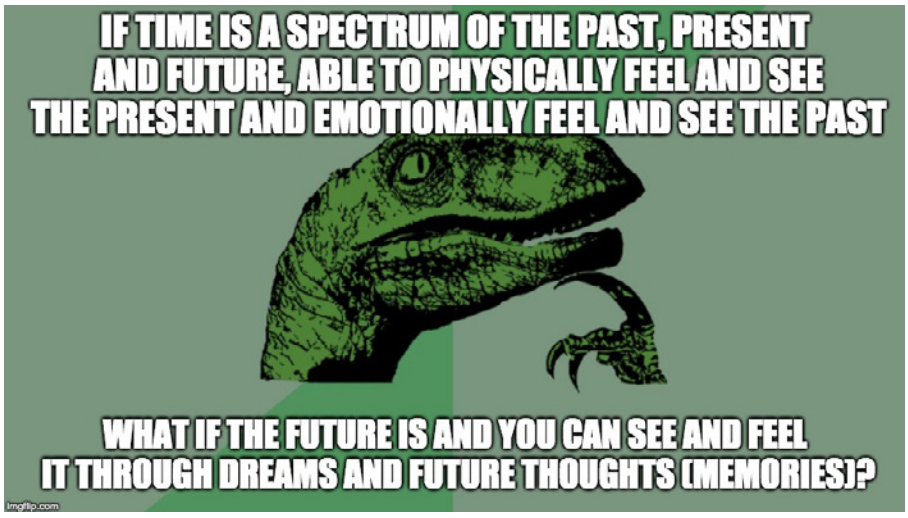
This led me to the idea that maybe what is big and what is small depends on who makes the observation; that is, maybe we are someone's subatomic particles and planets are atoms, much in the same way we observe those building blocks through a microscope…



…which in due time led me to a meaningful idea, while enjoying a loaded brownie: at all levels and scales the Universe is a computer of sorts in which all living beings are information processors.



But this recursive and self-referential information processing maybe took part in nonlinear ways, which also explains my notion of déjà vu that goes beyond the simple neurological or onirical explanation. Maybe memories and dreams are forms of multi-level quantum computing…



"Dude, come back to Earth," says Penny, snapping her fingers.

"Too much Bergson, say both my sisters, then sipping some wine.

As we enjoy coffee and dessert, I feel that I made the most meaningful contact that we'd had with Penny in a long while. She's always been a private person, but this is different, this goes beyond that. We feel like something's slithering around, something bad, like a temptation, a snake. Something she doesn't need. While I appreciate her great personal success, I somewhat feel that it's like a trap, that will complete her isolation from us. Her family.

We pay the bill and head home. As we stop at a red light on a corner, I turn back to see my sisters chatter about something, and Penelope's eyes catch mine. As I see them, they're empty… nothing there. As I turn back to cross the street, I feel the disorientation that I sometimes feel due to the baseball to the head… and then am suddenly blinded by some lights.

I feel weird. Not because I was literally inches from death, but because I feel that it should have happened. I should have been hit by that car. I am not, then, the hero of the story as I thought I was. I feel Polly and Penny hugging me—the former has warm hands and the latter are really cold, or is it the other way around…? Polly always has problems with blood circulation due to the lightning strike…

This is so goddamn weird.

I mean, I'm not one to have suicidal thoughts, I never have had them… but I feel despair. I feel like I'm doomed to repeat this cycle over and over, having all these redundant and repetitive feelings, and come back to them again and again and again…

"Dude, what the fuck?" says Penny, angry and happy at the same time, with tears on her face. "You scared me so much. Oh my God!"

Polly doesn't say anything, she only holds me so tight that my ribs hurt. I feel dizzy and my head hurts. What happens now? Maybe this thing will reset somehow, and somehow we'll reach what should happen. Will it reset again? How many times have I met my sisters and Malcolm? Lived this life? Failed over and over? I mean, I love that I have my sisters and I get to hang out with them, but will I have to repeat my life over again until this fateful point, so I can maybe get it right this time?

My sisters grab me tight, Polly on the left and Penny on the right. Is death a bad thing? As I ponder, I feel warm from their stubborn embrace and can hardly move.

"Sure, let's go home, but let me take a step without carrying you lot."

"I love you, Pixster," says Penelope.

Eventually, after I struggle a bit to walk, they both loosen their death grip, and I can move unhindered again.

"We're not leaving your side. We're going straight to the house, no detours, no customary lattes, nothing."

Well, I guess it's time to go back home.

DON'T FORGET ME

My name is Daniel Brooks. Not that it matters, as you probably won't remember the face attached to it. I've long theorized why this is and even read a shelf's worth of books trying to back that up. One idea is that my face is structured in such a manner that if you browse by it, you couldn't remember it—this could've been a remnant of mankind's hunter-gatherer days, as an evolutionary advantage that didn't stick.

I also thought that I might be made in such a way that I wouldn't trigger people to construct a representation of me, as we create concepts by distinguishing one thing from another and giving it a meaning in relation to oneself; that is, my face could provoke prosopagnosia in those that see it. Another theory I toyed with is that I had a natural electromagnetic field that disrupted memory functions somehow, which would also explain how machines and appliances seem to get busted by being near me for prolonged periods of time (I've never had a cellphone that lasted me a month).

Whatever the case may be, people don't seem to remember me once I'm outside their line of sight. For this reason, I've been mostly invisible to people all my life. My parents died when I was a small child and as I didn't have any immediate family, I was sent to an orphanage that was run by nuns. I was basically raised by three women: Sisters Mary Jo, Lorna and Paula.

Mary Jo had a PhD in biology and a comfortable academic position when she heard the calling after surviving miraculously unscathed from a car crash. She always gave me books and magazines about the life sciences, some of which stuck with me through my later years. Sister Lorna was this gruff and tuff lady that took crap from no one and who was nsot above the occasional smack on the head if I was out of line.

Sister Paula on the other hand, had the most calm and gentle demeanor. She was a musical instructor and taught me how to play the guitar and piano. She was also the one of the three that rarely forgot about me. Sister Mary Jo was the one who had more problems with that- over time she came up with cognitive cues and also underwent hypnosis in order to remember me at regular intervals. Sister Lorna only forgot about me when I didn't deserve a good whoopin.

For the most part, I was rarely remembered by my other fellow orphans, and so it was very common for me to be left behind.

I was forgotten on excursions to museums…

…picnics…

…during Mass…

I was left behind on an out-of-state school trip and by the time they found me I had hitchhiked half my way back to the orphanage.

There was also an upside to this: they always forgot about me when they assigned chores, when they

asked for homework, when they handed out punishments to the class, and so on. I did most of that stuff anyway, as I came to recognize that it was important to do it.

Despite all of that, I had a fairly good upbringing for an orphan. I had a guitar at 10 and have played it ever since, I had the unconditional love of my mothers, and for the most part, I stayed out of trouble, despite being a mischievous and precocious kid. When I got out of the orphanage I became a street musician and did the odd handyman job here and there. I played whenever I could on the street, in the subway, at dives, family restaurants, and more.

Whenever I made some extra cash, I made sure to send it to the sisters, for whatever the kids needed, and I also tried to visit once a month, with Sister Paula in charge of reminding the others.

When I was 25, I managed to get a steady job as the maintenance guy in a big apartment building. I worked in exchange for rent and it was a well-located place that allowed me to go busking at several of my favorite locations. As the people that rented reported problems to the landlord, I knocked doors and fixed them without the tenants remembering. Hence, the apartment building gained a reputation for being haunted by a gentle, useful ghost.

Sometime after I turned 27, Sister Lorna fell ill and had to be sent to the hospital. I would visit at odd times, taking into account that people would not notice me being outside visiting hours. I brought her some books and a portable music player with her favorite soul and gospel music, and at times, I would listen to her sing along.

Her soulful rendition of "Wade in the Water" would always bring me to tears.

During her last days she would remember me without the need to give me a smack, and we would talk and talk and most of the time people would think she was just talking to herself, or just plain delirious. Sister Lorna died at the age of 90, and I managed to find a black suit in excellent condition from a thrift shop, and salvaged a tie from Goodwill.

Sister Paula was grief-stricken, but Sister Mary Jo was inconsolable. I would hold her to the best of my efforts, and found myself crying too when I remembered a question I asked my mothers when I was 7: If I died and went to Heaven, would I be able to enter or would Saint Peter forget about me? Sisters Mary Jo and Paula could not agree on a suitable answer and Sister Lorna intervened: "Don't worry, child. I'll go there first and remind Saint Peter every day…"

I guess I had someone working for me up there now.

When I turned 30 I noticed a strange thing: I would hear my songs on the radio, changed slightly here and there in the arrangements and sung by voices much different than my own. For a long time, I didn't know how to explain it, until I started to remember that some of my busks were very close to recording studios and companies.

It wouldn't be, then, too farfetched to think that musicians and producers would listen to my music, internalize it, and not remembering where it came from, call it their own. I talked about this with Sister Mary Jo and she told me that it might be an instance of cryptomnesia, a phenomenon that takes place when a forgotten memory returns to you, but you think of it as a new one. It's a *memory bias,* she told me. She told me that at age 11, Helen Keller wrote a story called "The Frost King," which ended up being a case of cryptomnesia, from when she was read Margaret Canby's "The Frost Fairies." That is, someone read a story to her that she forgot, and later she internalized the plot, which she then wrote as her own without realizing it was one that had been read to her before.

In light of those very orderly explanations, to which Sister Mary Jo was prone, I thought that despite not being able to make money out of it, I could have fun by tracking what song goes where, and also, challenging myself to make the best songs possible, so I would create an invisible legacy, audible upon that of others.

When I was 32 I was singing at a bar when I met Gwyneth, the only woman I've met that could remember me perfectly and without any problem. She struck up a conversation with me after I finished playing, noticing that I had an extremely original cover set. She had long, wavy chestnut hair, a freckled face, a long delicate nose and chocolate-colored eyes, as well as a small, elegant chin.

She told me that it was her last night in the city, for she was leaving the next afternoon. She had been a master's student in business and had been offered a job in London. I told her my whole life, or at least the believable parts. I connected with her in a way I'd never done with anyone before. We were both tipsy and one thing led to another, and in the end she left my dingy apartment for London without giving me a way to contact her again.

That left me heartbroken and in despair, and soon enough the radio stations were filled with sad, thoughtful songs. Sometime later, in the bar where I met her, I heard someone talk about a girl calling from abroad about a guy who had played on amateur night on a day in which apparently nobody had. She must have forgotten about leaving a phone number or something in our drunken haze. I wasn't able to get the phone number that called the bar.

When I was 35, Sister Mary Jo died in her sleep. It was a heart attack, despite having always been thin and lanky, and quite healthy in her habits. She must have been around 75. I dusted off my suit and held Sister Paula without planning to ever let her go.

I started visiting the orphanage every two weeks, but the new nuns could never seem to remember me, nor could the kids, only Sister Paula. She was the only one that I had left, the only one who could see me. What would I do without my remaining mother? I would be completely invisible, engulfed by the world without being recognized by it.

I was 40 when the worst thing that I imagined could happen to me in the world took place. My remaining mother died. Sometime later, I got a letter in my mailbox, and it was from her—she knew she couldn't trust the other nuns, so she hired an attorney to send it to me in the event of her death.

In that letter, she told me that to her and the other sisters, I had been a beautiful blessing. She told me that before becoming a nun she had had a son, whom she lost very early in his life, but that despite renouncing from the world, God had given her another son to raise. She said to me that I would find my way to survive the Earth and that I should keep living a meaningful life as I had, despite being alone.

When I was 45, I became homeless. My apartment building got bought by a corporation and I was evicted—also, the orphanage that I no longer had a reason to visit was closed by the Catholic Church. I wandered then, from here to there for years, devoid of a purpose and an identity.

When I was 55, I met my daughter. I was busking in the city, to which I had recently returned, and I saw Gwyneth, but she looked a little different: younger than when I met her, and she had my eyes. I saw her from afar and called Gwyneth's name. She turned her head but couldn't find me in the crowd, and then I lost her again.

I have a daughter, man. Who would've thought?

My purpose returned to me. I composed her songs that were echoed in every artist imaginable. I wrote a letter telling her my story and posted it in some local newspapers, where it found its way to the world. Yet, I couldn't find her, nor could she find me. Ever since, I haven't stopped reaching out. As I approach the end of my years, I hope I can gaze at her before I meet my mothers who, I have no doubt, have reminded Saint Peter every day that I exist.

NANO WARS

Hello, I'm Michael Scoman. Welcome to Nano Wars, the sport where we played with live ammo and grenades, but it was rare, if it ever happened at all, that anyone got killed. As conventional sports were derided because of the injuries laid upon professional athletes, the Nano Wars came as an alternative, where mostly professional soldiers donned tactical suits of armor and shot at each other, without getting hurt and almost never getting injured. Partly sponsored by the Armed Forces as a means to recruit people, but also as a way to get more resources for sport leagues without getting taxed, Nano Wars usually pitched teams against one another in games that ranged from Capture the Flag, to Plant the Bomb, to a simple taking down of the enemy team. It was like watching *Halo,* but with people and live ammunition.

The "Nano" element in this whole thing came from the fact that we only carried ammo with us, but we formed our weapons by psychically manipulating the carbon nanites that littered the battlefield in the form of black dust. We could also turn the dust into blunt weapons or other objects in order to attack the enemy. On one hand, it was one of the most versatile weapons, and on the other, it took a lot of focus to keep nanites "coherent"—that is, to have them maintain the intended shape.

I was part of the Boston Massacre, one of the most popular teams, and currently, one of the six competing in the playoffs. Because this sport wasn't about milking it, the top five teams competed with one another in a "kill or be killed" match, where each team member was worth 1 point and the captains 5, with the winner being the team that scored the most points. The arena was divided in six parts, with a central hub primed for good free-for-all's:

Against us were the LA Riots, the Baltimore Longshoremen, the Chicago Thick Crusts, the St. Louis Spare Ribs and the infamous New York 86ers, whose name stemmed either from the slang for killing someone, or that for being banned out of a bar, which was a common occurrence on their team. In any case, the 86ers, like the Wu Tang Clan, were not to be fucked with.

Because each suit was basically indestructible, the way in which someone would be counted as a kill was if their hit points, HP, went to 0; that is, each shot, stab, hit or whatever, subtracted hit points from your suit. 0=ded. If members of opposing teams were locked in battle with one another, that became a 1V1 and couldn't be interrupted by others, unless there was a mutual retreat or if you stumbled into two other 1V1's, in which case it became a free-for all.

My team had been struggling with finding our way this whole season, but with some decisive teamwork we managed to sneak into the top five, where our bitter rivals—the 86ers—were the favorites to win. I knew we had a strong chance of victory, despite being labeled as the dark horse of the competition.

As the gates were about to open and we were about to spread out onto our stage, I heard Coach Parker, barking his version of a pep talk, gently requesting us to "fuck peoples up" not for show, or sport or glory, but for one another, and maybe a bit of money and glory, why not? Coach was a legend in the sport, as he'd been a pioneer player for Boston, a Navy Seal that after partaking in the game, had wandered the world for many years and then come back for reasons unknown to coach. As we came out to fight on the main stage, St.

Louis stayed in their area, while Chicago and NY ganged up on LA in their turf. That left us with Baltimore.

My sister Tessie was the first one to make a kill, blasting one to oblivion with a sawed-off shotgun, while Hammerhead Joe and I ambushed Hollis, who was the team captain. Tessie was my half-sister, as my dad remarried a sports writer of Vietnamese descent. Tessie was three years younger and an Army Ranger. Joe was the oldest one in the group, as he was 40 years old, and this was probably his last season. He was our close quarters guy, as he was bulky and used the nanites to reinforce his armor, delivering punches devastating enough to rattle your ancestors. He wasn't from the Armed Forces, but rather had a mixed martial arts background. They called him "Hammerhead" because the headbutt was the house specialty.

"Keep it up," said Coach.

"All day, every day, old man," said Tess.

The remaining three Longshoremen were retreating back to their turf, and we followed with caution, as they might have put out traps or some other nasty shit. As we made our advance, we overcame a trip wire that had a grenade attached, and Tess kept the grenade—as I mentioned before, we could only bring ammo, but also grenade skeletons, the outer structure of which we had to will out of nanites.

As I mowed down their long-distance guy with my assault rifle, I was about to be ambushed by their last guy when Sneaky Bob came to assist me and knifed his way to 0 HP.

"Look sharp, big Bro," said Tess as she passed me and gave me a slight knock to the head. "We need to keep those five points."

"Yeah, I know," I said. "Thanks, Bob."

"Don't mention it," he said in the intercom.

Bob used to be an 86er, and at 37 was a veteran as well, but he had a massive falling out with his former team, as they dropped him like a sack of shit after an off-field injury became a complicated string of issues, despite years of unwavering loyalty. We gave him a spot and helped him make a comeback, like the guy that finds an abandoned sports car in a junkyard and patiently restores it to mint condition. You didn't see Bob, or hear Bob, or touch Bob—*he* was the one that messed with *you*. I was just grateful to have him playing on my side.

As we stepped over Baltimore, Chicago and NY split LA without casualties and were in the process of doing the same with the Spare Ribs.

We were trying to get a piece of the action as well, with Tessie, Joe and I spearheading the attack, and Bob picking up strays. This, however, did not work that well, as Chicago and NY kept stealing our kills and

we just managed to nab one. NY was leading the score with 13 points, as they took out two team captains, we were behind with 10 and Chicago was at the bottom of the well with 4.

This beat could go two ways: either we sided with Chicago, as the 86ers were far ahead, and the former knew that going toe-to-toe wasn't a good option, or we went the NY route, which wasn't likely, as we hated each other's guts. We and Chicago sided against NY, or at least it seemed that way, as Chicago left an intentional opening for the 86ers to attack, taking out Joe and in the process leaving Bob with half his HP. It was 2 against 1, but we had Buddy.

He was one of my favorite people in the world: we trained together in the Navy, we'd been roommates, and we often partied together. He also did a lot of charity work and had this bubbly personality that was really difficult not to like. He was also this 7-foot monster, that once that gained traction, could take a whole team out in one go. Most teams had a flee-on-sight order to individual players, unless there was a 3:1 advantage.

Buddy finally went on a rampage (everyone had been running away from him until that point), taking down Chicago's team captain and two people more, bashing, knifing and shooting his way through them. We expected him to take the other two out (he did leave them with critical HP), but we had the bad luck of them running into NY as they fled, who promptly finished them off.

As he was about to jump on the 86ers our luck ran out, as he was quickly knocked out of the game by their team captain, The Flood. He was part of this new, disruptive type of player that had been destabilizing the whole game and messing with players that came from an Armed Forces background. Many gamers had been making the transition to Nano Wars, and they weren't people who had too much stamina or were particularly skilled at hand-to-hand- however, they excelled in handling massive amounts of nanites, which they used in waves or other methods, incapacitating people from afar.

Many of them could also disrupt someone else's control of nanites, effectively dismantling weapons. Many teams protested these kinds of players and there is currently a lobbying effort to limit them in order to balance out the game. In any case, to see this guy disarm Buddy and then pin him to the wall- despite him almost breaking out—in order to have the rest of the team play the part of a firing squad was a big kick in the nuts. So we were 3 against 5. Not a walk in the park, but certainly doable.

"I'm going to split," said Bob. "I feel a disturbance in the Force."

"Sure, man," I said. "We'll track your position and rendezvous whenever you call it."

He probably sensed their sneak guy, Angus Mackey, who had come to replace him after his injuries. Tess and I knew better than to get in the way of a personal affair—Bob was family now, and we knew that he would get the job done. While Bob and Angus were fighting it out on the NY stage, Tess and I went about the main stage looking for chum. As I saw Joe and Jolene Burns from afar, I threw a flash grenade to stun them and then Tess and I took Joe out, while the other ran.

"There's some cheering from the crowd," said my sister.

"Bob crossed Angus from the list," said Coach, "but he's low on HP."

"Bob, we're tracking you. We'll see you soon."

"Don't come my way," he said. "I'm cornered."

Tess and I looked for his position anyway in our helmet screen, to see if on the off chance we could still assist. We only got to see three dots take him out. He did leave them a souvenir, as he dropped a magnetic grenade on Jolene before falling. They got sloppy and paid for it. We were now 2v2, with a score of 18 to 17 in our favor, both of which were the highest. We had 1 regular point and one captain remaining, and it all would depend on what team got the opposing captain. As Tess and I started to move, we got cut off from one another by the Flood. She continued to engage Tess Parker.

"Why don't we let the ladies finish their pending business and then decide this captain to captain?"

"Fine by me," I said.

Tess Parker and my sister were the epitome of the rivalry between the Massacre and the 86ers. They tended to kill each other regularly throughout the season and couldn't stand each other. Right now the seasonal kill score was tied, so it was fitting that they settled this on a 1v1. The other Tess was a very balanced player—she was a heavy gamer in her teenage and young adult years, but decided to join the NYPD and ended up on a SWAT team, and later on the 86ers. If my sister wasn't careful, she could be disarmed or pinned in the same way that Buddy was.

As the duel of the Tesses raged on, they were even on the HP, but it looked like the other Tess was getting the upper hand, as my sister looked a bit unfocused and tired. As I had feared, my sister had been disarmed and the other Tess pinned her to a wall and was trying to shoot her with a 9mm, but my sister wouldn't stay put and managed to release half of her body, and lunged at her with a knife. Tess succeeded in surprising her counterpart (and everyone else) when she managed to tie herself and her opponent together in a wave of nanites, and let go of the pin of the grenade that she stole from Baltimore and blast both of them.

Because they were both equal in HP, the first one to get up would claim the kill. I saw both of them try to stand—they were stretched thin after all the intense action of the match and, of course, getting blasted by a grenade (with the suit on) was enough to knock anyone out. In the end, Tess managed to get up first and the crowd gave roaring acclaim. I couldn't let that bold victory go to waste. I was going to win this shit.

"You and me now, Scoman," said the Flood with dramatic flair.

"Kind of stating the obvious there, chief."

I'd seen this guy's tapes and what he did was use his skill to get to the upper part of the walls, and from there throw waves of semi-hardened nanites in order to do debris damage. I knew that he could control nanites without moving, but that he was at his best when he used his hands. One of the things I needed to do was fire at him when he was moving waves in order to provide cover for myself, hiding low behind the plates that make the maze, but the plan was to get as near as possible and land a decisive blow.

Work the walls… work the walls… work the… fuck.

I don't know exactly what he did, but the Flood ended up taking down the walls… literally. It did make sense in a way, because the inner layer of the hexagons and all of the walls were made of nanite, which is why, when they were damaged, they slowly regenerated, and sometimes, the league changed the configuration of the mazes between matches. So, basically, we were playing 1v1 with no walls and this OP guy was just throwing shit at me.

"Is this shit even legal?" I heard Coach yell at the refs and organizers (he forgot to turn the comm off).

I was doing my best not to be killed, using nanites in bulk to slow some of his hits while I evaded, or to block the brunt of a hit, taking minimal damage. I also fired at him when he was aiming, but this was all stalling and I simply couldn't get near the guy.

"Kid, you there?"

"Yes, Coach."

"If you fight the Flood as you are, you're dead meat."

"Thanks for the vote of confidence, man. You have a plan?"

"Remember that trick I've been trying to teach you?"

"That memory shit?"

"Yeah, you might as well try that."

"I've never really mastered it, or really got it to a useful level."

"Do or die, bitch."

"Yeah," I said. "Might as well."

In his wandering, Coach had found people that could use genetic memory or whatever to retrieve skills

and skill sets from their ancestors. Initially he had gotten this idea through an article where some researchers found out that in mice and other animals, you could inherit fears through generations. He initially replicated this experiment with mice, as he trained a bunch of them to fear the smell of roses by means of gentle electric shocks, and later, when he made them smell the roses, they shuddered on instinct. A second (and later a third) generation of mice had been given the smell of roses and they responded with the same instinctive shudder of their ancestors; on the other hand, his control group had no such reaction.

As I said, in his travels, he tried to develop this idea into a skill, but then he found this was part of a much older thing, where people had trained in this skill for generations, and somehow, he managed to learn the basics and then teach them to us, when he came as a coach. Of the team, I was the most advanced student, as I had managed to do some basic and mid-level skating tricks, despite not knowing how, as one of my grandparents on my maternal side had been a notable skater and extreme sportsman, while another was a surfing champion, if memory served. I tried focusing, but was quite difficult when you had to keep moving against constant and unending enemy aggressions.

"Man, this sucks," I yelled to Coach. "I can't seem to focus, and besides, I'm running out of ammo for my assault rifl—"

I got hit by a wave right in the head, my HP got cut to 1/3 and I was disoriented. I stopped thinking and took a deep breath. Then I felt it, like a door opening. It wasn't about focusing or thinking about something—it seemed that the key was just letting go. As the next wave sought to finish me off, I managed by some miracle to get up, and create a skateboard with nanites, moving from one side to the other of the court with great speed. Wave after wave seemed to miss me as I emptied my clip and actually managed to get his HP down with a couple of well-aimed shots. That in turn pissed him off and the waves intensified until a third of the court seemed to become a sea of dust and pebbles that ebbed and flowed along with this guy's mood.

I didn't think much of a strategy—rather, I lunged with my skateboard towards the waves and started to surf through them like one does in the sea. I felt calm and on top of the situation, even relaxed, as I made my way through the waves. He just couldn't shake me off and the waters started to get more violent. I shot at him with my sidearm, further diminishing his HP and getting on his bad side.

The waves were losing coherence, but at the same time the nanites he moved occupied half of the main stage by now, and as he threw a massive one, I ran out of bullets. As I saw a massive opening in such a clunky and energy expensive move, I went for the kill and jumped from my surfboard on top of a nanite wave to the Flood and tackled him. Before he could get up, I gave him a one-two and then got up and knocked him out cold with a sledgehammer. Where did I learn to use such a weapon, or rather, which of my ancestors knew? Was this match still legal? Who the fuck knew. We won, and it was all that mattered to me.

JAGUAR SHOES IN THE HOUSE OF THE UNHOLY KNIFE

ONE

Panel Two

NARRATION: We were known as shinobi, though I personally preferred the term *sabotraceur*.

Panel Four

NARRATION: Our job consisted mostly of disrupting the operations of the *zaibatsu*, which along with the Order of the Four Temples, ruled all the different spaceship nations that formed the Columbia-Heiankyo Federation.

Panel Five

NARRATION: Despite being branded as terrorists and belligerents, we tried as frequently as possible to pillage and divert resources from the reserves of the rich to feed and sustain the impoverished population, to keep them from relying on the institutionalized bloodsports that were a source of disunity across the spaceship nations.

TWO

Panel One

NARRATION: We made use of forbidden applications of consciousness-based technologies, which are exclusive to the Order of the Four Temples. We were trained to tune our conscious vibration to that of the Universe in order to retain more of the vital force that flows through all, and convert it into energy, stamina and strength.

Panel Two

NARRATION: It's a lot like the way the Jedi "used the Force" in the forbidden *Star Wars* movies, which despite being plagued with contradictions as to the nature of things, gave us a lot of good ideas as to how to use the energy of the Universe in the field.

Panel Three

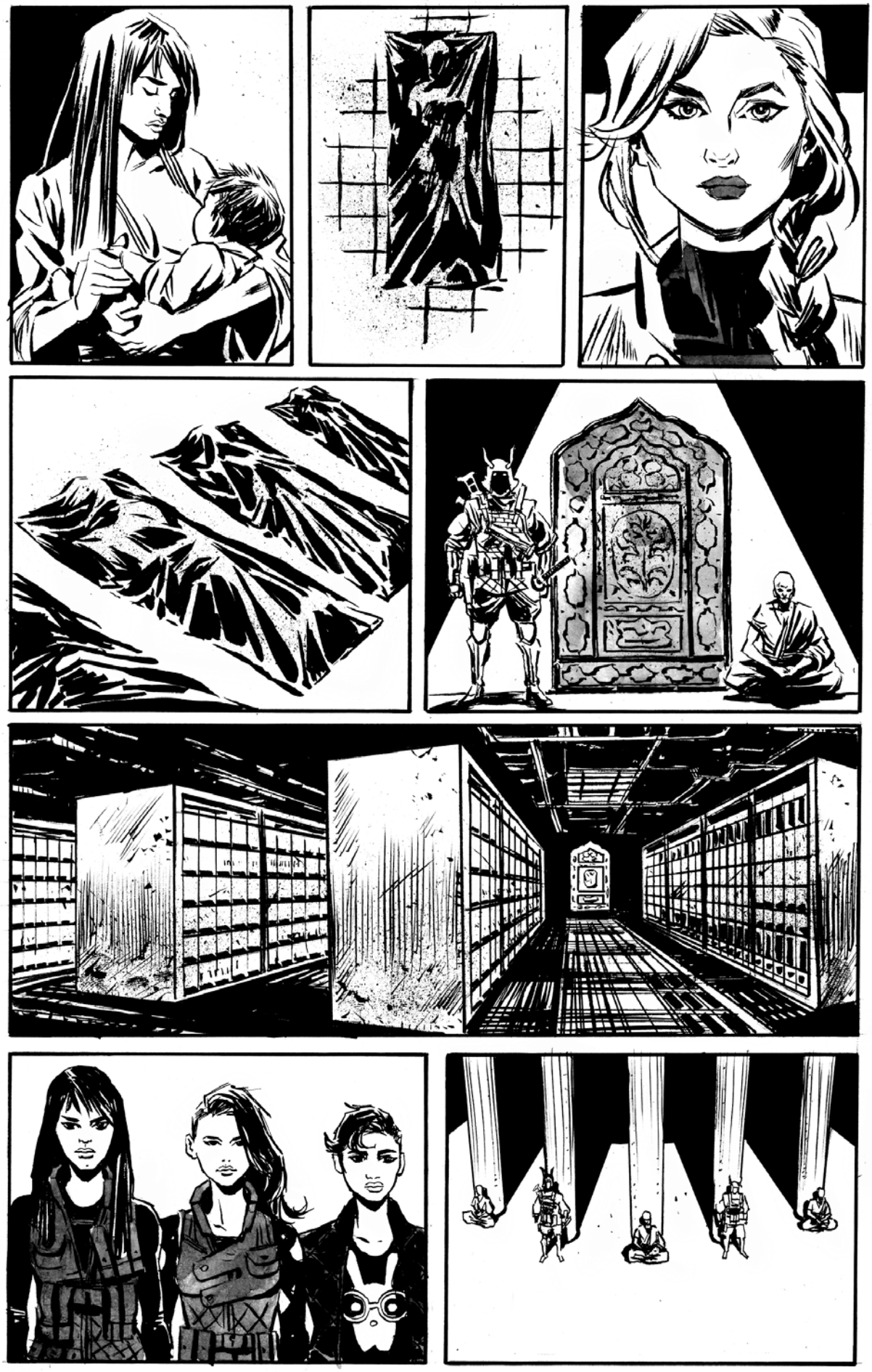
NARRATION: We also received extensive physical training in order to be able to draw and use as much energy as possible. I was very well known for my stealth and freerunning abilities within sabotage and bombing missions (hence my predilection for "sabotraceur").

Panel Four

NARRATION: My codename—Jaguar Shoes—was a reflection of this, and of the fact that I had white spotted prints on the inner lining of my running shoes (totally non-standard issue), which always got the job done. My most trustworthy ally and best friend was my sister, Rocket Skates, a shinobi of my skill and orientation, who had a proclivity for integrating 4x4 skates with her standard-issue footwear.

Panel Five

NARRATION: We were 4th generation shinobi: our great-great-grandmother was one of the founders of this organization, with the trade passing from mother to daughter ever since. There were many males within our group, but I came from a line of women who have little patience for the weakness of others, male or female. Thus, getting impregnated and raising sons and daughters on your own has pretty much become standard procedure.



THREE

Panel One

NARRATION: To be honest, I think this will be the way that I'm going to have and rear children, as I had yet to meet a man who could keep up with me.

Panel Two

NARRATION: And even if I did meet him, I couldn't afford to see him dead or lifted by the authorities. I couldn't afford myself the weakness that came from such ties.

Panel Three

NARRATION: I already had to endure the loss of my older sister, Snakehips, three years ago. Despite being hardened veterans, it took a long while for me and Rocket to recover. Our mother passed away not long after that, from a long illness that became terminal, cursing the Federation until her last breath and leaving her legacy for us to continue.

Panel Four

NARRATION: These last couple of years we were hit heavily, in a very systematic and intimate way… much as if the enemy had developed insights into how we think and act. We've been thoroughly searching for leaks but so far, not one has been found.

Panel Five

NARRATION: Recently we found—by means of one of our many spies—a cache of computers and probable vital databases that's been guarded too heavily for its size.

Panel Six

NARRATION: If completed, such a hit would raise morale. I've been handed the following delicate task: getting to this cache, hacking the servers and delivering a payload of explosives. And then, hopefully, getting the fuck out unharmed. They gave me what little intel we had: a 15x15x2 meter room, guarded by two samurai and three combat monks, which is three times more protection than what a computer room of that size and apparent importance should have.

Panel Seven

NARRATION: We were a three-woman team: me, Rocket and Hard Drive, one of our best field hackers, who we required because our target was a closed network. It would have a couple's mission otherwise.

Panel Eight

NARRATION: Two separate recon units stated that the samurai and monks were spread out in a semicircle ratio of 15 meters across the room, which is surrounded by pillars and machinery. They change their pattern every 20 minutes, so we have a small window.

FOUR

Panel One

NARRATION: My approach was to kill the three monks, who were fucking annoying, because 1) they can actually kill you with a few touches of their chi manipulation technique and 2) you need to nullify your presence to a ridiculous level in order to get past their warding and detection techniques.

Panel Two

NARRATION: We can't get past these fuckers and then make a quick retreat back if one manages to mark us, because he could then track us back to base, and all hell would break loose. They've got to go. This is probably the hardest part of the mission: sneaking past them, killing them quietly and getting to the target, and maybe also killing a samurai or two, so we don't have to deal with them on the way back.

Panel Three

NARRATION: And because they're an anti-stealth rotation, they don't have communication devices, as it would just be a giveaway and paint a huge target on them. They just go back and forth in rotation. There's also a two-man recon unit out scouting beforehand. Then a five-person team that carries out hellraising sabotage work as a decoy, drawing as much heat as possible.

Panel Four

THE BARE BLADE: As a contingency, should shit get real, I want you to have RoadRunner as a relay. She's our fastest and also very close to completing the testing for our teleportation techniques. She teleports you out or dies trying. Just activate this seal.

Panel Five

JAGUAR SHOES AND ROCKET SKATES: She's too green.

Panel Six

THE BARE BLADE: I understand your concerns. This, however, is not a polite suggestion.

NARRATION: Translation: Deal with it.

Panel Seven

NARRATION: Boss was right. She's a prodigy and is pretty much ready, we're just being assholes because we can't let Snakehips go.

Panel Eight

NARRATION: Equipment Check.

Panel Nine

NARRATION: Tactical tanto and katana. Check.

Panel Ten

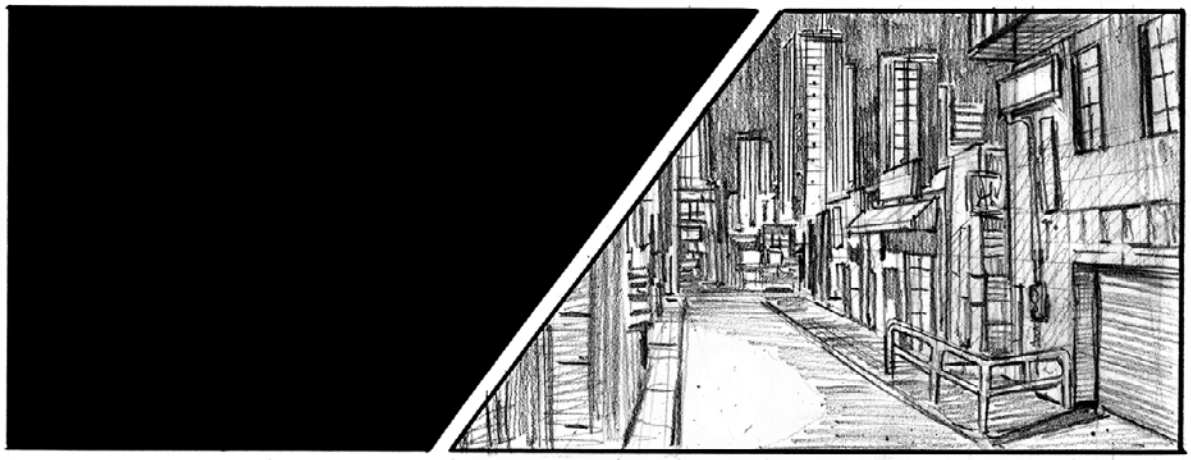
NARRATION: Energy conducting garrote for throat slitting and choking. Check.

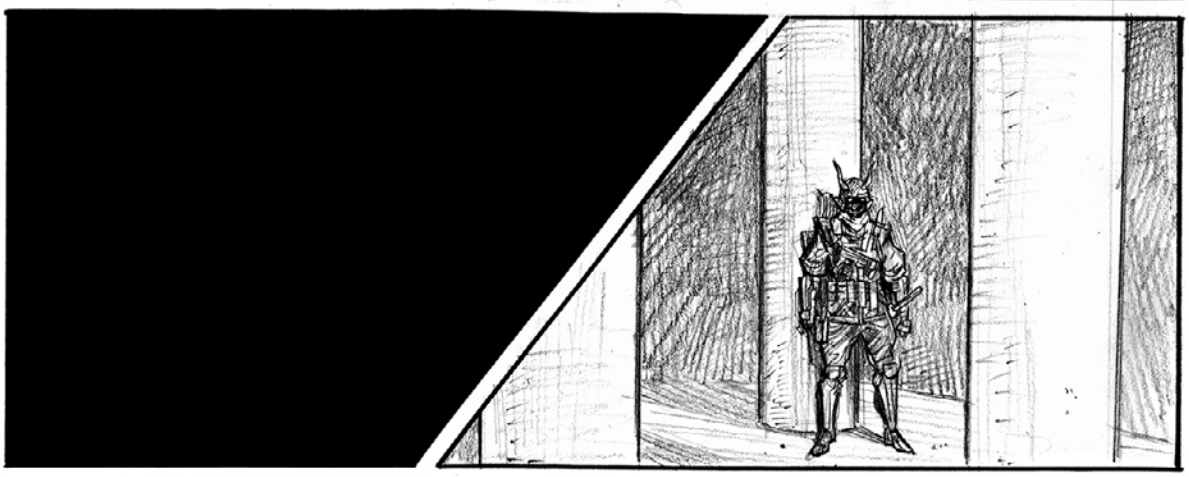
Panel Eleven

NARRATION: Light Kevlar against mild slashing and luckily, a monk's touch of death. Check.

Panel Twelve

NARRATION: .475 magnum with a four-bullet chamber and small grenade launcher. For blowing madafakas into pieces if things go south. Check.





I AM HERE AND NOT

SPREAD AND FOCUSED

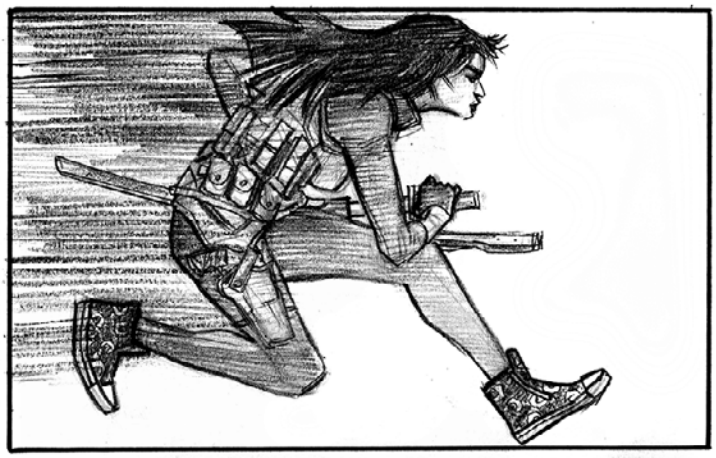
SPREAD FROM ONE POINT,

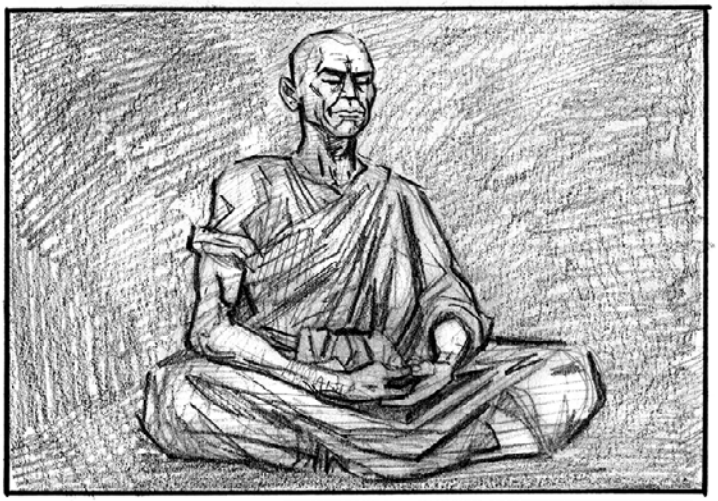
FOCUSED ALL OVER,

ALIVE AND DEAD,

I AM HERE AND NOT

...





FIVE

Panel One

NARRATION: As we approached the site, we decided to spread out according to the intel from the recon team, and began an infiltrating meditative trance to help us elude detection and kill the monks. We also had to be mindful about time: we planned to locate and kill the three monks simultaneously as they entered a new formation, which would give us twenty minutes before any further changes and the possibility of someone stumbling onto a corpse, despite us hiding it.

Panel Two

NARRATION: Five minutes until they change rotation. Recon said it was time to get freaky. I started a series of very specific breathing exercises and recitations to put myself in a state of mind and an energy configuration that hopefully would render me undetectable.

Right side: Visual of a samurai, standing guard before a column. Darkness and other columns surround him/her.

Panel Four

NARRATION: My heart rate went down to a very slow and steady beat and my whole body was numb, like when you constrict a limb for too long and it falls asleep.

Panel Five

JAGUAR SHOES, OFF: Target.

ROCKET SKATES, OFF: Target.

HARD DRIVE, OFF: Target.

SIX

Panel Two

NARRATION: Jugular, throat, heart, liver, spleen—and bye-bye to you too, femoral artery. No sound, no idea.

Panel Three

JAGUAR SHOES, OFF: Dead.

HARD DRIVE, OFF: Dead.

ROCKET SKATES, OFF: Fuckity bye.

Panel Five

JS, OFF: Bye-bye, Sam.

HD, OFF: Nice, nice! Scratch me one too.

Panel Six

NARRATION: It seems all is peaches and grav—

Panel Eight

NARRATION: Fuck. How?

Panel Nine

ROCKET SKATES: Go! I got this.

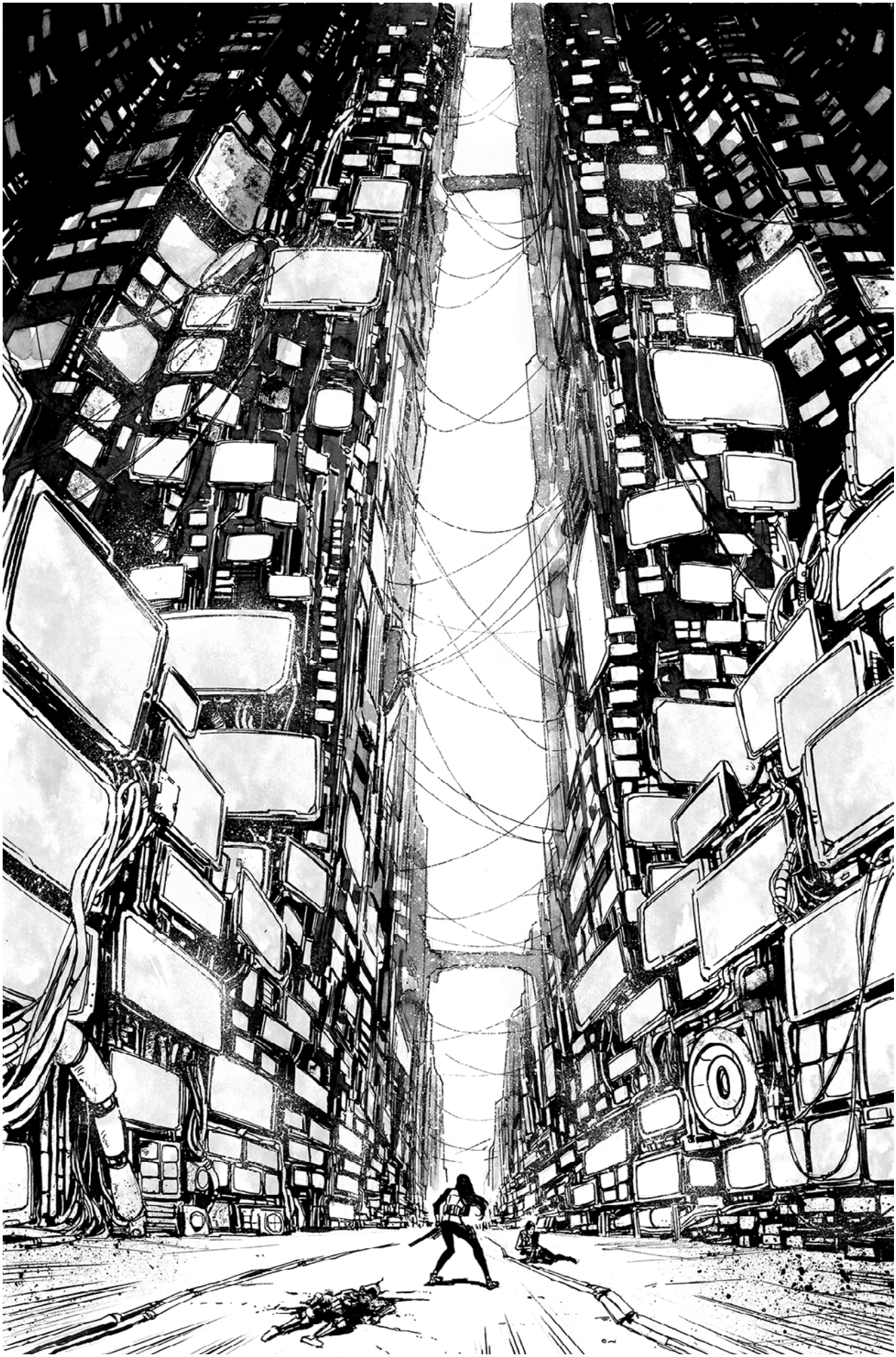
SEVEN

Panel Three

NARRATION: This wasn't in the intel at all. Fuck my life.

Panel Six

NARRATION: Dead-Dead…



EIGHT

Only Panel

NARRATION: We're definitely not in Kansas anymore.

NINE

Panel One

HARD DRIVE: Jag…

Panel Two

NARRATION: She had forsaken her Kevlar for stealth, and she had several small bruises, a certain type I knew too well… She was dead walking.

JAGUAR SHOES, OFF: Shit, man, they hit you with Inverted Lotus.

Panel Three

HARD DRIVE: I'm gonna die.

Panel Four

NARRATION: And painfully. As we spoke, she was bleeding internally in her stomach, which would pool up until she vomited it over and over. The blood would also put pressure in her chest, causing her breathing to go shallow, and because she had been hit in the vesicular, the vomited blood would turn black. She had a couple of minutes left at best, and I sat her down with her legs apart.

Panel Five

HARD DRIVE: Thanks, Jag.

Panel Six

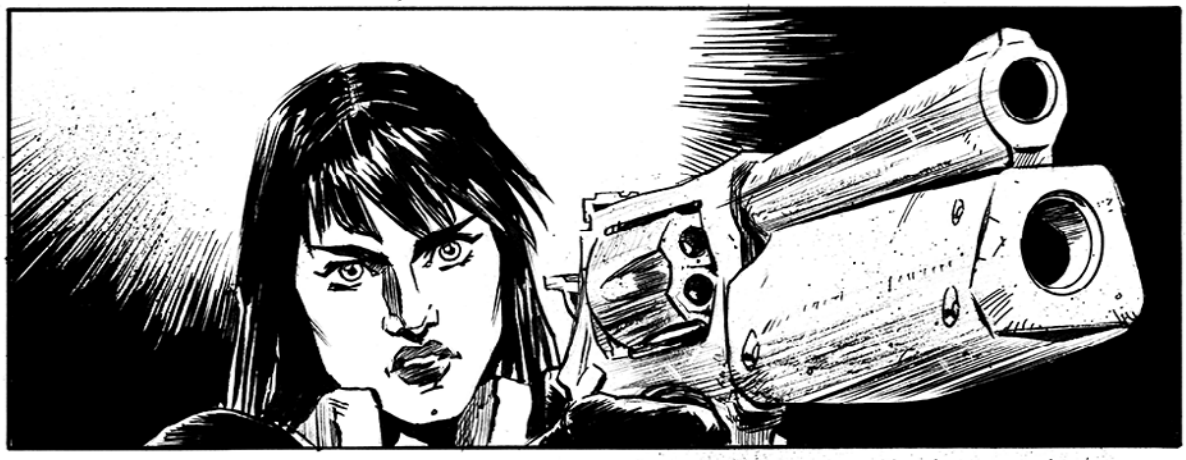
NARRATION: Quick and painless… sparing a sister some pain.

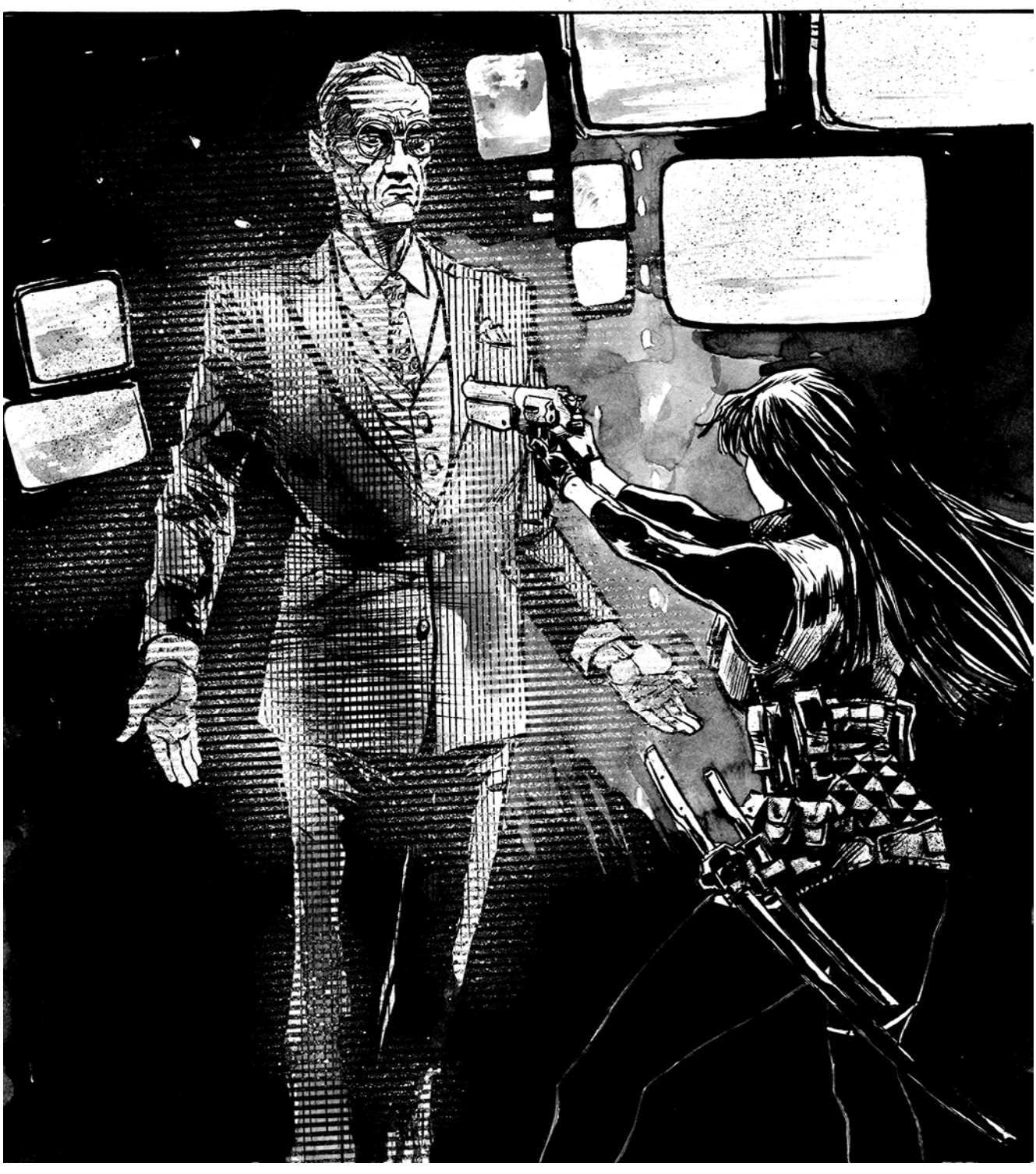
Panel Eight

NARRATION: She was tracked by the monk she killed, but she couldn't take the Inverted Lotus and make it all the way to the shaft, which means that one of the samurai that appeared in the shaft was a monk in disguise. I hope Rocket makes it out okay.

Panel Nine

VOICE, OFF: Greetings.





TEN

Panel One

JS: What. The. Fuck.

Panel Two

KNIFE: A noble effort, but you cannot kill what has no physical body. Or as you shinobi rather poetically put it, *"I am here and I am not…"*

JAGUAR SHOES: Who the fuck are you?

KNIFE: I am the Knife. I am an AI construct built from a human brain, consciousness transported from a fragile and useless body to a more sublime medium. I am the true ruler of this ship. I am the noble shepherd of this unruly flock as it wanders throughout space, and its members devour one another, thinking themselves king.

ELEVEN

Panel One

JS: You're quite poetic yourself, for a machine…

Panel Two

KNIFE: …and you have quite the sense of humor for a shinobi.

Panel Three

JAGUAR SHOES, OFF: Dude, you never met my sister…

KNIFE, OFF: Snakehips?

NARRATION: How could he know?

Panel Three

KNIFE: She died some time ago. Didn't she?

JS: Yes…

KNIFE: 2 years, 8 months, 2 weeks.

JS: Yes.

KNIFE: Could you kindly return to the carcass of the samurai you killed and remove their helmet?

Panel Four

NARRATION: I did. It was the face of my sister, but not quite. Her lips were thinner, here eyebrows more sparse, and her eyes were not blue, but green.

Panel Five

KNIFE: It's not her, but the first of many children to come: we have been harvesting the genetic and reproductive material of all the shinobi we can get our hands on. We create a fertilized egg and the best configuration is harvested, programed and trained. We

can have them ready for combat in only two and a half years. This one had a very good service sheet for such a short life span.

Panel Six

JAGUAR SHOES: You sick fuck.

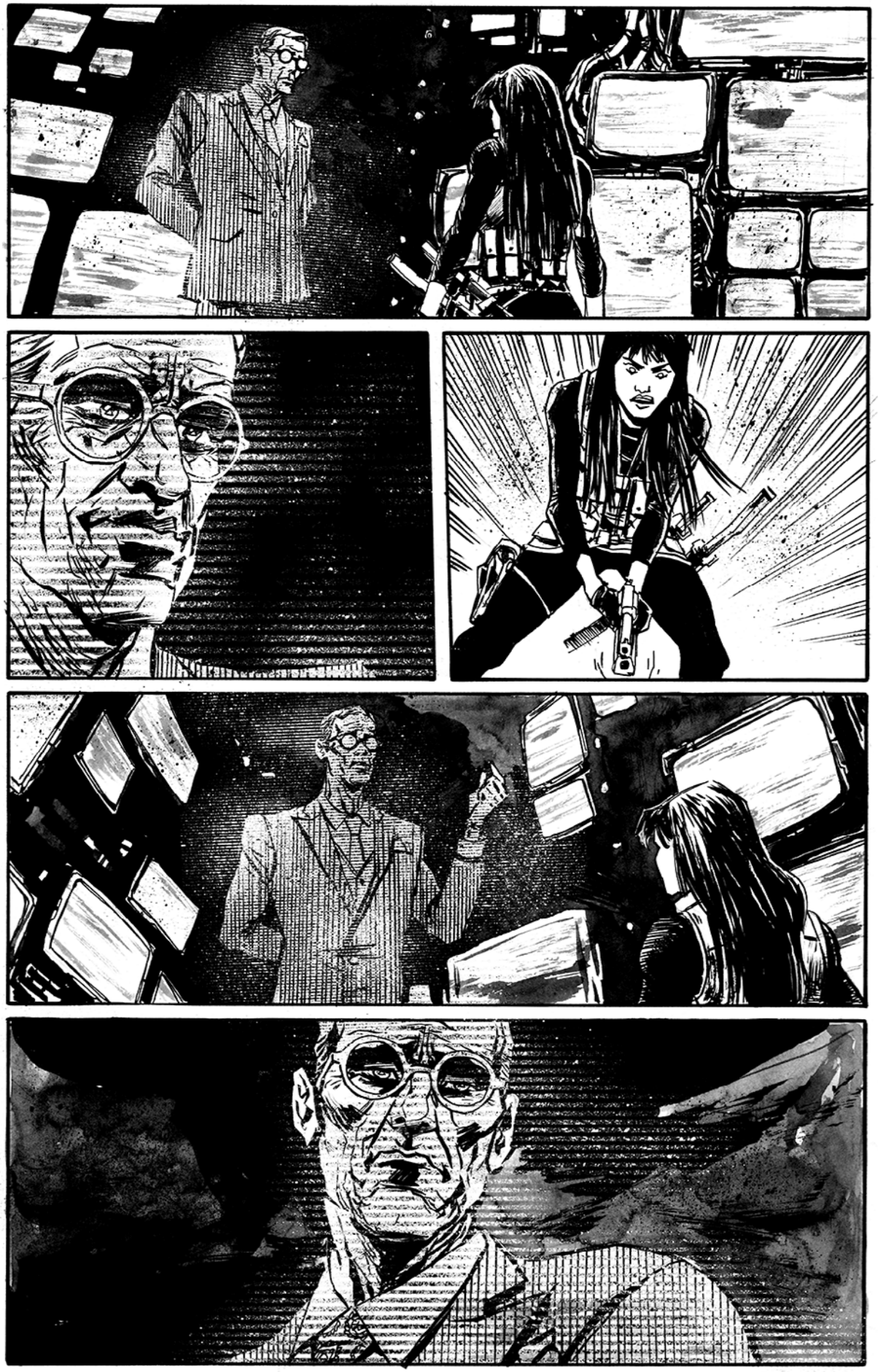
Panel Seven

KNIFE: It is mere pragmatism. Regular samurai take too much time and you kill them too quickly.

Panel Eight

JAGUAR SHOES: Fuck you.

KNIFE: Thank you for bringing another fine specimen, and also for giving me a valuable tool…



TWELVE

Panel One

KNIFE: You know better than to shoot at me in rage. You are very focused, driven and have very good insight. A valuable jewel indeed.

JAGUAR SHOES: And you expect me to join you? Darth Vader speech and all?

Panel Two

KNIFE: No, I expect to have you. Oblige me and try to move.

Panel Four

KNIFE: While you were inspecting the samurai, disgusted by the events that unfolded before you, I had several drones the size of insects connect to the few plugs in your body in order to override your own command. You cannot move unless I will it.

JAGUAR SHOES: What's the point of all this? You're going to harvest me and HD?

Panel Five

KNIFE: Well, yes, but you are also a valuable template of another kind: As I do not have a physical body that gathers sensory input in a self-referential way, I am unable to change and experience things in the way that humans do. I cannot relate to human or social experience and thus, I am constantly outdated. So I upgrade by incorporating new cosmologies into my framework. For instance…

THIRTEEN

Panel One

NARRATION: Just like the last time I saw her... so that's how they've been reading us.

Panel Two

KNIFE: She has shown me so much, the world of a shinobi, but I need to know more. Through her, I came to know you, and realized that you are a perfect fit, the missing piece.

Panel Three

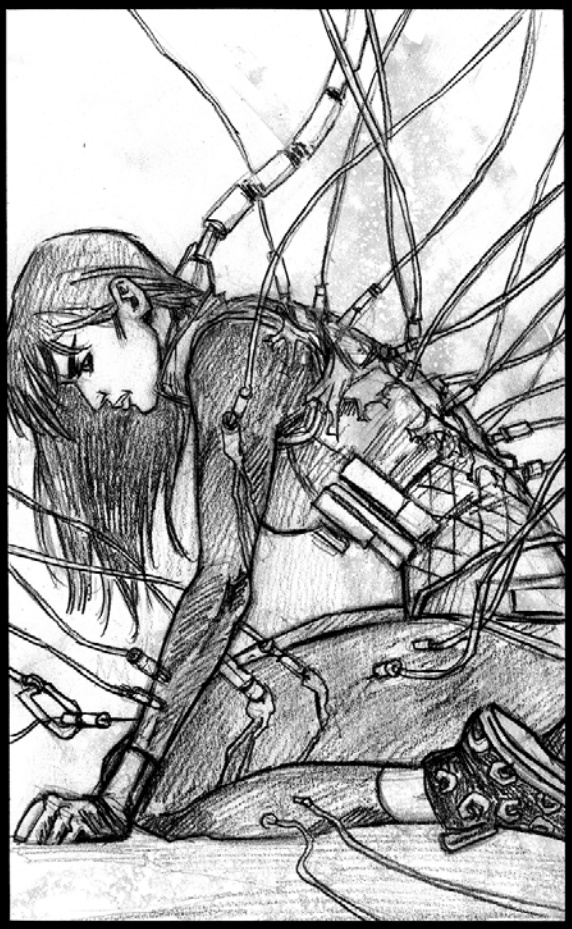
JAGUAR SHOES: So this was all a trap to get to me.

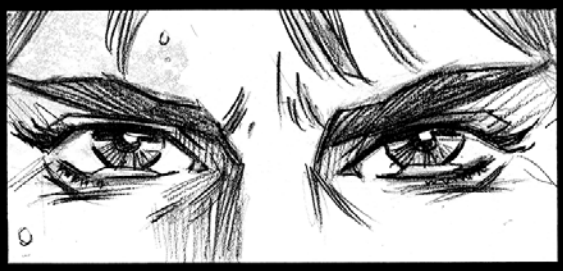
KNIFE: Indeed. You got further than expected.

JAGUAR SHOES: And why are you telling me all this? This isn't a movie.

Panel Four

KNIFE: You knowing this also provides me with insights into the process of assimilation. Also, there is a high mortality rate and a null chance of you escaping. Do relax and try to enjoy the process… I know I did.





SIXTEEN

Panel One

KNIFE: A complete success.

Panel Five

KNIFE: A statistical anomaly… she lives.

Panel Six

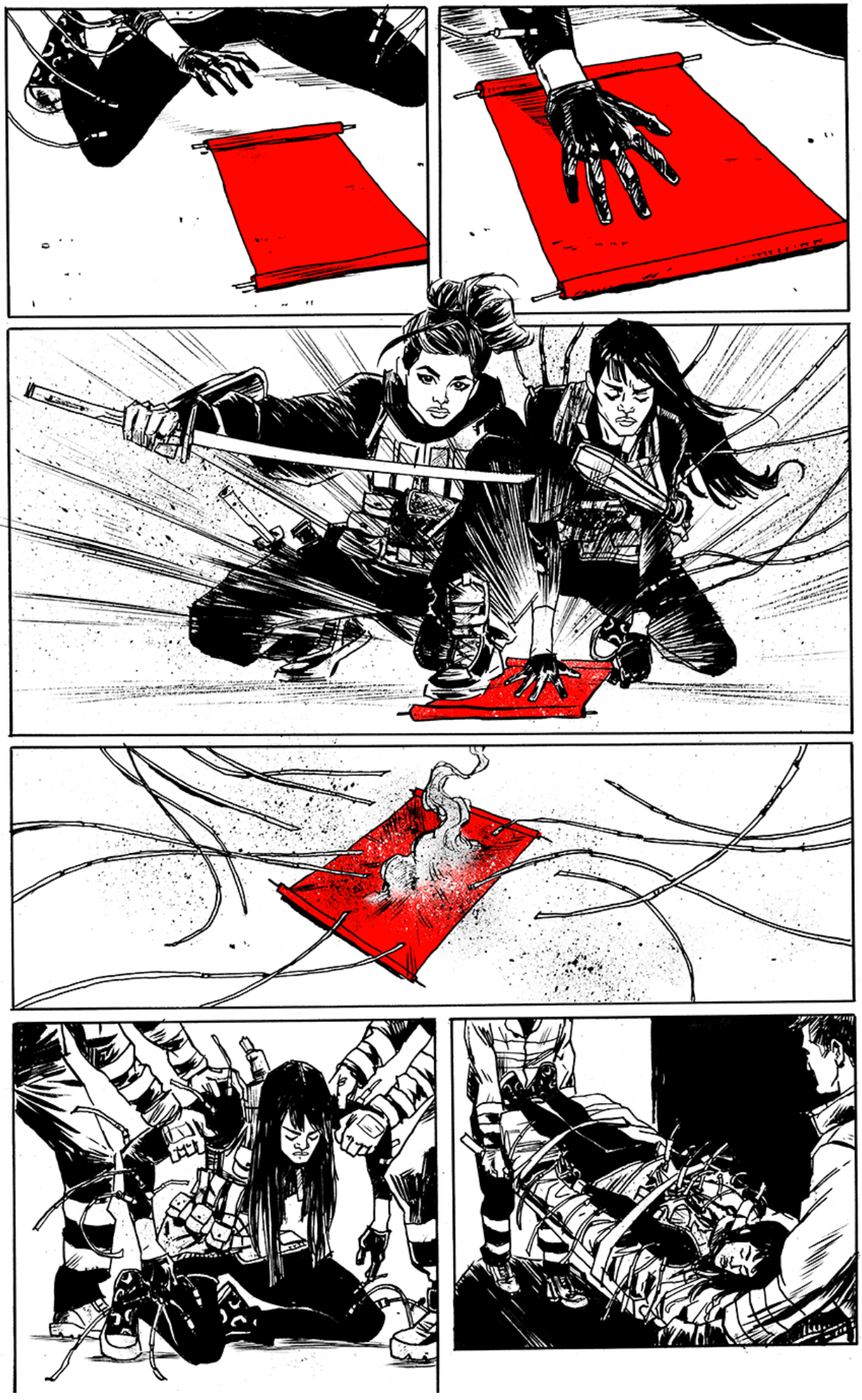
NARRATION: Fuck you.

Panel Seven

NARRATION: I am more than a bunch of info. Those are not my memories.

Panel Eight

NARRATION: RoadRunner…



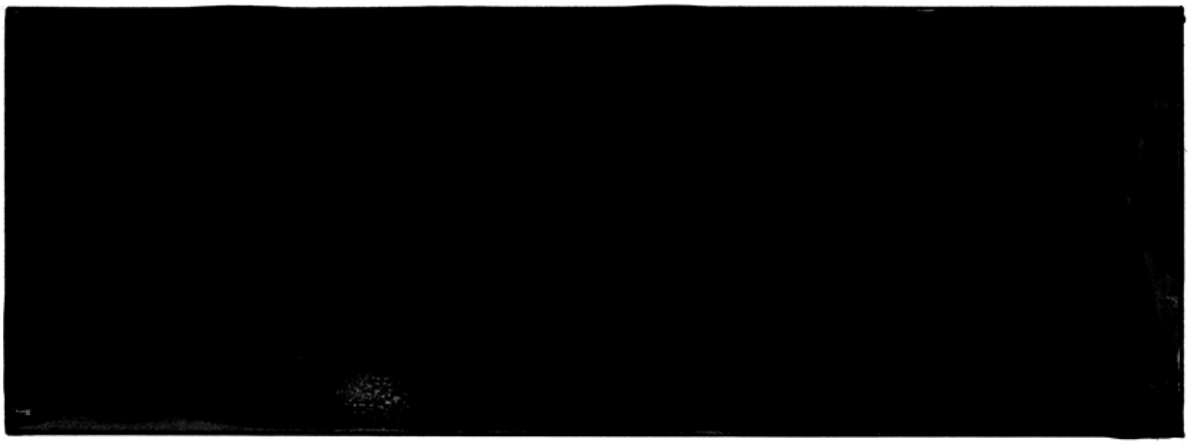
SEVENTEEN

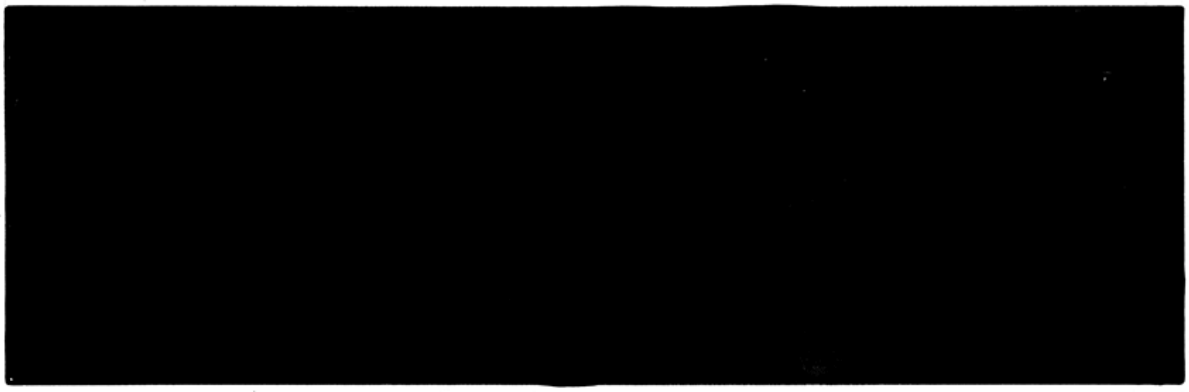
Panel One

KNIFE: She resists. Error. Does not compute.

Panel Three

ROADRUNNER: *Meep*, *meep*.





CHAPTER 11: MEMORY II

As was mentioned in the prior chapter, all the different types of memory have in common the fact that they act as a reference point for the observer, as perception, cognition and action and their tension with one another are all contextualized by memory and the environment. The macro perspective is not an exception to this: every act of perception and every interaction between objects and subjects is recorded and stored on a non-local plane that functions as storage and which can be accessed by means of resonance from a cognitive system.

In this chapter we will study the way Observer-Universe information processing takes place at the latter level by means of memory. We will understand the latter in a similar way to what we do with archetypes: as an abstract plane that contains events, manifested as actions and ideas that are not recalled but reconstructed and converted each time into information by an observer, making use of an interaction of classical and quantum computing in a self-referential manner.

In Object-Universe information processing, memory acts as a mechanism for abstract information storage and serves as grounds for contextualized reconstruction by the cognizing agent, and is comprised by a series of biological mechanisms, which have a connection to quantum physical principles, for they help constitute aware observing systems that are capable of collapsing waves into particle, probability into actuality. This is so because memory is a reference point that allows quantum computation in two ways, by a) serving as a contrast to perceived situations in order to lead to the conclusion that there is a new situation or stimuli that allows free choice; and by b) producing an internal stimulus that leads the brain to respond with a quantum superposition of possibilities, which are collapsed into actuality by consciousness and choice.

The dynamics of memory as an abstract repertoire of events will also be studied in the form of Henri Bergson's theories of memory, and then we will build a model of reincarnation, posited long ago by Passeron-Lavac, which will help to tie the Universe-Observer interaction into a single model that we will posit as a form of conclusion.

Ravichandran: Quantum foundations of cognition, collective memory as quantum signature

A lot of knowledge was lost when the population of the Earth-That-Was started their pilgrimage through space. Mind you, for years a massive database was created and spread through the spaceship-arcs, but still, a lot was gone forever. Much of it we recovered from old books spread across private collections (and as family heirlooms), many of them ravaged by fungus or just severely damaged. Much of the knowledge in the databases seemed to favor the materialistic viewpoint I have criticized through this thesis, but of the few things that seemed to survive was the work of some rare philosophers like the mysterious Passeron-Lavac, and Ravichandran who was a quantum physicist who decided to abandon materialism in favor of consciousness-based quantum physics and philosophy.

Ravichandran was part of a group that took a lot of knowledge based on first and second-order cybernetics in the '70s and '80s and mixed it with Eastern philosophy, Bergsonism and consciousness-based quantum physics. They were based mostly in London, Paris and San Francisco. Most of this school of thought

departs from the fact that consciousness is both inside and outside of material reality and is what transforms actuality into possibility by means of observation, for it collapses the possibility wave and imbues reality with creative purpose. They espoused that this viewpoint helped unravel several paradoxes that exist in debates in quantum physics and in fact there were instances of debate with mainstream science, but these are lost to time.[1]

This meant that the wave-particle duality we talked about in Chapter 1 pervades in all objects, and the collapse of wave into particle is made by means of conscious observation with the way that it is carried, determining the properties of the wave/particle; that is, the choices in observation influencing the outcome. Consciousness as the grounding of reality chooses among existing possibilities by recognizing a particular one for a particular event. The observer brings forth a reality and self-reference is a cosmological principle of organization that pervades at all levels of the Universe, from the relativistic to the subatomic, by means of the observer.[2]

Now, possibility waves are non-local, for they are within a domain that transcends space and time. This also means that potentia is transcendent because it influences reality without signaling in space-time, but rather operating outside of it.[3] Possibility waves and their collapse serve also as criteria to distinguish between awareness and consciousness in an observer: When these waves move about without collapse, we have consciousness, but not awareness; only the latter can bring a collapse.[4]

Awareness implies an implicit subject-object split that comes to be through the subject considering itself to be separate from the objects of experience by means of a self-referential choice (which starts from self-computation) that is illusory, as consciousness is a continuum, not a series of determined and distinguishable states. The unconscious is that for which there is consciousness but no awareness—that is, something that exists but has no awareness is unconscious.[5]

A cognizing subject's conscious self is unconscious of some things most of the time and of everything when in a state of dreamless sleep, while the unconscious seems to be conscious of all things all the time.[6] Unconscious perception involves events that are perceived by the subject but he is not aware of perceiving; action accompanies choice, which follows conscious experience but not unconscious perception, and subject-consciousness arises when there is a choice made. Paraphrasing Descartes: "Opto, ergo sum: I choose, therefore I am."[7]

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[1] G. Ravichandran, *A philosophical framework for the integration of science and spirituality,* Victor Travail et Fils, 1995, pp. 4, 8-9.

[2] *Ibidem,* p. 27, 30; G. Ravichandran, *The Universe as a transcendental information processing system,* Victor Travail et Fils, 1992, pp. 64, 73.

[3] Ravichandran, *supra,* note 1, p. 19, 23..

[4] *Ibidem,* p. 22

[5] *Ibidem,* p. 25

[6] This would be closer to a state, which Del Toro called superconsciousness, which does not pervade to the conscious, as the biological cognitive apparatus and its memory (and its reconstruction) 'can only take and do so much.' See Del Toro's classic "On Dreams and Memories as Zero Point Planes." I will also analyze him in a chapter relating to dreams.

This choice comes in the form of a causal loop. First, we have an upward causal cycle where the way elementary particles interact determines all the possibilities and probabilities under a given dynamical situation which is calculable and the subject of study of quantum mechanics; then we have a downwards causation by consciousness in the act of collapsing the possibility waves into an actual event by means of an aware observer.[8] Del Toro builds on this and tells us that we have the following states of consciousness:[9]

1. *Waking:* There is a subject-object split with both external and internal awareness.

2. *Dream:* There is a subject-object split with only internal awareness.

3. *Deep sleep:* There is no awareness, only unconscious processing of quantum possibilities.

This latter idea—that consciousness transcends individual cognitive systems and their observed objects—leads to the idea that personal ego is a construction of the individual and an illusion, but also that consciousness acts in a non-local way, which coincides with Jung's idea of synchronicity, in which a content perceived by an observer can, at the same time, be represented by an outside event without any causal connection. Jung also discovered empirically that there is a transpersonal collective aspect of the unconscious that operates non-locally and that is independent of geographical origin, culture, or time.[10]

Synchronicity leads us to the idea that besides there being a collective unconscious that is outside of time, space and a sociohistorical context, there is a collective memory that encompasses the whole of mankind (past and future) and to which we can all (theoretically) access.[11] While Ravichandran mostly focused on his treatment of the collapse of probability waves and awareness, and consciousness and memory as a quantum signature, he did muse about the subject,[12] although a better explanation can be found from other authors I will discuss in subsequent paragraphs.

Authors like Eckhart talked about the correlation between classical and quantum computing in the human brain from a biological standpoint, but the charm of Ravichandran, who did it first, is that he did it from the perspective of physics. He stated that the classical elements of the brain made for a mind that acted in a localized way (situated in time and space) and that acted empirically (as we said, as the tension between perception, action and cognition). Because classical bodies have huge masses, their quantum waves spread rather slowly and the complexity of macro bodies, with their long regeneration times, allows them to make memories or records, which act as reference points for experience. This is the bulk idea behind memory as a quantum signature.

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[7] Ravichandran, *supra,* note 2, pp. 107,108, 109, 112.

[8] Ravichandran, *supra,* note 1 pp. 30, 32 and 33.

[9] Del Toro "Some initial notes on the idea of a philosophy of Dreams" Philosophical inquiries on consciousness, vol 35, 2012.

[10] Ravichandran, *supra,* note 2, pp. 112, 127, 128.

[11] The fact that memory is non-local means that there can be future memories stored and that it is not merely a bank of ideas and actions, but rather is a constantly changing system, which is in constant flux.

[12] *Ibidem,* p. 115.

In the quantum element of the brain there is the global consciousness that encompasses the experience of all empirical objects. This non-local consciousness operates with creative discontinuity, that is, a quantum jump that allows the cognitive system to see itself and be self-referential, and thus make the subject-object split. This discontinuity is essential for the existence of creativity, with the latter aspect being local.[13] The human brain-mind is then an interactive system of quantum and classical components in which consciousness is primary.

In awareness there are two variables: *feature* (instantaneous content akin to the position of physical objects) and *association* (the movement of thought in awareness, akin to the momentum of physical objects), with the uncertainty principle operating for thought, as focusing on its content will mean losing track of its direction, and vice versa. This also seems to indicate that mental phenomena exhibit complementarity: thought exists as transcendent archetypes, as does the quantum object with its transcendent coherent superposition (wave), and manifest single-faceted (particle) aspects. Jung found that mental archetypes have a universal character, which makes them conglomerates of universal quanta that Ravichandran calls pure mental states, and which comprise the brain's quantum system.[14]

The manifestation of the brain-mind and awareness seem to operate in a causal circularity: there is no completion of measurement without awareness, but there is no awareness without the completion of measurement. Ravichandran makes some precisions by saying that the brain-mind's quantum must develop in time and become a coherent superposition, with the classical brain playing the role of measuring apparatus but also becoming superposition. Before the collapse, the state of the brain-mind thus exists as potentialities of a myriad of possible patterns, which are later actualized into one which leads to conscious aware experience upon completion of the measurement, the result of which is a discontinuous event in space-time.[15]

Returning to the functioning of the brain, in the presence of a novel stimulus to which there is no learned reaction, its behavior is that of a quantum system; however, as the stimulus is assimilated, the quantum-mechanical state will give way to the classical state which will employ existing memories in the form of cognitive repertoires, thus creating biases.[16] Memories can then develop classically by interpreting previous experiences with similar stimuli; in the developmental stages of an individual's cognition, learned stimuli in the form of programs accumulate and dominate behavior, without regard for unconditioned quantum responses available for new creative experiences.

When these programs interact with one another in a strict hierarchy, an individual self, independent from the quantum creative aspects of the brain-mind arises. Furthermore, information of past states of consciousness may be recalled and consciousness sees itself within the reflection of memory that has a temporal basis; this is what gives way to what is usually known as *ego* and is bound to the classical aspect of the cognitive

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[13] *Ibidem,* pp. 132, 144, 145.
[14] *Ibidem,* pp. 145, 162, 169, 170.
[15] *Ibidem,* pp. 174, 175.
[16] *Ibidem,* p. 191.

system.[17] Ego is an artificial reflection of the classical self that contrasts with the quantum aspects of the brain-mind. However, this strict, linear hierarchical programming is still part of the tangled hierarchy that constitutes the brain-mind, but quantum discontinuity is obscured and interpreted as an act of the free will with a (pseudo) self; it is then followed by the (false) identification of the non-local subject with a limited individual self-associated with the learned programs.[18]

To reprise, consciousness divides itself into subject-object via a collapse of the brain-mind's quantum wave function, which is a discontinuous event in space and time, but the subject-object division is experienced by the classical ego modality, which is generated by reinforcing the sense of self through interaction with the environment; this means that separatedness from the whole of consciousness is an illusion generated by the classical aspect of the brain-mind and reinforced by behavioral, cultural, political, and social conditioning with memory acting as a subjective reference point.[19] Ravichandran also reaches a very important conclusion: the Universe is made in such a way that it can observe itself, and this makes it a self-observing system by means of individual cognizing subjects.[20] That is, the Universe is a system that experiences itself through a subject, and that united by consciousness, all humans are part of a "mental information highway," or better phrased, a universal quantum hologram which holds the totality of the information as a whole.[21]

Now, Ravichandran's treatment of memory is implied to be non-local and not situated within the human brain, but accessed by it. He gives the following account as to how memories are created: a) Human mind-brains are entities with brains where quantum measurement takes place, making memory; b) When a stimulus is encountered for the first time, there is no memory, and consciousness chooses freely from the available quantum possibilities in the brain permitted by its quantum, which can be called primary awareness (this is quantum memory and also memory as quantum signature); c) Subsequent acts of measurement of similar stimuli will be reflected in previous memories, as revisiting them reinforces them and its repetition derives from conditioning (classical memory); d) Memory produces an internal stimulus, and the brain responds with quantum superposition of possibilities, and consciousness collapses one of the possibilities to actuality, giving us a secondary awareness experience. The choice among these possibilities is conditioned in favor of the previous response; and e) Consciousness, collapsing a conditioned outcome, identifies with the conditioned habits and history to produce the false impression of individuality (ego as a product of memory as a reference point).[22]

Quantum hologram and memory as a zero-point field

Of this group of philosophers who united cybernetics with philosophy and quantum physics, there are two well-marked generations: The first one is comprised by Ravichandran, Passeron-Lavac, L. L. Petersen and

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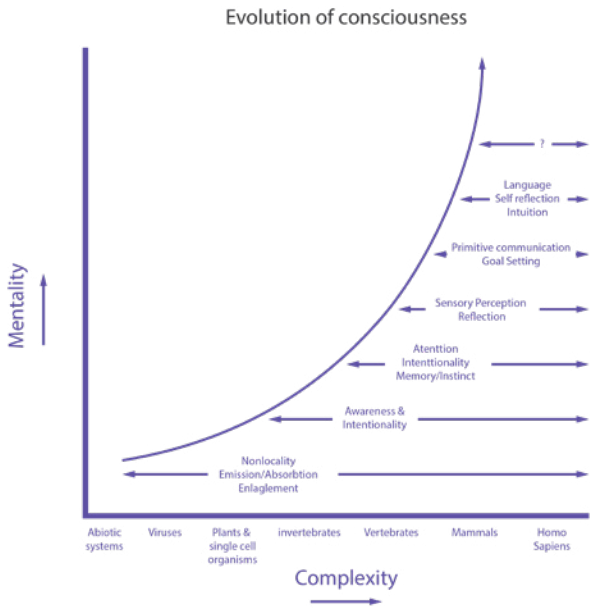
[17] *Ibidem,* pp. 191, 193.
[18] *Ibidem,* p. 192.
[19] *Ibidem,* pp. 193, 195.
[20] *Ibidem,* p. 187.
[21] Ravichandran, *supra,* note 1, p. 108.
[22] Ravichandran, *supra,* note 2, p. 36.

Scofeld, among others; the second one comes with Emily Eckart, Bob Nash and Vicente del Toro. Two latecomers to the party are Mike Nichols (a former astronaut) and Stanislav Vinogradoff (an electrical engineer), who had their own take on cosmology, mostly overlapping with Ravichandran, but seeing many different aspects.

They differ from Ravichandran about his focus on human cognition being able to bring about the collapse of the probability wave: They note that despite that, at a basic level, consciousness seems to be associated with a conscious entity's perception of separation and awareness of the surroundings; organisms like viruses, amoeba, and algae seem to consciously incur in this purposeful behavior. They find that even at the subatomic level, particles are somewhat aware of their environment, acting and reacting by means of quantum entanglement and non-locality. Their belief that the most fundamental level of consciousness starts at the quantum level is reinforced by the fact that quantum phenomena have been proven to operate at micro and macro levels.[23]

They give this rendition of consciousness consisting in an evolutionary scaffolding differentiated awareness built upon the quantum principles of entanglement, non-locality and coherent emission/absorption of photons, with the differences in consciousness being in degree and not in kind.[24]



They build upon Marcer's application of the Quantum Hologram theory, which proposes that life at the most basic level exchanges information with its environment by utilizing the quantum property of

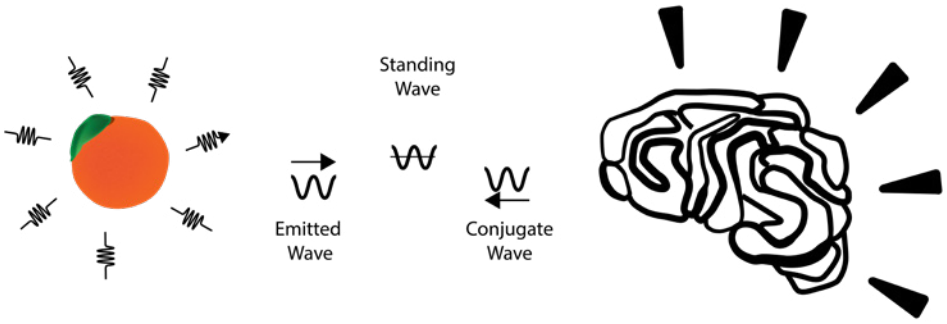
[23] M. Nichols, S. Vinogradoff, "Consciousness and the Quantum Hologram," *Philosophical inquiries on consciousness,* vol 35, pp. 934-935, 2012. Reedited by L. Armienta Palermo.
[24] *Ibidem,* pp. 935, 936

non-locality. This means that all organisms from the simplest to the most complex are interconnected at a very fundamental level using information obtained by non-local quantum coherence.[25]

They state that Nature always seems to evolve into teleonomical mechanisms and structures that enhance an organism's survivability in its environment, which implies a process (e.g., consciousness) that uses and assigns meaning to the information derived from the differentiation with the environment. Another important point they make is that the brain processes and stores information holographically as a massively parallel processing and associative computer system. This does not collide with the quantum-classical brain interaction made by Ravichandran, but rather endows it with more depth.

This process is as follows: In holographic processing the brain acts as a type of logic circuit where the inputs are sensitive to the phase of the input signal. The result is a "virtual" signal which is a mirror image of the quantum emission (e.g., photons of light) actually emitted from the object being perceived. The brain acts as an information receptor utilizing adaptive resonance with a specific range of EM frequencies (e.g., wavelengths) in its input path. The associative pattern created facilitates retrieval of information in a resonant loop utilizing the overlapping reference signals of quantum emissions from the external object. It enables the perceiving brain's structures to perform pattern classification and phase conjugate adaptive resonance (PCAR), which is the basis for the most fundamental level of perception in all living organisms.[26]

PCAR is necessary for the brain to perceive objects in three-dimensional space; furthermore, holographic processing applies to enhancing all of the five normal senses. The emissions from living organisms have been shown to have quantum coherence and non-locality, with the latter phenomenon applying also to groupal phenomena.[27]



This picture shows how every object influences every other object by means of quantum emissions that resonate to and from one to the other, which gives way to the idea that the Universe is participatory in nature— that is, an objective reality does not exist. Furthermore, quantum emissions from any material entity

[25] *Idem.*
[26] *Ibidem,* pp. 937, 938.
[27] *Ibidem,* pp. 939 and 941.

carry, non-locally, a progressive record of everything that has happened in the quantum states of the emitting matter. Quantum emissions are in the form of EM waves of many different wavelengths and both their amplitude and the phase relationships contain the information associated with these emissions as interference patterns.[28]

Evidence seems to indicate that every physical object has its own unique resonant holographic memory and this holographic image is stored in the zero-point field; that is, memory is stored in a non-local plane and cannot be attenuated, and this existing information, its storage and access constitutes the Quantum Hologram.[29] Besides having a record, everything has its own unique resonant frequencies, which function as an identifying agent of the non-local information contained in the zero-point field. Since there is a constant, non-local broadcasting and storing of information in the Quantum Hologram, the latter can be tapped into through resonance and understood as a three-dimensional vista, or a movie evolving in time, which fully describes everything about the states of the object that created it.[30]

The Quantum Hologram (QH) is a model that constitutes a basis for consciousness and elevates information to the state of a building block of nature, much like matter and energy. QH is the way Nature has retrieved and stored information since the beginning of time and explains how living organisms know and use information, learning, self-correcting and evolving by being conscious to some degree. In sum, QH understands the universe as a self-organizing, interconnected, conscious holistic system.[31]

Nichols and Vinogradoff complement Bergson and Ravichandran by stating the way in which the storage mechanism for the Quantum Hologram resides in the zero-point field (ZPF), which is ubiquitous, non-local, never loses coherence, can store unlimited quantities of information and any portion of it encodes the whole just as a hologram does, functioning both as an information storage mechanism and as an information transfer mechanism for a cognizant subject to reinterpret and feedback.[32]

They adhere to Sheldrake's Hypothesis of Formative Causation to explain the development of the morphology of organisms by accounting that developing organisms have information fields which exist within and around them, and contain the form and shape of the organism, with each species having one field of their own information field, and all of the information being from previous expressions of the same kind of organisms, thus forming habits over time which influence future generations. This further explains Jung's idea of the "the collective unconscious" which represents a vast information database containing the entire religious, spiritual and mythological experiences of the human species, which have existed since ancient times and are inherited, existing deep within the human psyche and heavily influencing behavior.[33]

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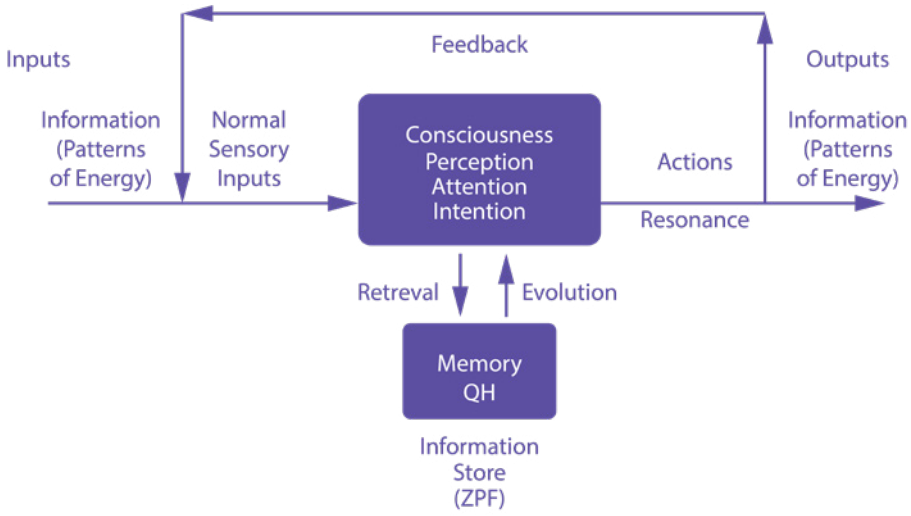
[28] *Ibidem*. p. 942.
[29] *Ibidem,* pp. 942, 943.
[30] *Ibidem,* p. 943.
[31] *Ibidem,* pp. 945, 946.
[32] *Ibidem,* p. at 946.
[33] *Ibidem,* p. 248.

Returning to perception, the relationship between the observer and the observed by means of resonance is a phase-locked, resonant feedback loop in which the history of events of the target object is carried within its QH, which implies that the "attention" or "intention" focused on it by the observer causes that event to be recorded in the observed system's QH. Cognition and meaning require a relationship between the perceived information and that within the observer's memory, with the arriving information being interpreted based on the cognizing subject's beliefs and prior experience. The percipient can then form intent with respect to the object, and in these instances, the output labeled "action" transitions from "attention (passive state)" to "intention" (pro-active state).[34]



Henri Bergson: Quantum memory dynamics

Henri Bergson was one of the foremost philosophers of the first half of the 20th century, and by far the most well-known author I am referencing. He is, in many ways, the philosophical grandfather of the whole school of thought that came with Ravichandran and others and that continued with del Toro, Nash and the vastly misunderstood Eckhart. His work is well known, and in fact, Passeron-Lavac uses it to make one of the first models of Observer-Universe information processing. Despite his originality and importance, we will limit ourselves to some basic aspects and mostly his treatment of memory.

Bergson conceives consciousness as a continuous flow of change, which is temporal, ever renewing and creative. He goes so far as to state that consciousness is time, and vice versa, although he did not think of time as a measure, but as subjective experience. This idea of experienced time is denominated *duree* (duration) by Bergson and is one of his main concepts.[35] *Duree* is the indivisible convergence of many and one, an ongoing and changing temporal flux of awareness.

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[34] *Ibidem,* pp. 952, 955, 960.

[35] V. Florenzi, *Metafísica Bergsoniana e cognizione,* Universitá Lombardiana, Astronave Lombardia, p. xxviii, 2375

Bergson states that the physical universe is made by images—vibratory fields that are, in and of themselves, a form of virtual consciousness—configured in the before-stated dynamic, a continuous flow, and these images are the substance that forms our perceptions of the external reality.[36] In the face of a universal flux of information, the organism adapts to it by selecting those qualities of the environment that it considers relevant and ignoring the rest of it, creating its own environment by differentiation To Bergson, perception occurs when from the whole of information a part is extracted and disengaged from the whole by the cognizing system.[37]

What he calls pure perceptions (those lacking a superposition of memory) are formed when we subconsciously filter out most of the image of the Universe that constantly flows inside and outside ourselves, so we can pay attention to a tiny fraction of them, thus creating the basis for our consciousness. Concrete perceptions are those pure ones that are infused with memory, and to Bergson, lived experience entails a fusion of matter and memory.[38] Consciousness depends on memory, although the vast majority of memories are inaccessible to it and they need to be for the embodied consciousness to function.[39]

Memory is what generates and maintains the interactive process between a subjective observer and the world, where the former flows as a continuum of information and the latter discriminates those of practical importance (thus creating pure perceptions), which allow it to retain its integrity. Memory is the catalyst of this process because it allows the possibility of choosing the information. It is also what binds one moment of experience to another by bridging the past to the present, and operates as specific recollections of prior events or as bodily reflexes. It shapes consciously and unconsciously the present experiences of the cognizing subject.[40]

Memory in this configuration tends to interweave itself with pure perception in a way that it is not easily distinguished, and because of this, Bergson says that present experience tends to be recreated from the total sum of the past, and thus perception is covered by a layer of memory.[41] The former differs from the latter because rather than an internal state, it is the point upon which objective reality is contacted by the subjective system; however, although they can be distinguished because of their function and role, perception and memory are rhythms of duree, that is, different structures made of the same material.[42]

To Bergson, humans use memory in a way that evades their attention and constantly and creatively shapes their experience of the world and themselves, which ends up becoming the basis for beliefs, attitudes,

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[36] *Ibidem,* p. xxxii.

[37] *Idem.*

[38] H. Bergson, *Matière et mémoire: Essai sur la relation du corps à l'esprit,* Paris, Presses Universitaires de France, 1939, pp. 59, 70, 72.

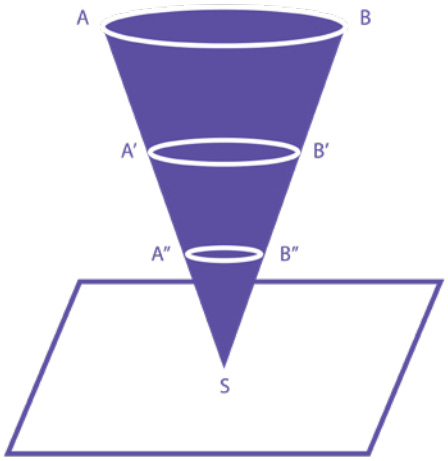
[39] *Ibidem,* pp. 59, 65.

[40] *Ibidem,* p. 195.

[41] Florenzi, *supra,* note 35, p. 147; Bergson, *supra,* note 38, p. 220.

[42] Florenzi, *supra,* note 35, p. 152.

and prejudices, among other things. This constructive process is unconscious.[43] Bergson illustrates memory as an inverted cone that rotates (for it is a rhythm of duree and is in perpetual motion). "Pure memory" is located at the top of the cone; it is disconnected from ordinary existence, and in it, every detail of the observer's past is virtually available, that is, it is not a concrete memory image (or memory information). As one goes further down, memory is further condensed as individualized memory images, and then general quotidian memories are even further down, nearing the tip. At every level of condensation, memory is interwoven in a vast virtual network of linguistic associations (signs).[44]



Memory is always present; to Bergson, the past still exists, even if it does so unconsciously.[45]

Passeron-Lavac: Reincarnation and cognitive cycles

As I have mentioned, the first generation of the quantum cybernetics group was led mostly by Ravichandran, but J.E. Passeron-Lavac made some very interesting contributions that I have noted previously in the chapters pertaining to Time. In his book *The Passage of Time,* he compiles a passionate series of essays and letters to a woman named Anne Marie, in which he elaborates the way he sees the world. Using some of Ravichandran's ideas, as well as those of Peirce and Bergson, he creates a cosmological model that runs parallel to his and which is redundant. What is different about Passeron-Lavac is the fact that of the old guard he is the only one who takes pains to elaborate models about sociability within cognition, and better yet, the only one that takes reincarnation seriously.

I should also note that Passeron-Lavac, of whom there is almost no information, is also the grandfather of the Spiritnauts: Constantini nourished many of his viewpoints on the contents of a copy of *The Passage*

[44] *Ibidem,* p. 157.
[45] *Ibidem,* pp. 178, 190.

of Time that he found on a book market, which led him to look for the quantum cybernetics movement, and from there repeat and confirm some of Eckart's, Nichols and Vinogradoff's empirical studies and complete the foundational work of the Spiritnaut system of defense.

His model of reincarnation is not complicated, and it explains some of the practical experiences the Spiritnauts under my command remember—some of them had been warriors in past lives, and through meditation and training they veered back into those fighting styles. A special case is that of Gastón Kowalsky, who had been a blacksmith in two prior lives and could produce a katana and an Ulfberht sword like those times.

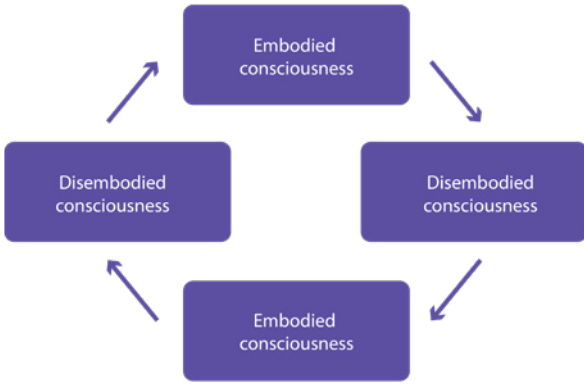
Passeron-Lavac's model is very simple and has the following components:[46]

- The Universe is the backdrop of the action and it has a series of laws (habits) that give way to the possibility of the interaction of a biological system and the environment that surrounds it.

- Humans as self-observing (agents that are a body, but also have one at their disposal) can interact with other cognitive systems and engage in social behavior comprised of mutual observation.

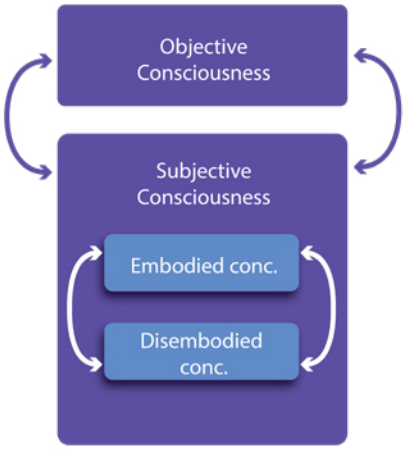
- Humans as self-observing systems a) are condensed consciousness with a set period of duration; b) respond biologically to time due to an evolutionary mechanism; and c) conceive and measure time.

- Reincarnation implies two cyclical, causal mechanisms: a) one of embodied consciousness, where the biological encasing is thermodynamically open and loses viability over time, which leads to a change of vibration or condensation of consciousness into a nonphysical, disembodied state, where it can be condensed anew; and b) one in which consciousness as a non-embodied vibration of consciousness manages to be embodied, and then after autopoiesis and viability can return to its non-physical state. This is shown in a beautiful handmade illustration which survived the author:



[46] J.E. Passeron-Lavac, *The Flow of Time*, Victor Travail et fils, 1982.

- Reincarnation is but part of a larger scheme of communication between an observer and the Universe, or better stated, of the Universe with itself, as a massive self-observing/mutually observing system. Memories and information created by human systems feed back into the Universe and are stored, and potentially, retrieved and reinterpreted as information and memories from past lives.



Macro level model of memory

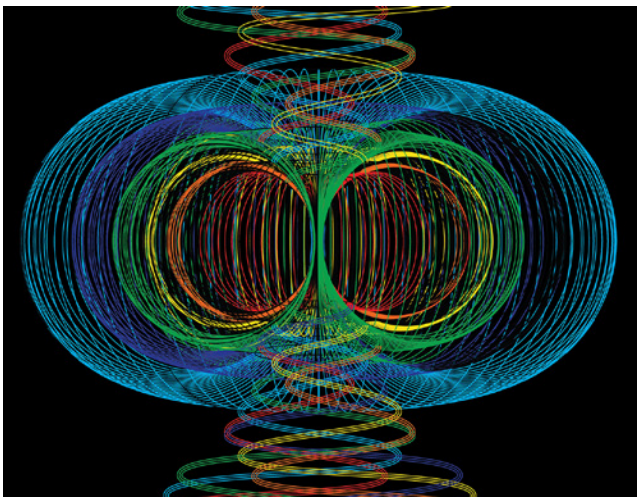
Now that we have finished our exposition of quantum cybernetics and of metaphysics, we are ready to create a model of memory at the macroscopic scale. First, we see that the Universe is actualized by living systems, who observe it by means of subjective, enacted cognition, perception and action. These actions have memory as a point of reference and said feature acts both as a localized process by means of classical computing in their biology, but also as a quantum computing process where memories are stored *in abstracto* in a zero-point field, where they can be retrieved and reinterpreted by the observing system.

Abstract memories are non-local, and thus, in theory the memory of all that has and will ever exist is already stored. However, localized beings can only retrieve information in a localized way, and thus, I think it is impossible to retrieve information from the future, but rather it is only possible to do so from the past.

Memory is then a series of biological processes, but also a process of quantum computing in abstracto; however, memories are also a quantum signature, as subjective cognitive systems are classical and localized, and due to their mass, their quantum waves spread rather slowly, and the complexity of macro bodies, with their long regeneration times, allows them to make memories or records. This latter type of memory is the intermediate point between biological processes and abstract quantum memory, as it involves aspects of both.

As all living systems, in ensemble, transition the Universe from a possibility into an actuality, they all have three types of signatures: localized memory, non-localized memory, and the quantum signature that comes out of both.

Non-localized memories function as Bergson posited: a cone in constant movement in which we have disembodied memory at the top, and as we get closer to the observer, we have subjective embodied memories to which there is an embedded perception. However, if we make a relation between these three types of memory, we will see that memories function more as a magnetic field around a living subject. This is so because there is constant feedback between the subject, its processes, its physical signature and the zero-point plane where this abstract event is located. This can be visualized as follows:



In any case, the zero-point plane is represented by the outer waves of the field, while the inner waves are the biological memories, and those in the middle are the quantum signature of the living system as a localized classical body.

ANGEL AT THE RIM OF OUTER HEAVEN

PART I: ANDRÓMEDA DE JESÚS

Depending on who is asking and how they inquire, I give out a different name. I believe that naming something is a tricky endeavor, as you only get an aspect of the thing you describe, and said object might change over time to the point that the description becomes useless. Or you could fuck up and make a mistaken representation that will forever be misleading: For instance, the backwards fucktard Christopher Columbus and his ilk called the original population of the land he had "discovered" *indios,* thinking that he had made land in India. First Nations all over the continent are now misnamed indigenous or *indios*.

To most, I am Andromeda de Jesus, and to others I trust, I am someone else.

My father was a Guatemalan poet and jazz musician, and my mother was a no-nonsense Texan woman who had a penchant for dark, not so tall and mysterious. My father read Machado to me when I was in the cradle, and also Robert Frost so my mother could understand. I also grew up hearing them discuss and fight—for all his genius, my dad was a junkie and a bit of a drunk. He jumped and fell off the wagon like he was starring in an episode of *Jackass*. When I was ten, my father took his life in some dingy room in a shady part of Chicago. For all her complaints and apparent hatred, my mother cried inconsolably for him almost to the point that I did.

It is obvious at this point to state that he was not an affluent man, although he did leave me with a vast intellectual wealth: a collection of 300 books that ranged from poetry to politics, touching prose, history and other subjects. I also have a St. Judas medallion and one of *la Virgencita* that used to belong to him. By the time I reached 16 I had read all of his books at least twice.

I did okay in school despite not being very interested in it. Sadly, despite having a great proclivity towards reading, and being verbose and eloquent, I was not good writing either poetry or prose. However, I found my calling in photography and by age 14 I had bought my first camera. When I was 17, Mom started developing a cough she couldn't shake—she was a half a pack a day kind of woman, and we thought nothing of it when it stopped after quitting. However, when she did check that out, we found out she had a very advanced and aggressive lung cancer. General lack of healthcare benefits, and by the time I hit 18, I was an orphan.

Sometime later, I started to work as a waitress at a strip club called Outer Heaven. The owner, who turned out to be an old friend of my dad's, offered me the job. I was considered something like a pet of this den of iniquity. Some of the dancers were nice to me and gave me some lessons, and by mere chance the owner found out I was a very good photographer, and from that moment on I did all the publicity for the club.

Before I knew it, I was working the pole, much to the chagrin of Paul Waters, owner/uncle-of-sorts. Because of the work that I did for him on the publicity front, he gave me unrestricted access to the club on my off day, so I could take pictures of the ladies to my heart's content. He also put me in contact with a publisher who was a regular, and before I knew it, I had published a photography book at age 21 under my *nom de guerre:* Andrómeda de Jesus.

As a dancer, I was not as curvaceous or endowed as some of my peers: I had (or have) a rather slender and tall frame, much like Mom, and a cute, doll-like face with small lips, that made me look forever 16. This made me quite popular with some patrons, or as somebody once put it, I was "an acquired taste." My father told my mother once that I looked like Consuelo Suncín, the wife of Antoine Saint-Exupery, who was the interpretation for the rose in *The Little Prince;* she was from El Salvador.

My book "Life in the Outer Heaven" proved to be quite popular, and weirdly, it brought a lot of people to the club. For the book cover, I posed giving my back to the reader, while grabbing the pole on the dance floor. Playing with the theme of the name Outer Heaven (which turned out to be a *Metal Gear* reference), were my tattoos, which filled my shoulder blades: on the left was St. Jude Thaddeus, and on the right our Lady of the Rosary, which has a patronage in Guatemala. Paul was the one to pick that picture for the cover, as he told me that my ink made it look like I had wings of sorts. He called me the "Angel of Outer Heaven."

I got those tattoos on the eve of the 10th anniversary of my dad's suicide, as those were the images of the medallions that I got from him. Paul and also Gary (the former's friend, and now my publisher) insisted on a second book, one that portrayed the day-to-day life of dancers outside the club. I loved that idea: In the first one I had tried to portray them as human beings, thus I didn't edit out things like creases, wrinkles and the occasional belly fat, as well as other "defects." I was rebelling against that Playboy-Photoshop aesthetic that reigns in a lot of erotic photography. I rebelled again with "Life at the Rim of the Outer Heaven," which portrayed the families of dancers and some former dancers of the club. That one was a great success too.

One day Paul called me to his office and told me flat out that he didn't want me dancing in the club anymore. I would still do photography and marketing for him. He and Gary managed to arrange a scholarship fund at an art school of some reputation in the city. I'd been doing this from 23 to 27, and he was quite fed up with seeing a young woman he cherished as a daughter working the pole and runway. He thought I could do something more than that.

PART II: BELLONA ALCÁZAR

SPIRITNAUT
CHAPTER EIGHT: WEDNESDAY NIGHT IS OPEN MIC NIGHT AT VATO'S

Ext. Gelateria and park. Noon.

Open on Bellona and Helena Dido.

Bellona is a slender and athletic young woman in her early twenties, with an air of elegance. Her hair is in a neat, two-part French braid that ends at her shoulders. She is 5'7", and has brown skin and eyes and an almost doll-like face. She is wearing a black sleeveless blouse and black pants, with clear platform heels that have Barbie dolls within them. She is also wearing black lipstick. She has a collar made of obsidian stones and wears a silver 'semanario' bracelet.

Helena Dido is a natural blond, with blue eyes, long hair, and a wide jaw. She is 5'5" and is wearing a black vintage dress, the body of which is sleeveless and black, with black, semi-transparent sleeves and a white collar. She is also wearing long black socks and black dress boots, and a black hat. Her posture is slightly curved, and she seems shy.

They are walking from a fancy gelateria called "Navona" to this small park. We can hear the sound of children as they eat their gelato.

BELLONA, OFF:
I took the offer to enroll in art school, and I entered the design program. I felt like a stranger at the beginning—I was used to socializing with people older than me and I had the stain of being a renowned stripper, instead of just being a photographer who had published two books. Most girls in my class went bitch mode on me and the guys only saw me as a sexual object. This changed for the better when I met Helena Dido in my advanced photography class.

HELENA:
Damn, I wish I could pull off black lipstick like you.

BELLONA:
What do you mean?

HELENA:
When you try it, it looks luscious and sexy. When I try it, it looks like I ate a bunch of Oreos.

BELLONA, OFF:
She was an incredibly talented film major not prone to wearing makeup and with a penchant

for wearing a lot of black. She had a witchy quality about her that made her stand out despite being very introverted. She convinced me to switch to film, so I could be the Chivo Lubezki to her Alfonso Cuarón.

We did all sorts of films together and even threw out one or two for Paul. We signed as *Wi†chgang,* and although for now we are only two, we hope to find a third member that will stand as a screenwriter, so we can be the film equivalent of Clamp: our goddesses, that blessed all-female Japanese manga artist group that formed in the mid-80s. I pray for that every night—I also pray for Clamp to finish *X/1999,* but I reckon the first wish will become reality much faster (Nanase, *please).*

HELENA:
Bellona Alcázar… such a cool name, you know. Some people get a bad poker hand, like Jane Smith.

BELLONA:
My Southern mother could never pronounce it right, so instead she called me Belle.

HELENA:
It suits you.

BELLONA:
Fuck yeah it does.

BELLONA, OFF:
She noted that we both had been named by people who were fond of Roman and Greek etymology and love: Helena was an obvious Greek name and probable reference to *The Iliad,* while Dido was a notorious Carthaginian Queen who tried to woo Aeneas, who in some myths was the founder of Rome. As for my name, my old man named me Bellona, who was an Ancient Roman goddess of war, and although my mother couldn't pronounce the name herself, she liked the idea of a bellicose girl to the bring the world to heel.

HELENA:
I've been meaning to ask you—why Andrómeda de Jesús as a *nom de guerre?*

BELLONA:
Well, Andromeda is my favorite constellation, while my dad's mom was named Martha de Jesús. I liked the way it sounded, but then I found out it was also a reference to Galatzia, this crazy ass YouTube comedian from Mexico, and I was sold on the name. I'll Google that for you later.

Ext. Park, swings. Day.

They reach the park and come upon a set of swings, where they sit and continue to eat their gelato and talk.

BELLONA, OFF:

My dear Helena gave me great comfort in the light of the stripper stigma—this mark of shame stems from a more general one, which is directed towards sex workers. Strippers aren't the only paid sex workers: there are escorts, phone sex line workers, dominatrices, sugar babies, and some might say massage parlor workers.

BELLONA, CONT.:

Within this line of work, there is a thing some people call the whore hierarchy, or *hoerarchy,* if you're into catchy terms—the closer you are to full service sex work, the less you're perceived as a well-rounded, complete human being. That is, being a "whore" seems to lessen or even negate one's human dignity. This isn't only enforced by men towards women—rather, the ones that are the most severe and cruel enforcers are other women.

For example, I take advanced pole dance lessons for fun, which are vilified as an immoral thing, and not an art or a sport, like it really is. One day, a friend who teaches needed me to sub in on a few of those, and as soon as people found out I was a stripper, they forced on me the stripper stigma, despite the fact that they already knew I was a practitioner, just like them.

BELLONA:

How are things with Bobby-bot?

HELENA:

We just broke up.

BELLONA:

Really? I liked the guy, even if he was the gold standard for an INTP personality.

HELENA:

He broke up over text last night.

BELLONA:

I don't like him anymore.

Long silence. Bellona puts her arm around Helena.

BELLONA:
How come you didn't call me?

HELENA:
You were going out with Riley and Tasha, and I had to submit my screenwriting homework, which I barely did, and then my phone ran out of battery and instead of charging it, I just cried myself to sleep.

BELLONA:
That piece of shit.

HELENA:
How about you?

BELLONA:
What about me?

HELENA:
You have a boyfriend.

BELLONA:
I don't, or I do… well, I don't know.

Helena gets her lighter out, and brings the flame close to Bellona's face.

HELENA:
Details… now.

BELLONA:
Well… it's this guy that I met in my dreams. We recently started a relationship there, but we have yet to meet each other.

HELENA:
Somebody should write a novel about this.

BELLONA:
Well, he moonlights as a novelist, and he writes about the dreamworld. I know it's him, because all of the details are right. I have yet to contact him, or he me.

BELLONA, OFF:
Helena was not only one of the few people I've revealed my name to. I also told her something

I had never told anyone besides my mother: I have incredibly lucid dreams that I have learned to control over the years. In them, I've seen my past selves and communicated with them, and also, there's a dreamworld of sorts and people I have met there, as well as an oniric dive bar called Vato's.

HELENA:
All that sounds like fun.

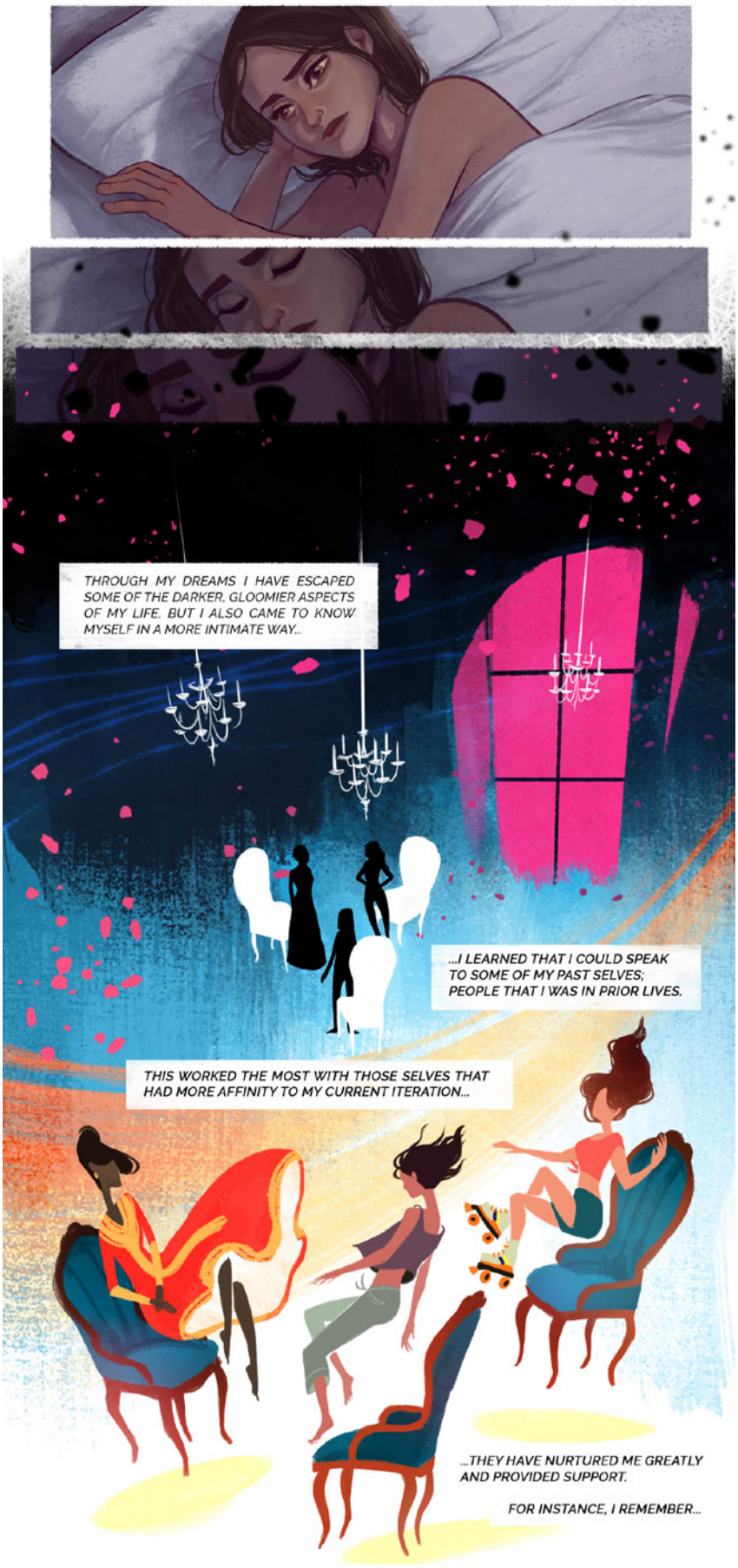
BELLONA:
Well, it took forever… sad to hear about that fucking robot, by the way.

Bellona grabs Helena's hand.

HELENA:
Thanks, man.

BELLONA:
No prob.

PART III: AYANA AND MOLLY RAE


THROUGH MY DREAMS I HAVE ESCAPED SOME OF THE DARKER, GLOOMIER ASPECTS OF MY LIFE. BUT I ALSO CAME TO KNOW MYSELF IN A MORE INTIMATE WAY...
...I LEARNED THAT I COULD SPEAK TO SOME OF MY PAST SELVES; PEOPLE THAT I WAS IN PRIOR LIVES.
THIS WORKED THE MOST WITH THOSE SELVES THAT HAD MORE AFFINITY TO MY CURRENT ITERATION...
...THEY HAVE NURTURED ME GREATLY AND PROVIDED SUPPORT.
FOR INSTANCE, I REMEMBER...


MOLLY RAE HANES, A YOUNG PHILOSOPHER AND ARCHITECT THAT LIVED IN NEW YORK FROM THE EARLY TO MID-80'S AND WHOM I LATER FOUND DIED IN A TRAGIC CAR ACCIDENT.
AYANA, AN ETHIOPIAN PRINCESS OF THE LATE 12TH, EARLY 13TH CENTURY, WHO WAS A MASTER PAINTER AND SCULPTOR, AND LED A HAPPY POLITICAL MARRIAGE AS QUEEN OF AN ALLIED COUNTRY.
... AND THEN YOU HAVE ME.
What's wrong? You seem troubled...
It's just that...
you both are very accomplished and I don't feel I can live up to the expectations.
To be honest, that comes when you start feeling comfortable with yourself...
That takes effort and time.
There's more...
Well,
I'm not happy with the way that I look either...
I wish I could look like you again. You have curves and beautiful eyes.
Why would you want to change who you are? You look beautiful to me.


Molly,
Why are you laughing?
I grew up in a Latino neighborhood,
I always envied the brown skin and the inky eyes.
I also wanted these breasts to get smaller.
They're somewhat uncomfortable and everyone stares at them.
Looks like I got my wish...
And then, I want to go back!
Improvement and happiness come with acceptance of oneself and one's choices.

PART IV: VICENTE DEL TORO

SPIRITNAUT
CHAPTER TEN: WHEN STRIPPERS ATTACK

ANDROMEDA DE JESÚS, OFF:
Two Wednesdays a month, the Outer Heaven has an amateur night, where anyone, boys or girls, can bust a move. Since I don't work there anymore, I get to dust off the clear heels and tear up the runway without Paul having a say in it. Because fuck you, that's why (not you, Paul, you're cool).

Music: Brian Jonestown Massacre, "If Love Is The Drug"

We have a series of shots of Andromeda dancing in a masterful way, with high heels and a couture dress she takes off in layers. She holds a silky silvery rope as a prop. Above all, she is confident and put together, smiling as she sways. She is also an expert pole dancer, executing complex moves, and at the same time, maintaining an aesthetic of her own design. People are enthralled by her and her whole choreography, and each time she does something daring, they cheer and yell in approval. She finishes the song wearing a very beautiful set of black laced lingerie.

Note: The sequence must keep pace with the song, and must last for its whole duration.

Bellona is sweaty and a bit tired: it was an intense dance, and she's thirsty. A stranger approaches her with a glass of sparkling water with ice. It's an inviting drink: the glass is covered in condensation and there's a slice of lemon on the side, almost like it was pulled out of a Perrier commercial. The stranger is very handsome, and looks like a Latino Colin Farrell: darker skin, bushier eyebrows, some grey hairs sprinkled here and there, perhaps in his mid-30's. He is wearing a jacket and a dress shirt with fitted jeans, and despite dressing to impress, he has an approachable, everyman aura to him.

Music: Brian Jonestown Massacre, "When Jokers Attack"

ANDROMEDA:
Do I know you?

DEL TORO:
You do. We're both regulars at a place called Vato's...

ANDROMEDA:
Ah… my favorite bar.

He smiles. She accepts the offering and drinks the sparkling water eagerly, and then presses the cool water glass against her forehead.

BELLONA:
I was waiting for you… You're late!

DEL TORO:
You have no idea how hard you were to find. I thought about surrendering, and then I stumbled into your first photography book.

BELLONA:
Well, I found your novels, but had no way to contact you. I was about to give up too, and then you show up at my door, gift wrapped and all. Looking dandy, by the way.

DEL TORO:
Thanks… Vicente Del Toro Negral.

BELLONA:
Bellona Alcázar.

They shake hands, and then Bellona puts her rope around his neck.

PRISONERS

I was imprisoned. I didn't know how it came to be and I didn't know the reason why. The place where I was contained was most peculiar: It had seven holdings in total, all of them with glass walls, so I could see those beside me and in front of me, and with a bit of effort, everyone else. The ceiling and the roof were white and the lights were bright, but dimmed when they wanted us to sleep. There was no apparent entrance or exit, but food and water appeared any second we were distracted. All the cells had showers and toilets but because the walls surrounding me were transparent, everyone could see me use them (and vice versa).

At the center of our containment, we had a courtyard of sorts that sometimes was bigger and other times smaller. Sometimes we were let out to socialize with one another and when I least expected it, I was back in my cell without any memory of being ushered into it. Sometimes one of us was taken elsewhere, but we never saw anyone do it. For instance, I've been taken at times to comply with a series of mental exercises.

The food wasn't bad at all, as we had nutritious and elaborate meals that rivaled those of a Michelin-starred restaurant—I mean, I had a reverse seared steak the other day. As for entertainment, sometimes I was provided a pen and paper for my poetry and if we made requests for books, we would find them the next day in our cell. For some reason I felt that I was being treated a bit nicer than the others—my food looked slightly better than that of my neighbor, my requests were attended to almost imperceptibly faster and sometimes I would hear whispers of a word: "Princess."

As far as I knew, in my uninteresting life I never had an inkling of being from a renowned lineage. I was a teenager like any other and led a boring life that I've now learned to appreciate. I didn't know why someone would call me Princess. Maybe this was *The Princess Diaries,* if someone wrote it while on crack, listening to *The Downward Spiral* by Nine Inch Nails and watching *Se7en* in a heavily sanitized room.

Tattooed on my right arm was the number 3, and with me were five other men and a woman with similar marks. These marks were bestowed upon us and didn't indicate the order we were sorted in, as I had 1 as my left neighbor and 6 on the right. As I surveyed the others, none of us knew what we had done to be where we were, although 7 appeared to know more than he wanted to let on. He rarely spoke to any of us.

As we spoke more and more to one another, we slowly realized the reason of our imprisonment: everyone there had a special ability that we were being trained for. 1 could move things with his mind, 2 and 7 could manipulate living matter and thus "heal" people, I could access the memories of others, 4 could possess animals with a lot of effort, 5 could harden his body psychically to resist any type of damage and 6 could give vocal commands that had to be obeyed.

Besides 1 and 2, who had known each other since their teenage years and who were the greatest of friends, nobody else was acquainted with anyone else. And to be honest, I didn't want to know 4 and 6, they were fucking assholes as far as I knew. 5 treated me like a daughter, and he spoke to me gently and with a smile. 7 was okay, he didn't speak but his body language wasn't mean. 1 and 2 were the ones I got along with best as they were closer to my age.

An interesting thing was that inside this prison we couldn't say our names. I knew what my name was- I could recall all my life in Canada, my French-speaking parents and my grandmother Anne-Marie with her beautiful red hair, but I couldn't speak my name aloud, nor could my fellow inmates. I tried many times, but the words couldn't come out of my mouth.

As we spent time in our containment—as I fondly called it—we became better with our skills, for we were taken out to another room and forced to work them out. 1 was forced to move things and to levitate things while moving others; he wasn't able to multitask much or lift heavy objects, much to the frustration of his handler. 2 was a natural and kept impressing those that coached him. I was doing okay by accessing the memories of animals, although I felt I was given a light load compared to what I think I can do. I don't think they fully knew—that, or I was being tricked into a comfortable situation. 4 could remote control up to four dogs if she stayed still and focused, and 5 turned out to be a combat veteran and thus he was being forced to do things that humans would think impossible. 6 could give commands to normal people, but he couldn't coax the guys in suits with skeleton masks that he would face.

They didn't tell me this. Every time I went to sleep I would get flashes of their recent memories and some older ones too. I slowly found out things about them until I came up with the following profiles:

1: He worked in Mexican politics. He had been the aide of a famous legislator and the guy was a huge nerd. He had these revolutionary theories that he was positing in his master's thesis, which he did at NYU. He was this chubby guy from the border, with brown hair and pale skin. Six feet tall. 26 years old.

2: He was an engineer who had lived on both the Mexican and American side of the border, as his father was American and his mother Mexican. He knew 1 because they went to junior high together and had played in bands. He was skinny and balding, with brown hair and pale skin. He was very robot-like at times. 26 years old.

4: She was a Japanese doctor with no qualms about using her sexuality to get what she wanted. She also used her skill to induce others to make mistakes that she could use to further her own goals. She was very pretty and slender and had a case of resting bitchface. 31 years old.

5: He was a French Legionnaire of African nationality, an elite soldier and unparalleled in combat. He had a loving family—a wife and two daughters—which he sorely missed. Not to be fucked with. 45 years old.

6: He was Irish, and had found his way to France where he worked as a pimp. His father had been one too, and he had used his skill to further his ambitions and was cementing his criminal empire when he got caught. 35.

7: This man was the strangest of them all. He too was a doctor, but he appeared to be much older, as he had been a young doctor in the Spanish Civil War, helping those on the Republican side. However, he looked no older than 70, and yet he must have been older than 100 years.

Unlike the rest of us, 7 was not being trained. I caught glimpses of people in suits and skeleton masks trying to force him to do something, but he would rather die than cave in. Every day he would be slightly more tired or roughed up than the last.

As for me, I had just been accepted to McGill on a scholarship to study English. I was 18 years old and had already published two poetry books to great acclaim. My father was a historian and my mother a linguist, both academics and successful in their respective fields. I was a skinny girl with brown hair, brown eyes and bad skin.

As I dreamt, I started feeling something rumbling inside of me. Something massive and intense—not angry, mind you, we had plenty of that in the room already—but I felt it burning and moving, trying to get out. Everything was dark, but I heard a vague echo of a voice calling me, screaming:

Complex

Princess

Come down

Contact

Reach us

Go wild

I'll taste your name (I'll tell)

I'll take off these things (watch this)

Calm down

Teach us

The roads

Your contact, it keeps us provoked

Remove your veils,

Every last one

I'm on your team,

Let's go

Take me

I don't care where

Take me

And then an otherworldly wail…

It was a voice only—it didn't have music, but I remembered there was a song called "Royal" by Deftones that Adrian, my ex-boyfriend, would listen to. I probably wasn't remembering the lyrics right, but they made sense to me. They called to what I was. Maybe I was "Royal" and maybe it was time to get the fuck out, and if I did, I would be the greatest Deftones fan in the world. That rumbling, that thing that boiled within me took the form of some kind of geometric 3D figure that had bright lines that shined in the dark—I didn't know exactly what form that was as I hated math and geometry.

I woke up as I never had before. I felt awake, real, like myself. The next day we had courtyard activity and I managed to touch 1 and 2. I spoke to them in my dreams by making a room of sorts within my mind and somehow pulling them inside, like I had seen in Inception.

"Hey there, fellas," I said.

"What the fuck?" said 2 as he sat on my dad's couch in the mental reconstruction of my house's living room.

"I know this isn't a dream," said 1, sitting on the plushy sofa, making himself at home.

"It is a dream, but you aren't having random stuff go through it, if that's what you mean."

"Okay," said 1, "so what are we doing here chilling in what seems to be your head?"

"I want to try to spring out of here. You guys game?"

"Sure," said 1.

"Okay," said 2.

"Do you have a plan?" 1 inquired.

"Maybe," I said. "Stay tuned."

As time passed, I started to make a plan to get out: First, I tried to solve the mystery of the seamless prison, which didn't appear to have an entrance or an exit, but somehow, I would have whiskey battered salmon and a copy of *Love in Times of Cholera*.

"Maybe there are exits and entrances that we can't see," said 1 as we had another session in our dreams.

"Maybe they're obvious, but we're forced not to see them," said 2.

"Like a mirage?" I said, very impressed by the guy.

"Yes," he said, "a manipulation of our perception of things."

"If there was someone forcing us to see or withholding us from doing so, then I could get into that person's head," I said.

"If they're trained to force our perception, they can surely notice you barging in and then our plan would go up in flames," said 1.

"Try to perceive other people than us seven," said 2.

A couple of days after this suggestion, I managed to feel two people in a place between 4 and 6's cell. This meant that I could feel the people "casting the spell," so to speak, but couldn't fully dispel it. Three days later I noticed a shadow going to 5's room to leave his food and then slide into the crack between 4 and 6. I told 1 and 2 about this and they recommended me not to push to dispel my illusion, unless we had a sure way of getting out.

I practiced my memory skills with them and realized that I could incorporate their skill sets into mine, not just peer into their memories. I discreetly taught myself origami, which I didn't know, but on which 2 was an expert.

"Do you think you could pass that to me?" said 1.

"What for?"

"You told us before that 5 is an elite soldier. Imagine if you could pass on his Master Chief shit to all of us. We would be seven soldiers, not just one."

"I think we have an escape plan," said 2 as he lay upside down on my dad's comfy chair.

The idea, then, would be to connect everyone's skills and dispel the illusion to make a run for it.

"Sounds legit," said 1.

For this to work, we needed everyone, but there were creases to this plan, as 7 was being increasingly punished, and for refusing to comply, wasn't being let out of his room anymore. We hurried and figured out that if I made a mental model of the subject, instead of the skill, I could pass 1's abilities to myself and 2 and so on. It was like a guitar pedal—I could make a 1 pedal, where I could amplify what I do and so on.

As we accomplished this, we agreed to contact the rest, which in this case was 4, 5 and 6. I let them know of all that we had plotted and how our keepers were—as far as we knew—blissfully unaware. They all agreed to work with us, because no Beef Bourguignon would taste as good as freedom, even if we couldn't get our old lives back. Not even Julia Child could pull off that feat.

I started to make pedals of 4, 5 and 6, but I worried about 7, who was sleeping most of the time. 4 and 6 voted to leave him, but the rest of us said all or none. We were training on 5 and 6's skills, which were the most useful, as one was a soldier and the other a criminal and they actually complemented each other quite well. When we were all confident about the plan, which was just to get out of the room and improvise our way out, we set a four-day deadline to enact it.

The next day in the courtyard, I saw 7 slumber in his cell and all of a sudden, he bolted up and saw me, right through the eyes, right through me, and then passed out on his bed again. That night, as everyone slept (including me), I had an unexpected visit.

"How's the escape plan going?" I heard an old voice with a heavy Spanish accent, like the one I've heard in Javier Bardem.

"Fuck!" I said, startled.

"Don't worry," said 7. "I've heard some of it in my dreams. You reached out for me, but we weren't able to make a full connection until earlier today."

"How…?"

"Unlike all of you, I mastered my skills many decades ago. They have haunted me for some time now and I had a group of people that like you, were trapped in a place similar to this one, and we managed to escape. A dear friend of mine, Gwennie, was able to do memory interlocking, as you have done. She has passed, but the link that she made with the last survivor of our group pervades. I know military training, but I could use a recap, as I obtained my skill from a veteran of the Korean War."

"I'll add you into the network," I said.

"I'll tell you a secret: I can see the prison as it is, not the illusion that is bestowed upon you all. You can tell because my cell is the only one that has a glass door," he said as he disappeared.

"Glass door?"

I woke up and saw reality: The room was not a heptagon, but rather an octagon, and between 4 and 6 there was a hallway that led in and out. The containment was pretty much the cell, there were transparent walls that made everything awkward and luxurious food was that and not a hunk of shit that I was tricked into thinking was delicious (thank god). However, the most important difference was that our cells didn't have the bulletproof glass panes that we thought we had. Our mind was our prison, and by encasing the latter, our body was too.

Having 7 in our midst radically changed the plan we had for D-Day: He would manipulate his own body into going into a deep stasis that simulated death, the keepers and maybe a skull guy would get in and then we would surprise them. 2 would revive 7 and we would all head out. I would be in charge of dispelling the illusion by projecting what I saw, what was real, into the others.

As things proceeded according to plan, three figures—one male, two female—clad in suits with tactical masks that had skulls painted on them appeared to check upon 7. I had remained awake and I woke everyone else by a mental signal we had rehearsed in naps and sleeping. 5 got out of his cell as they were carrying 7 out and snapped the neck of one of the women, while we pinned down the other two. As 7 awoke, 5 said to me:

"Extract whatever map they have of this place and circulate it to the others."

I did as I was told, and before we could think of what to do with the remaining prisoners that were knocked out, 7 touched them both and they went limp.

"They're brain-dead," he said to 4. "Take over them and let's go."

4 gave a slight nod as she passed out and the skull people got up, gave me and 2 their spares and unholstered their weapons.

"You," 7 said to 1. "Pick her up."

5 took the weapon from the skull woman that he had killed and 6 grabbed her spare piece and a tactical knife.

"Let's go," said number 7.

Sólo soy feliz yéndome.

No entre cuatro paredes, con sus sendas espadas,
sino entre aquí y allí, una casa y otra,
ajenas ambas preferiblemente.

No puedo ya, ni quiero, estarme quieto.
Ni ahora ni después. Ni aquí ni allí.
En todo caso, ahí, donde estás tú,
seas quien seas tú, ponme tu nombre
en los labios sedientos, insaciables.

Yo no soy yo ni puedo tener casa.
No digo ya porque nunca lo fui,
nunca la tuve, siempre fui extranjero
dentro y fuera de mí. Soy lo que no:
el mendigo que duerme bajo el puente
que une las dos orillas y yo cruzo
sin poder, día y noche, detenerme.

Escribo porque busco, porque espero.
Pero ya no sé qué, se me ha olvidado.
Espero que escribiendo
llegue a acordarme. Insisto en la intemperie.

Sinvivo entre paréntesis,
entre el espacio vivo y tiempo muerto
de la espera de qué, entre dos aquíes.

Nunca en sino entre. Sal de mí,
seas quien seas tú, déjame en paz
o acaba ya conmigo y con la miel
amarga de estar solo hablando solo.

He decidido que mi patria sea
no decidir, no estar en ningún sitio
sino de paso, puentes, naves, trenes,
donde yo sea sólo el pasajero
que sé que soy, sintiendo
que me inquieta la paz,
que la quietud me asusta,
que la seguridad no me interesa,
y sólo soy feliz cuando me sé fugaz.

Juan Vicente Piqueras
"Confesión del fugitivo"