UC San Diego

UC San Diego Electronic Theses and Dissertations

Title

Ch'ik'xulub: A Non-Visible Crater. Intersections across geological, cultural and biographical memory.

Permalink

https://escholarship.org/uc/item/3143r90t

Author

Andrade, Ana Carolina

Publication Date

2021

Peer reviewed|Thesis/dissertation

UNIVERSITY OF CALIFORNIA SAN DIEGO

Ch'ix'xulub: A Non-Visible Crater. Intersections across geological, cultural and biographical memory.

A thesis submitted in partial satisfaction of the requirements for the degree Master of Fine arts

in

Visual Arts

by

Ana Carolina Andrade

Committee in charge:

Professor Nicole Miller, Chair Professor Edwin Teddy Cruz Professor Pascal Gagneux Professor Anya Gallaccio The thesis of Ana Carolina Andrade is approved, and it is acceptable in quality and form for publication on microfilm and electronically.

University of California San Diego

2021

DEDICATION

To Yátzil Ikal, the fragment of this universe that created space in my uterus, during her human becoming. To my mother who always reminds me that I can, thanks for your support. To my father who made my mother's body become my temporary space during my first stage evolution. And to all our genetic ancestry.

Thanks to all the people that believed in me before I did.

To whoever takes their valuable time to read this document, especially those who helped me editing the text.

Thanks Earth for letting me be part of you.

TABLE OF CONTENTS

Thesis Approval Page	iii
Dedication.	iv
Table of Contents.	v
List of Figures	vii
Abstract of the Thesis.	ix
Introduction	1
General Overview.	1
Contextual Background.	3
Part 1: Chicxulub: A Non-Visible Crater Intersections across geological, cultural and biographical memory	7
1.1 Installation Abstract.	7
1.2 Installation Concept.	8
Part 2: On Memory and Becoming.	13
2.1 Unwrapping Memories, to construct memory	13
2.2 An Asteroid Wandering on Space.	16
2.3 The Region That Hosted an Asteroid.	18
2.4 Cenotes: The Portals of Time.	20
2.5 Digging Mayan Mythologies	22
2 6 Spanish Colonizing Meteor	24

2.7 Henequen Fiber: Plants of Resistance	25
2.8 My Grandfather's Recommendation Letter.	27
2.9 La Reina de Pátzcuaro.	28
2.10 The Other Peninsula.	29
2.11 Yatzil's Rock	30
2.12 My Stone	31
: Material Entanglements in Practices of Fiction	. 33
3.1 Interfaces Between Social, Time-Based and Material Practice	. 33
3.2 Embroidering For a Radical Crater Cartography	. 38
3.3 Mappe, Alighiero E. Boetti.	. 41
: My Fiction: Exchanges of Memory in Practices of Fiction	
(Posthumous Correspondence with my Grandfather)	44
	2.8 My Grandfather's Recommendation Letter 2.9 La Reina de Pátzcuaro 2.10 The Other Peninsula 2.11 Yatzil's Rock 2.12 My Stone Material Entanglements in Practices of Fiction 3.1 Interfaces Between Social, Time-Based and Material Practice 3.2 Embroidering For a Radical Crater Cartography 3.3 Mappe, Alighiero E. Boetti My Fiction: Exchanges of Memory in Practices of Fiction

LIST OF FIGURES

Figure 1.1: Ñongo Cultural, 2013 internal and external view; digital image	4
Figure 1.2: 66 hours in collaboration with Yatzil Ikal. 2019; Installation View	5
Figure 1.3: Ch'ik'xulub. 2021; Installation View.	9
Figure 1.4: Ch'ik'xulub. Fragments of the Crater and The Mix of Peninsulas. 2021; Installation View	0
Figure 1.5: Ch'ik'xulub. <i>Hybrid Belonging</i> 2021; Installation View	1
Figure 1.6: Ch'ik'xulub. <i>After Death, When my Grandfather Visited the Crater.</i> 2021; Installation View	12
Figure 2.1: Bird phylogeny adapted from / branched downy feather and symmetrical contour feather from <i>The Tangled Bank</i> . Understanding Evolution site. Illustration credit: Carl Zimmer	18
Figure 2.2: <i>Chicxulub Airblast</i> . Regional Effects, <i>Lunar and Planetary Institute site</i> . Illustration credit: David A. Kring	19
Figure 2.3: Chicxulub Zone of Cenotes. Discovering the Impact Site, Lunar and Planetary Institute.	22
Figure 2.4: <i>Maya god D, Itzamná</i> . Francis Robicsek: The Maya Book of the Dead. The Ceramic Codex, University of Virginia Art Museum. 1981 Illustration Credit: Unknown Maya artist.	25
Figure 2.5: <i>Henequen</i> . 2016; Illustration Credit: Sergio Hidalgo	26
Figure 2.6: Letter that says who is my grandfather's father and explains that he was owner of an henequen field. 1942; Grandfather's archive. Digital Scan.	28
Figure 2.7: La Reina de Pátzcuaro. My Maternal Grandmother. 1941; Digital Scan	29
Figure 2.8: Samuel Uc, Yatzil Ikal and Ana Andrade on Yatzil's Rock. 2019; Digital Image	31

Figure 2.9: My Stone at the Yucatan Peninsula. 2015; Digital Image	32
Figure 3.1: Fragments of the Crater in process. Ch'ik'xulub project. 2017 – 2021; Digital Image	40
Figure 3.2: Afghan Women Working Together on a Boetti Mappa, 1990, © Randi Malkin Steinberger.	41
Figure 3.3: Alighiero e Boetti, Mappa del mondo, embroidery on canvas, cm 120 X 220. Image Credit: Courtesy Archivo Alighuiero Boetti	
for koones magazine	43

ABSTRACT OF THE THESIS

Ch'ix'xulub: A Non-Visible Crater. Intersections across geological, cultural and biographical memory.

by

Ana Andrade

Master of Fine Arts in Visual Arts

University of California San Diego, 2021

Professor Nicole Miller, Chair

Ch'ik'xulub¹: A Non-Visible Crater is an installation based on a fictive story about a scientist from the 1960's who is studying the connection of Earth to the Universe through ancient Mayan science and history. The story is inspired on my grandparent's archive and my research on the Chicxulub asteroid's impact. This work creates a dialogue between the heterogenous as life/death, macro/micro, organic/inorganic, Yucatan/Baja California peninsulas and real/unreal facts.

ix

¹ Ch'ik'xulub, Mayan word that means: Tail of the Devil. I also use the word *Chicxulub* in the document.

Ch'ik'xulub:A Non-Visible Crater brings together time through geological, cultural, and biographical memories with videomicrography, archive, objects, sound, sculpture, and a collaborative piece of embroideries.

The story began with me visiting cenotes (limestone caves with water) to abstract fragments of the sites as soil, water, and invisible microorganisms, then photomicrographing them to make an embroidered cartography in collaboration with Mayan women from La Hermita at Oxkutzcab Yucatan.

Everything changed when I dreamed of my posthumous grandfather, who was a scientist. He started sending me his super 8 reels from the Mayan region. I wrote him letters and he responded; through this series of fictive correspondence we go back to the Mayan mythologies and sociocultural history along with other contemporary issues. My grandfather and I are thinking about what our real home is? We know that we belong to the specific place where our conception happened because all matter is connected; therefore, the site is merged into the dynamic of engendering. We connected this idea to the fact that my daughter recognized as home the rock where she was conceived. Our potential homes are in different states of Mexico as Yucatan and Tamaulipas (both lands affected by the Chicxulub asteroid impact). In my fiction I connect Baja California to this macro cosmical event because of the constant movements of Earth's plate tectonics.

The Thesis is divided in four parts. Part one explores the project *Ch'ik'xulub A Non-Visible crater*. Part two refers to the main memories that are part of the research. Part three is about my connection to other methodologies and Part four presents my fiction.

Introduction

The following document consists of four parts. These represent a fraction of my thesis in partial fulfillment for the MFA in Visual Arts from the University of California San Diego. Each of the sections manifests a different perspective of my work. Part I describes the body of work for the project "Ch'ik'xulub (Chicxulub): A Non-Visible Crater", the conceptual relation to elements of the installation, and descriptions of installations as they are intended to be shown at gallery exhibitions. Part II, "On Memory and Becoming" belongs to my former body of work, this section includes descriptions of the main concepts and memories that are part of my thesis research. The third part: "Material Entanglements in Practices of Fiction" is focused on the reflection of artists that approach time, fiction and science, and the connections I found they had to my future artwork projects. It also describes the process of collaboration with a Mayan woman from Oxkutzcab mentioning the weakness and strengths of the collaborative process. The fourth part "My Fiction: Exchanges of Memory and Practice" consists of a posthumous correspondence letter exchange between my fictive maternal grandfather and myself.

General Overview

My work explores the convergence of life dimensions in space: all those that create a sensorial present. Keeping this idea in mind, I observe the effects of movement in time, while focusing on human/non-human history, and science, emphasizing a relationship to geology and planetology. I am particularly interested in deconstructing daily life exchanges that I experience as a physical being, and for this reason I use my process to break socio cultural boundaries and limits of spaces and times. Meanwhile, I observe and capture the light effect on diverse elements

through optical devices, such as projectors, cameras and microscopes. I use my body to conduct sensorial interactions with materials of different types and scales, merging heterogeneous elements such as fiber with wire, breast milk with sound, memories with fabric, death with life, and two geographic peninsulas.

My research explores sites as craters, urban spaces, archives, communities, and my inner body. I am interested in knowledge in the form of histories and cultural practices and their connection to ancient cosmologies. Sometimes I collaborate with friends, family, indigenous people and communities, yet I also collaborate with non-human organisms and the non-living realm. Together we translate worlds to words, create videos, write stories, adapt photomicrographic images into embroideries, record sound, interact with landscapes, collect objects and exchange knowledge through conversations.

My work is mainly directed by intuition and my perception of reality, that I often convert into imaginary facts proposing other possibilities besides our actual existence. I interweave these natural-like fantasies with memories so that they tell stories: reality-based fictions. My installations create plausible environments combining objects, sculptures, archives and time-based media. The viewer/experiencer converges with the installation, molding a tangible present. The viewer/experiencer approaches the visibility of the invisibleness while experiencing the exhibition atmosphere. This is the intent for project *Ch'ik'xulub* that I am presenting for my thesis dissertation.

Contextual Background

I have been in contact with artistic expression since I was born: my father photographed my head while being pushed out from my mother's body. As a child, my maternal grandfather showed me the use of video cameras, projectors and the microscope. I have always observed light and its reflection on surfaces. I also spent time watching the outside world from the windows of my home and car, the light reflected peoples' situations along the paths I took by the Tijuana/US border.

Sometimes I feel that my unstable way of thinking is an effect of being raised as a transborder woman. Since I had a key from my house, I started to walk around the urban border complex accompanied by a camera, observing all the materials that surrounded my journeys as well as different sociocultural realities like the Chinese community, the Mexican immigrants and the deported persons from Mexico and Centro America, to name a few. When I studied photography, I found out that a camera will always be a key that breaks with the monotonous aspect of my life. Performing as a photographer I interacted with communities that are settled in Tijuana, like the Chinese and the inhabitants of the Tijuana river that flows along the US/MX border. I spent around five years approaching groups of people that were deported from the United States during the 2010-2015. It was in those years I heard thousands of stories about movement and subcultures, witnessed addictions, corruption, kidnappers and mafias. I collaborated with *El Gato* who directed his own musical short-documentary. To frame a series of photographs I collected frames that were found in trash dumps by the people who worked recycling. We built an in-site installation recycling materials among trash, I used my

grandparent's bed sheets as walls of the ñongo. *Ñongo Cultural* was known as the first Latin American gallery because it was ten meters away from the border wall. It was visited by many people including christians, journalists, friends, police, and workers from factories around. We used the structure as a gallery and screen for projections of the short film *El Gato Julio Romero Salas*





Figure 1.1: Ñongo Cultural, 2013 internal and external view; digital image.

While visiting the river and filming micro documentaries, I wrote a script for a fiction "Seeking America" that was supposed to be filmed on site. The characters are based on some of the persons that I met or the stories that I heard about the migration movement. The idea was to build epic scenography along the river; built by the inhabitants, light engineering made with recycled cables and batteries as well. Instead of this utopic project, I collaborated with two peers to film the documentary feature *Donde Los Vientos se Cruzan/Where the winds cross* where we follow the story of my friend from Yucatan for whom I felt secret love.

The river introduced me to my portal to the Yucatan, where we conceived a life, somewhere at the *Chicxulub* crater. I became pregnant and this experience of hosting a life made me feel that we are molds of the Earth in its own motion along the planet's movements. My

uterus became a fragment of the space that grew from Samuel's sperm, a sphere-like shape inside my body which only exists as shelter for my daughter's ontogeny.

I started thinking about the invisible dimensions that converge to build a moment that changes and evolves shaping the present. With this experience, I mothered a life that is part of the universe's life, and I am a collection of physically unstable substances found on planet Earth. The experience led me to make the video micrographic installation: "66 Hours in Collaboration with Yatzil Ikal". I filmed with a microscope juxtaposition of placenta, breastmilk, meconium and spit in motion. This work is a three-channel video with sounds of a liquid environment, my daughter sucking milk, chants, and a narrative of my reflections about expecting and delivering.



Figure 1.2: 66 hours in collaboration with Yatzil Ikal. 2019; Installation View.

My work has always been experiential, with a mystical approach to reality. I started telling other people's stories while documenting subcultures. I called it *ethnographic* performance: the moment that both heterogenous realities (the other's and mine) are slightly

transformed while coexisting in our present time. Stories of other realities are not 100% real; they tend to be constructed memories. Reality-based fictions have been around my processes during the past ten years.

Being in the Visual Arts program allowed me to experiment with media that I have always wanted to, such as sculpture and textile. As using sewing machines, threading string, wrapping fiber over wire shaping them to create amorphous figures. Birthing new creations starting from zero, has become a fundamental part of my work. The act of handling materials is part of my research, it allows me to create new worlds connecting other dimensions and memories. Recently I have been interacting with fiber while I combine it with wire, merging particles with the action of touching. When I sew fiber string with chicken wire, I touch contrasting textures, at the same time my neurons might recombine their patterns faster, then my perception shifts constantly from one frequency to another. For example: the smell of the fibrous henequen vs. the smell of the cold wire, this composition is guiding my present will to create. During the process I cut the chicken wire, then I merge the remaining wires by sewing henequen string around them creating abstract polymer shapes.

For my thesis dissertation project *Ch'ik'xulub* I use storytelling as a medium. Using storytelling I merge two parallel projects: two opposites, namely, natural processes and real-unreal memories. *After Death* explores my grandfather's archive through a fictional exchange between life and death, that is between my long-gone grandfather and myself while *Chicxulub* emphasizes the relationship of life's evolution, the macro-cosmos, and indigenous practices through their collaboration.

Part 1:

Chicxulub: A Non-Visible Crater. Intersections across geological, cultural and biographical memory.

1.1 Installation Abstract

Ch'ik'xulub: A Non-Visible Crater is an installation based in a fictive story about a scientist from the 1950's, who is studying the origin of life in Universe through the Mayan mythology. The story is inspired in my grandparent's archive, and my research upon the Chicxulub impact.

It creates a dialogue between heterogenous elements as life/death, macro/micro, organic/inorganic, Yucatan Peninsula/Baja California Peninsula, real/unreal facts. *Ch'ik'xulub: A Non-Visible Crater* brings together geological, cultural and biographical memories with videomicrography, archive, objects, sound, sculpture and a collaborative piece of embroideries.

The story began with me approaching the non-visible Crater of Chicxulub, visiting the cenotes (limestone caves with water) to abstract fragments of the sites, as soil, water and invisible microorganisms. Collaborating with Mayan women from *La Hermita* at *Oxkutzcab* Yucatan in order to create an embroidered cartography of the crater. As pattern we used photomicrographic images taken from samples of water from the cenotes. Everything changed when I dreamed my posthumous grandfather who was a scientist, he started sending me his super 8 reels from the same region. I wrote him letters and he responded; through this series of fictive correspondence, we go back to the Mayan mythologies and sociocultural history along with other contemporary issues. My grandfather and I are reflecting that our real home is where we were conceived, therefore we have a sense of belonging to that specific site. We connect our idea to

the fact that my daughter recognized as home the rock where she was conceived. Our potential homes are in different states of Mexico, as Yucatan and Tamaulipas (both lands affected by the Chicxulub asteroid). In my fiction I create the connection of Baja California to this macro cosmical event because of the constant movement of Earth's plate tectonics.

1.2 Installation Concept

Chicxulub is an installation that puts together the macro-cosmical event of Chicxulub² impact with Mayan history, my grandfather's archive, the microscopic world of a buried crater, and the two Peninsulas of Mexico. The visitor walks into an environment surrounded by sounds that includes recordings of phrases in Mayan. A woman and a man are sharing their feelings in relation to human sacrifice and how that action will safeguard their communities, the man mentions their belief of the *cenote*¹ as a portal to the underworld which transport them to the lineage of life origins, also the experience of a man that saw for the first-time a group of foreign people, along with other written passages abstracted from contemporary Mayan's oral history. The voices are merged with other recorded sounds, as drops of water and minerals are being released to the underground through the stalactites1 inside caves of the Yucatan region. Also, the underground environment of the *cenotes*, such as bats and silence, interactions with domestic elements implying a phenomenological effect. Horse steps by the ocean and over the concrete. The Pre-Columbian melody of blowing a conch shell, a flute and other sounds played by contemporary Aztecs who work at the streets of the Tijuana border. Also, recordings from my grandfather's cassettes that he used while traveling, and chants that I tend to voice when I

² More information in Part 2 of this document

installation. There are four visual projections in the walls. One section of a wall has small texts (probably in Mayan, English and Spanish) the texts are synchronized with some phrases that are being heard at the moment. Another section of the same wall has a vertical slow-motion image of the light interacting with water from a *cenote*. The center and left walls are projecting large scale videomicrography from water, soil and microorganisms who were collected at the *cenotes*.



Figure 1.3 Ch'ik'xulub. 2021; Installation View.

The *Mix of Peninsulas* is an installation that uses stones from my homeland Tijuana, Baja California to uphold ten pieces of the collaborative series: Fragments of the Crater. The pieces

are made by Mayan women from Oxkutzcab, Yucatan who translated into cross-stitch embroidery the photomicrographic images, that I captured from water and soil of the cenotes that have been transforming along the fifth ring of the Chicxulub's1 crater. The Mix of Peninsulas is emphasizing the idea of plate tectonics motion and the possibilities of land hybridization by merging elements from both the Southern East Peninsula and the Northwest Peninsula of Mexico. I am also connecting the geographical sites where my daughter was conceived as well as well as mine, therefore our homelands.





Figure 1.4: Ch'ik'xulub. Fragments of the Crater and The Mix of Peninsulas. 2021; Installation View.

Hybrid Belonging is an assemblage of hanged sculptures made of agave sisalina¹ fiber and chicken wire. They are inspired by elements that represent life's components like molecular diagrams and nucleotide structures, as well as chemical elements that are related to life's evolution and how all these elements are contained inside an atmosphere. These forms have

endless possibilities to be shaped, they are interacting with the microscopic large-scale videos. Using the lightning of the gallery we can gaze at a string of light coming in from the outside resembling what happens inside the *cenotes*, the light also projects the forms' shadows on the floor. *Hybrid Belonging* is about the act of mixing native Mayans with Spanish conquerors. I use organic materials and connect them with non-organic materials. This sculpture is part of my fictive idea of homeland¹ since my grandfather was conceived at an *agave sisalina or henequen* field in Tamaulipas.

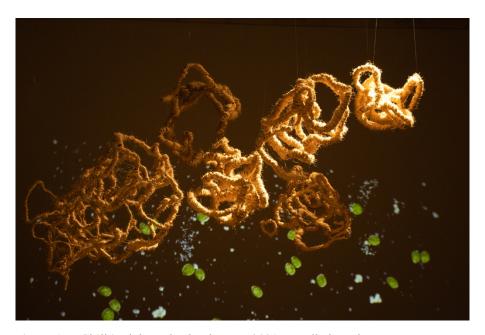


Figure 1.5: Ch'ik'xulub. Hybrid Belonging 2021; Installation View.

After Death, When My Grandfather Visited the Crater in the left part of the gallery, is an assemblage of objects that contain my maternal grandparent's memories. Twenty carrousel boxes of Kodak slides, my grandmother's green jar, table and lamp, and a super 8 film projector (probably two). The light is being projected over a square pedestal in the middle of the gallery.

The films are loaded on the projector and when someone comes into the space, they can watch minutes of my grandfather's 1970's footage from the 1970's, four reels of super 8 film with moving images of his car being driven in the Yucatan region, some the ancient Mayan cities as Uxmal, Chichen Itza, the sacred cenote, and if I find it, a film of himself looking through a microscope at his laboratory. These projections merge different times and create a fiction in which my grandfather could be the scientist that captured the other microscopic images. Along with this idea I wrote a series of fictive letters in which I reached his non-living being. The texts are based on many issues that interweave dreams, science, politics, religion, technology, my Chicxulub project, conception, homeland, memories, unimaginative situations, love, and autobiography.



Figures 1.6: Ch'ik'xulub. *After Death, When my Grandfather Visited the Crater.* 2021; Installation View

Part 2: On Memory and Becoming

2.1 Unwrapping Memories, to construct memory

I believe that memories are effects of the movement in time. The present is always becoming. Each individual memory is existing along with universal memories. Even if we only remember what we perceive first hand, the moments that we archived were experienced along thousands of other elements that have their own memories. All that material in motion is what makes a sensorial present, this is related to what I refer to as the convergence of dimensions. In 1911 the philosopher Henry Bergson published his book *Matter and Memory* where he mentions:

The brain, in so far as it is and image extended in space, never occupies more than the present moment: it constitutes, with all the rest of the material universe, an ever-renewed section of universal becoming. Either, then, you must suppose that this universe dies and is born again miraculously at each moment of duration, or you must attribute to it that continuity of existence which you deny to consciousness, and make of its past a reality which endures and is prolonged into its present. ³

This non-stop instability and deconstruction apply to all that makes the present time, as living and non-living material subjects. Everything that moves and lives inside this universe has its own past and memories. While we change, we produce an endless chain of remembrance. In his book *Cinema 2: The Time-Image*, Gilles Deleuze responded to Henri Bergson ideas, thinking about time and memory he specifies that:

The past is not to be confused with the mental existence of recollection-images which actualize it in us. It is preserved in time: it is the virtual element into which

³ Bergson, Henri. Matter and Memory. Translated by Nancy Margaret Paul and W. Scott Palmer, B.J. Muirhead, LL.D, 1911 P.192

we penetrate to look for the 'pure recollection' which will become actual in a 'recollection-image'. The latter would have no trace of-the past if we had not been to look for its seed in the past... Memory is not in us; it is we who move in a Being-memory, a world-memory. In short, the past appears as the most general form of an already-there, a pre-existence in general, which our recollections presuppose, even our first recollection if there was one, and which our perceptions, even the first, make use of. From this point of view the present itself exists only as an infinitely contracted past which is constituted at the extreme point of the already there. ⁴

The "already there" idea that Deleuze mentions, could be one example of the visible and invisible dimensions that converge to cause the present of each living subject. Humans are able to remember, but also plants, animals and their immune systems, sites, planets, particles, objects, buildings, tectonic plates, and everything that is becoming contain memories from their past and produce memories for the present. When we remember, the memories are reconstructed through many external and internal aspects that are associated when the memory emerges. Everything is formed and surrounded by coexisting particles in a continuous growth, that is always in motion. Many other-than-human memories are fabricated through research and historic discourses that inform, sometimes these produced memories become memories of the spectator.

To exemplify an action that shows how the dimensions converge in the present, I relate this idea to the act of photographing. When we photograph, the photons of the present moment are fixed in a chemical or digital surface that immortalizes a fragment of a fragment of that present. Photographic images are produced by a living moment of the whole material that is part of that moment, which is forming along with the time and space of that instant. When photographing, the camera is converging with all the unimaginable dimensions of light and

⁴ Deleuze, Gilles. Cinema 2: The Time-Image. Translated by Hugh Tomlinson and Robert Galeta, University of Minnesota Press, 1997, p.98

matter. Roland Barthes refers to photography as "the container of a death moment", when he was reflecting upon the act of photographing, he wrote that:

Photography offers an immediate presence to the world, a co-presence; but this presence is not only of a political order ("to participate by the image in contemporary events"), it is also of a metaphysical order... And if Photography belonged to a world with some residual sensitivity to myth, we should exult over the richness of the symbol: the loved body is immortalized by the mediation of a precious metal, silver (monument and luxury); to which we might add the notion that this metal, like all the metals of Al- chemy, is alive... What matters to me is not the photograph's "life" (a purely ideological notion) but the certainty that the photographed body touches me with its own rays and not with a superadded light... the photograph surreptitiously induces belief that it is alive, because of that delusion which makes us attribute to Reality an absolute superior, somehow eternal value; but by shifting this reality to the past ('this-has-been'), the photograph suggests that it is already dead."5

In this case, photography is a discovery that has been practicing the action of life convergence, into one moment that becomes a tangible memory. This is reminiscent of how infinite dimensions are part of the present, in this case they are turned into physical objects. But there are many other things orbiting around moments which were not necessarily being photographed, but they are shaping the present time, acquiring memories and producing them.

In this section I will enlist and briefly explain the main memories that are coexisting in my project *Chicxulub*. Since this project is approaching many scales, the list is organized from the macro-cosmic wide scope to the micro particular elements that are part of the research, such as history, science, oral-history, Mayan terms, genealogy, and

⁵ Barthes, Roland. *Camera Lucida: Reflections on Photography*. Translated by Richard Howard, Hill and Wang, 1981. pp. 79-82

15

my grandparent's memories. Naturally, some are memories containing memories within memories.

2.1 An Asteroid Wandering on Space

As usual, Earth was orbiting around the Sun, rotating and spinning, all at the same time, when suddenly our atmosphere was penetrated by a heavy asteroid. This entity of 81 km of diameter hit on the Earth with a high speed, altering the whole structure of the planet. Chicxulub transformed Earth while becoming part of it. It appears that this moment happened around 66 million years ago, the asteroid altered Earth with a series of natural phenomenon's: tsunamis followed by earthquakes, fires and loss of species. This catastrophic experience "released into the atmosphere 425 gigatons of CO2 and another 325 of sulfides (one gigaton equals 1 billion metric tons.)"6, the *Chicxulub* asteroid poisoned the biosphere spreading a "sizeable amount of toxic metals around the globe" as Iridium. This poison was produced by the material that the asteroid was made of. It released gases all around the carbonous surface of the site where it crashed. It appears that their chemical impact covered the atmosphere for years, therefore light wasn't able to achieve its dynamic feedback of photosynthesis with our superorganism. It also caused lower temperatures affecting the living organisms of earth. That moment, the present in time of both organisms, synchronized their dimensions in space while moving, performing this involuntary encounter. They generated the fifth mass extinction of species that were part of our

⁶Criado, Miguel Angel. "Así fue el primer día en la Tierra trás el asteroíde que acabó con los dinosaurios". *El País*. 10 Sept, 2019, www.elpais.com/elpais/2019/09/09/ciencia/1568041613_749340.html

⁷ Frankel, Charles. "The End of the Dinosaurs: Chicxulub Crater and Mass Extinctions". *Cambridge University Press*. 1999, pp. 127

superorganism, from plankton to non-avian dinosaurs. Chicxulub on Earth didn't only cause an extinction, but also made some species evolve, (as if the dark membrane around the atmosphere was Earth's metamorphosis cocoon). The Chicxulub impact affected several food chains, apparently mammals were more resistant to the weather and could move faster to find shelters, "Mammals, in contrast, could eat insects and aquatic plants, which were relatively abundant after the meteor strike. After several days of heart, the earth's surface temperature returned to bearable levels, and the mammals emerged from their burrow"8

It appears that some of the dinosaurs evolved, turning into small birds. "The ancestor of all living birds lived sometime in the Late Cretaceous, and in the 65 million years since the extinction of the rest of the dinosaurs, this ancestral lineage diversified into the major groups of birds alive today." This macro-cosmical memory clarifies that everything is always becoming. Sometimes there are specific situations, like chemical interactions between living beings that deconstruct life causing loss and evolution.

_

⁸ Penn State. "Why did mammals survive the 'K/T extinction'?." *ScienceDaily*. ScienceDaily, 10 February 2010.www.sciencedaily.com/releases/2010/01/100131221348.htm

⁹ *Understanding Evolution*. 2021. University of California Museum of Paleontology. 22 August 2008, www.evolution.berkeley.edu

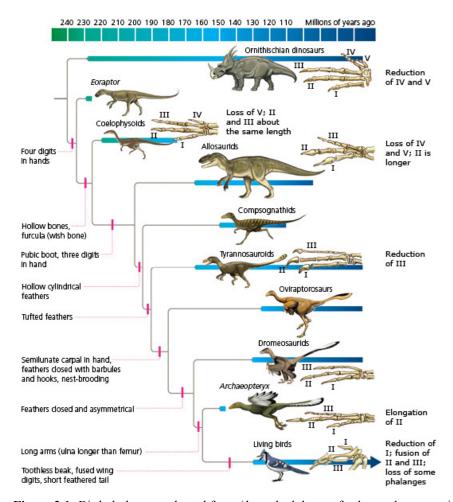


Figure 2.1: Bird phylogeny adapted from / branched downy feather and symmetrical contour feather from *The Tangled Bank*. Understanding Evolution site. Illustration credit: Carl Zimmer

2.2 The Region that Hosted an Asteroid

In the 1970's two geophysicists were riding a boat looking for petroleum around the Gulf of Mexico, by the Chicxulub port of Yucatan. The field researchers found clay that had concentrations of iridium instead of petroleum. In the 1990's, the Planetary Scientist Allan Hildebrand studied the situation, finding that it was the crater's ring peak. The K-Pg boundary was already being studied through the impact debris and sediments

around Haiti, Canada, North East Mexico, all these places recorded this memory in their underground. Half of the crater is inside the ocean next to *Chicxulub* port while the other half is buried in the Yucatan Peninsula of Mexico. *Chicxulub* in Mayan means *flea of the devil*. They named the asteroid as the port where the underground crater is. The state of Yucatan has two types of soil: *kankab* red soil used for agriculture which is the primary economic source from cities in Yucatan, and *saskab* white soil which is decomposed limestone, "a sedimentary rock conformed by a high amount of calcium" ¹⁰ which is used to create roads, highways, build houses, the ancient Mayan civilization as material to construct their cities and temples.

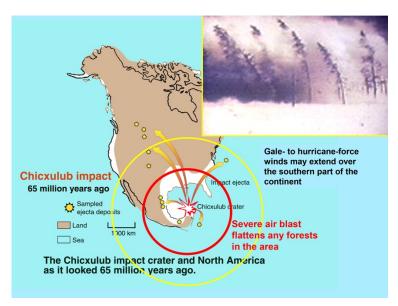


Figure 2.2 Chicxulub Airblast. Regional Effects, Lunar and Planetary Institute site. Illustration credit: David A. Kring.

¹⁰ M. King, Hobart, "Limestone: What is Limestone and How it is Used". *Geoscience News and Information*. www.geology.com/rocks/limestone.shtml

2.3 Cenotes: Portals of Time

Since Earth started existing its land has been changing, it used to be one that has been separated into many pieces of land which we know as continents. The Yucatan region has always had caves and caverns, but when the sea level rose the caves were filled with water and since limestone is soluble in water, it has been falling from around the caves transforming it into deep holes with underground water. The ancient Mayans refer to these subaquatic systems as ts'o'not" a hole filled with water" which is translated as cenote. There is a path that can be traced by cenotes, this path, according to cartographies, is part of the fifth arch of the crater, and it is known as the Ring of Cenotes.

In his lifelong research of cenotes, the Earth and Planetary scientist Emiliano Monroy-Ríos provides the following information:

The portion that we inhabit today above sea level of the Yucatan Peninsula, is only the exposed part of the carbonate platform that was steadily growing from the seabed by accumulation of millions of skeletons of different marine organisms that use calcium carbonate to form their bones, shells, spicules and other parts of the body. Upon dying, they deposit on the bottom surface to compact and harden together with fine clays over millions of years. It is important to recognize that the growth of the platform happens through the deposition of *biogenic* carbonate, sourcing from living organisms, and moreover, that it involves a process that necessarily happens underwater across the submerged areas.¹¹

The surface of the cenotes is made by fragments of dead organisms that are decomposing themselves during time. The water is filtered from the ocean, coming as a newborn substance, trespassing the clay made of pieces of death bodies. The

¹¹ Monroy-Ríos Emiliano, "Speleogenesis: How Were Caves and Cenotes Formed?". Karst Geochemistry and Hydrogeology. 26 December, 2017 www.sites.northwestern.edu/monroyrios/2017/12/26/speleogenesis/#.YDxMFJNKjOQ

contradictory interaction of life and death happens below the *cenotes*, but also above. The cenotes have openings to the outside, which can suddenly fall by parts inside the water, but since its limestone it will dissolve inside breaking apart into an infinite amount of soil grains. Some caves, caverns and cenotes from around the Yucatan region have stalactites and stalagmites. Both are results of water that is filtered from above the ground combining itself with minerals during its journey, from outside to the interior of the cave. Once it gets to the empty space it starts to form a stalactite that goes down from the ceiling of the cave, while the stalagmites arise from the droplets of water that come from stalactites. The water hits the surface, making the inverse of the stalactite, a structure that arises from the floor and goes up. They are both effects of the interaction between water and the carbonous properties of the land.

The *cenotes* are sites that host life and death. This sweet water source benefits different types of birds, deer, possums, reptiles, fishes, bats, microorganisms like plankton, cyanobacteria and snails. Actually, there are many cenotes that are abandoned, and many others that are tourist's attraction and some even have light systems inside.



Figure 2.3 Chicxulub Zone of Cenotes. Discovering the Impact Site, Lunar and Planetary Institute

2.4 Digging Mayan Mythologies

During the Pre-Columbian period, the Mayan civilization had autonomy over territory. It was a large society that spread around Mesoamerica: Yucatan, Quintana Roo, Chiapas, Belize, Guatemala, El Salvador and Honduras. The civilization emigrated throughout what are now different countries and they founded cities. While in the Yucatan they used *cenotes* as references for their settlements. Water is the primordial source of life that they looked for while deciding where to establish their communities. They used water from *cenotes* for many purposes including daily consumption and in their craft like ceramics with *saskab* or other clays but also for ceremonies and sacrifices. Many caves and caverns were used as settlements.

The Yaxche or ceiba tree was the ancient Mayan's representation of The Tree of Life that they use as reference for life's creation: it created dimensions, time and space¹². For the Mayans the ceiba leaves are connected to the upper world, the trunk to the middle world therefore the tangible dimension, the roots to the underworld. It is common to find a ceiba at the entrance of the cenotes, their roots fall down from the ceiling of the subterrain caves of water. The ancient Mayans believe the cenote was a portal to the underworld. They used cenotes for sacrificial purposes, specifically the cenote sagrado at the big city of Chichen Itza. When there was drought, they conducted ceremonies for Chac Mool, the rain god, offering bodies of persons who were sacrificed for harvesting purposes. For them, when bodies were thrown into a cenote, the body's soul would pass through a portal that will direct them to another dimension above the hills, in the upperworld. The cenotes were also mortuaries during war, when they started to fight against each other for land and properties.

The Mayan civilization was connected to land and the universe, they used to observe the sky and find relationships between macro-cosmical events and their socio-cultural life. Their temples were structured according to cosmological observations of the sun, moon, stars and eclipses.

-

¹² Calleman, Carl Johan. "The Purposeful Universe: How Quantum Theory and Mayan Cosmology Explain the Origin and Evolution of Life" Bear and Company, 2009

2.5 Spanish Colonizer Meteor

During 1502 another meteorite crashed into the Yucatan region that instead of falling from outer space and spreading chemical components that gave rise to a geological period of transition, this meteor consisted in the concentration of Spanish explorers. During decades of violence, slavery, battles, and imposition the Mayan civilization had a directed metamorphosis. Their society was persuaded by religion, most of their temples were destroyed and they forced the native community to build their churches, some of them next to the collapsed temples. During the imposition their customs were hybridized, for example nuns conducted workshops for women, introducing the use of steel wire needles to learn cross-stitch, (*xok bil chuuy* in Mayan) embroidery technique, they stopped using bones for sewing. Since then, they started wearing a white dress call *huipil* which has beautiful handmade embroideries of flowers, and that is now recognized as a traditional Mayan dress yet those designs were imported from Europe. ¹³

A high percentage of native Mayans died fighting against the Spanish troops, others died because of diseases that were imported from Europe, and the rest of the survivors became slaves that would work their lands. Some of their customs are still practiced within Mayan communities, while others were prohibited, such as the sacrifices; yet the Mayan society considered a crucified Jesus Christ as a sacrifice to save the world. Some communities from Yucatan still conduct ceremonies at the cenotes to ask the god *Chac Mool* for rain, but without human sacrifice.

¹³ Ruiz Ávila, Dalia. "Hipiles yucatecos, flores multicolores. Estética e identidad sociocultural". *Península* vol. 7 no. 1 Mérida, January 2012. www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S1870-57662012000100005

¹⁴ Nájera Coronado, Martha Ilia, "El sacrificio humano entre los mayas en la Colonia", *Arqueología Mexicana* núm. 63, pp. 64-67

2.6 Henequen Fiber: Plants of resistance

The Mayan God of Knowledge Itzamná, the Lord of Heavens and Earth. He is also known as God D, a historical figure of the Classic and Postclassic Mayan period. He was a special person, known because of his observations of astral entities who inhabit the space. Itzamná also experimented with land material, and made important contributions to civilization, as astronomy and art. There is a legend about his discovery of the *henequen* fiber "*Itzamná* was walking by a *henequen* field and was hurt by a leaf thorn. Immediately he noticed that the leaf had resistant fibers which could be useful for his town" The Mayans recognized the *henequen* as a sacred plant, the fiber had many purposes, such as making hammocks, bags, domestic articles and other objects.



Figure 2.4: *Maya god D, Itzamná.* Francis Robicsek: The Maya Book of the Dead. The Ceramic Codex, University of Virginia Art Museum. 1981 Illustration Credit: Unknown Maya artist

Agave Sisalina is the scientific name of the native plant from the Yucatan region, also known as *green gold*. Mayan survivors of the conquest became slaves to the *mestizo or foreign* land new

owners in the Yucatán, some of them would work to extract the fiber of the agave. During the late nineteenth and the beginning of the twentieth centuries, the Mexican government decided to export plants to different countries where the plant would grow successfully because of the soil and weather. The fiber's procedure is complex and "the strong sisal fibers are extracted from the plant's long, green leaves, then washed, sun-dried, brushed, graded and bailed on the plantations. Each leaf of the agave plant contains about 1,000 fibers, and one plant produces around 200 leaves during its productive life cycle" 15

The henequen industry in the Yucatan has been collapsing because of its competition with other producers throughout the world as Brazil, Tanzania and Kenya.



Figure 2.5: Henequen. 2016; Illustration Credit: Sergio Hidalgo

¹⁵ "How is sisal harvested?" Sisal Rugs. 11 November, 2016. www.sisalrugs.com/blog/how-sisal-harvested

2.7 My Grandfather's Letter of Recommendation.

Tamaulipas is a state from North East Mexico, where planetary scientists have found sediments of iridium that prove the Cretaceous – Paleocene (K-Pg) boundary ¹⁶ It is another place that has memory from the macro-cosmical event, this region was also known for its *henequen* fiber industry.

While exploring my maternal grandfather's archive I found a letter from 1942 when apparently my grandmother's father ordered an inquiry from a detective. They wanted to know if he was a good prospect for her daughter. The letters are explaining who his father Don Eduardo Zorrilla was. My grandfather *Jose Zorrilla* was born out of marriage from an affair of the land owner with the housekeeper's daughter. Although he did not live with his paternal family, he was not financially abandoned by his father. The interesting memory of the letter is that his paternal family owned a *henequen* field that produced and exported its fibers.

_

¹⁶ "Chicxulub Impact Event: Regional Effects". *Lunar and Planetary Institute. www.lpi.usra.edu/science/kring/Chicxulub/regional-effects/*

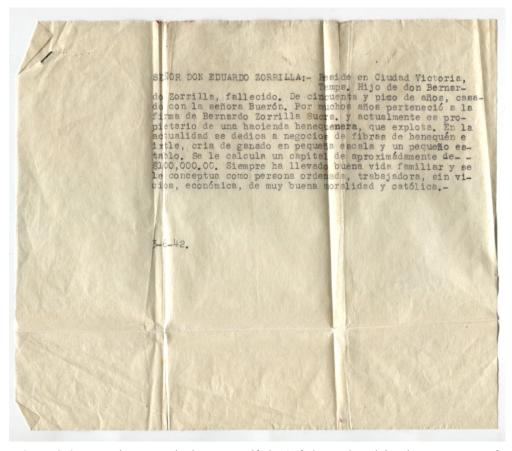


Figure 2.6: Letter that says who is my grandfather's father and explains that was owner of an henequen field. 1942; Grandparent's archive. Digital Scan.

2.8 La Reina de Pátzcuaro

In 1942 my grandfather met Maria del Carmen Leal, a woman 10 years younger than him. He was working as a biochemist for the fisher port of the Janitzio lake at the town of Patzcuaro Michoacan. One year before they met, she had been named queen of the Independence Day festivities.



Figure 2.7: La Reina de Pátzcuaro. My Maternal Grandmother. 1941; Digital Scan

In 1943 she turned eighteen and was able to marry my grandfather.

2.9 The Other Peninsula

After some years of being married, my grandparents decided to migrate to the city of Tijuana that is located at the Peninsula of Baja California. They settled, he set up a

laboratory and was professor at the federal high school. She was a housewife and mother of six children. They bought a property at a hill in Tijuana where the trans-peninsular highway starts. When my mother got married, they built my parents' house adjacent to theirs. He also owned other properties including the building where I actually live and work. Curiously I have been exploring their photographic, video and letters archive projecting their memories over the walls of this building.

2.10 Yatzil's Rock

When we went to visit my daughter's paternal family in the town of Oxkutzcab in the Yucatan Peninsula, we went to Samuel's land plot, where Yatzil was starting to walk and run. Suddenly she saw a limestone rock and started petting it, she was saying *casita*. Home! Right away we remembered that she was engendered in that rock, which is part of the *Chicxulub* buried crater. She recognized the place when the moment of her conception happened. And since the dimensions are converging during the sensorial present, the act of her procreation coexisted with Samuel's land. The environment, limestone rocks, mangoes, *ceiba* trees and the amorphous living lights that we saw disappearing in the sky are part of her creation, and therefore are part of her life.



Figure 2.8: Samuel, Yatzil and Ana on Yatzil's Rock. 2019; Digital Image

2.11 My Stone

When I left Baja California to live with Samuel at the Yucatan Peninsula, I arrived in a house at Oxkutzcab, where I found a limestone rock with quartz inside. I sent a picture to my mother, and she replied that she found a similar stone when they were digging the ground to build her house. I was conceived in that house.



Figure 2.9: My Stone at the Yucatan Peninsula. 2015; Digital Image.

Part 3 Material Entanglements in Practices of Fiction

3.1 Interfaces Between Social, Time-Based and Material Practice

For the past years I have been trying to decipher what I do as an artist, even if I started working with people, I was always thinking that humans are part of Earth, and that my approach to communities was in some way about the planet. Then I used a microscope to travel around invisible landscapes that reconfirmed those thoughts, and also made me witness the relationship of body, land, universe and microcosmos. A characteristic of my thoughts is that they turn realities into possible stories, sometimes I write them, other times I only remember them. During my time at the Visual Arts department of UCSD, I was able to explore other processes such as birthing material structures as soft sculpture and textile. Also handling archives of persons who are already dead. My work became more complex and I decided to make use of storytelling to entangle the many layers that my actual research has. With this medium I am able to connect memories of different scales and times.

There are many contemporary artists whose bodies interact with materials creating sculptures or installations, which is something that I included in my body of work. There are also other artists that create assemblages that interweave time-based media, objects, sculpture and sensorial elements that are interacting with each other. Some artists build fictive environments that connect pieces of history and speculation.

Candice Lin is a contemporary artist based in L.A. who also explores materials that are connected with history and creates environments. In an interview she talks about her work:

My practice is a heavily research-based process, but I think of research broadly. I include my hands playing with material as a kind of research, as well as reading a lot—usually history or cultural theory that acts as a kind of node that I build an idea off of. But it can also go the other way. Sometimes I get really interested in the way a material feels or behaves and I begin learning about it after working with it physically. I did a whole three-part exhibition focused around porcelain that began from the material.¹⁷

She also uses fiction to create conversation between times, memories and histories. Her work is mostly based on colonial trade, and explores Chinese civilization as a fundament of race, culture, gender and hierarchies through the adaption of their history, material, discoveries and land elements in her work. "Lin has confessed that she embraces the field of anthropology as a kind of science fiction, and her drawings and exhibition tactics often mimic strategies familiar to the display and dissemination of the "natural" sciences." She is able to direct dialogs between historical materials such as tea, porcelain, salt, books, soil, urine, cochineal, ancient plants, insects and bacteria. "Part of my interest in these kinds of bacteria and molds and plants and insects is wanting to think through the world and all its materials from a de-centered, non-human point of view, and to think about our interspecies entanglements and interdependencies" 19

Sometimes, she translates passages of literature into drawings then living sculptures that coexist with the entire body of work. This trans disciplinary artist approaches time in history through different layers and materials, scientific experimentation, collaboration, and her hands.

¹⁷ Lin, Candice. "Candice Lin, Los Angeles based artist" Interview by Mark Daybell. *Unequal Measure*, 13 June 2019, www.unequalmeasure.org/candice-lin-interview/

¹⁸ Holte, Michael Ned. "Michael Ned Holte on Candice Lin." *Artforum International*, 1 Nov. 2018, www.artforum.com/print/201809/michael-ned-holte-on-candice-lin-77278.

¹⁹ Lin, Candice. "Artist at Work: Candice Lin" Interview by Silvi Naçi. East of Borneo, 4 Dec. 2020, https://eastofborneo.org/articles/artists-at-work-candice-lin/

Speculation might probably be her daily day practice which surrounds her conceptual work, leading her to build a sensorial experience.

Beatriz Cortez is another artist who is interested in creating objects that imply other possible worlds, she mixes present and past to build speculative futures. "Her work explores simultaneity, life in different temporalities and versions of modernity, memory and loss in the aftermath of war and the experience of migration, and in relation to imagining possible futures."²⁰

She approaches many sociocultural issues such as race, gender, identity and migration therefore movement. I am happy to know that she also works with imagination and fiction to make her ideas possible. She mentioned that she has imaginary collaborators from different times that help her turn discourse and sensory perception into ideas, then she translates their collaborative ideas into matter. Her installations also are converging dimensions of time and space as *The Cosmos* "It is an exhibition informed by the past, by colonial, scientific, popular, and personal memories. However, it is also an exhibition about the future, about the idea that we are in constant motion, in a process of perpetual becoming other, in a process of becoming part of the cosmos"²¹

A characteristic of her work is that she approaches indigenous cultures and communities that are connected to ancient memories, she also adds indigenous languages to some of her collaborative pieces. Her idea of breaking chronology inspires her to start new chronologies sometimes making sculptures that are becoming through time. *Glacial Erratic* is a large living

²⁰ Cortez, Beatriz. Bio. *Beatriz Cortez*. https://beatrizcortez.com/bio/

²¹ Cortez, Beatriz. "The Cosmos" Beatriz Cortez. 21 Feb. 2015, www.beatrizcortez.com/the-cosmos/

sculptural piece at the Rockefeller Center, I refer to it as a living sculpture because this outdoor sculpture interacts with rain, air, dust and sun radiation making it change its color and characteristics. For this piece she draws a rock from *Aztlán*, a place considered by some as where the world originated; then she creates patterns of possibilities to create large rocks assembling layers of steel. She uses this material as a method to give back to the Earth what is hers, specifically at the moment of creating a representation of an ancient historical rock.

Although I have learned from many artists that use sculpture, performance, archive, science and fiction, I know that the conceptual basis of my work is similar to that of Candice Lin and Beatriz Cortez's artistic practices.

There is also a French artist Pierre Huyghe who works creating fictional environments that suggest possibilities of different realities. His projects start with curiosity and as how Dafoe mentions:

The heart of Huyghe's work is elusive in the truest sense of the word. More than just time, it's change: between objects, living and dead; between organisms and their environment; in language and perception. True to form, the tenets of Huyghe's practice also continue to evolve. "Recently, I've widened my parameters," he says. "That plant, that animal, that human, that computer, that robot, that machine—those can all change, of course. But now I can also see the potential for change in, say, a stone, for example. I might not be able to see it change if I'm measuring it over the course of the human gaze, but what if I think about the state of the stone under a different set of conditions, over a longer period of time? Maybe I can't see it change because I'm a human. What if I were a bat?"²²

-

²² Dafoe, Taylor. "Pierre Huyghe: Sculptor of the Intangible." *Interview Magazine*. 30 March. 2017, www.interviewmagazine.com/art/pierre-huyghe-nasher-prize

I am interested in how Pierre Huygh transforms his way of viewing the world into tangible experiences. This art director works in large multidisciplinary productions where he also develops a connectivity between human–non-human-otherness-matter, also applying different technologies to speculate within unrealities that seem to be close to our reality, and futuristic.

Time-based media is around the artist's utopias:

"Rather than creating the sharp juxtapositions familiar in the modernist strategy of assemblage, the exhibition's workings had the feel of a living environment, an ecosystem at once more random and more hypnotic, with fugitive apparitions—a demonstration, on the level of an individual career, of what Huyghe has long insisted upon: that his art's origins as "time-based protocols" allow them to be played, and replayed differently—what Huyghe, lacking the language for his format in the vocabulary of art, often calls his "scenario."²³

His work also creates a reflection of the human relation to nature, as in the project (Untitled) Human Mask. For this project, he hired a monkey that he saw on YouTube, it was a waiter at a sake-house. Pierre Huyghe filmed the monkey, who was dressed as a girl with a girl's face mask. In the real world, the monkey learned to mimic the waitress's movements and interactions at the restaurant where she worked, the artist took her to an abandoned restaurant where it mimicked the same movements because it is now part of the monkey's mechanism of life. This piece was filmed in Fukushima after natural disasters in 2011.

One characteristic of Pierre's work which I find similar to mine is that he overlaps science, real facts and fiction. He also acknowledges the constant becoming in time as how Catherine Craft mentions:

²³ Craft, Catherine. "2017 Nasher Prize Laureate Pierre Huyghe" Nasher Sculpture Center. 2017, www.nashersculpturecenter.org/read-watch/articles/article/id/50

37

Huyghe has also drawn inspiration from individuals in other fields, from scientists and science fiction writers to philosophers and thinkers. All of them have contributed to Huyghe's expansive vision of art, which provides almost endless possibilities, including even more traditional types of artworks: "We are not interested in this vaunted 'disappearance' of the art object, [we are] not returning to that old trap...however, I see things as transitory, hybrid, generative, inbetween, not ends in themselves or autonomous; they change and have an outside."²⁴

Pierre Huyghe is an established artist who lives the dream of developing projects, he has the resources and keeps bringing his ideas into the tangible world.

Candice Lin, Beatriz and Pierre Huyghe's practice is a reflection of my actual way of producing artwork. I find similarities between our way of approaching different aspects of reality and transforming them into real-based fictions through objects and video. We are all entangling materials to create experiential fictions. In the case of Pierre, he uses story-telling as how I do for the project *Chicxulub*. I wrote fiction which is inspired by scientific facts, regional history and memories. With the text I am exemplifying various ways in which different scales are part of the in time present. The main characters of the story are my grandfather and me, some of the facts described in it never happened.

3.2 Embroidering for a Radical Crater Cartography

For the last four years I have been exploring the Peninsula of Yucatan, approaching the *Ring of Cenotes* where the fifth ring of the *Chicxulub* crater is buried.

²⁴ Craft, Catherine. "2017 Nasher Prize Laureate Pierre Huyghe" Nasher Sculpture Center. 2017, www.nashersculpturecenter.org/read-watch/articles/article/id/50

38

When I am able to go inside the *cenote* I use a blood test tube to collect water and soil from each site. When I am back *in the other peninsula*, I use my microscope to photograph the samples. I started doing this with the idea of collaborating with embroiders from the town of *Oxkutzcab* because I wanted to create an embroidered cartography of the *Chicxulub* crater, each piece represents a *cenote* because the image is taken out from *cenotes* that are part of the half of the crater.

The first time I went back to the Southern east Peninsula I tried to find a woman who would be able to translate my photomicrographic images into patterns to be embroider. A guy from a fabric and string business sent me to *La Hermita* where I could find a lady that sells embroidered blouses and *huipiles*. Curiously *La Hermita* is a neighborhood that is settled above the cavern where I first took a drop of water falling down from a stalactite, and it was the photograph that I was using to make the first test. *La Hermita* is also a catholic church that is above the cavern. Oxkutzcab is in the *Puuc Rout*, a known rout of catholic churches that were built next to Mayan ruins.

I found Rita Maria Tzap, she is a dress designer and painter. She agreed to try to embroider the first test. Meanwhile I shoot more photomicrographic images of other *cenotes*. The first test succeeds, then I went back with more images and had a workshop with her in which together we found ways of solving the fabric finish, in order to be able to display them as a single piece. During my visits we learned from each other, she is a master of the crafts, mother and woman who struggles with her *macho* husband, as the 90% of the population in the Yucatan, including me.

Rita Maria had rheumatism in her hands. The project stopped for months, then she decided to draw the images in the fabric and hired six women from *La Hermita*. They knew the cross stitch technique because it was taught by women from their past, it is an heirloom that is transmitted from their mothers, grandmothers, great great grandmothers, all the way back in time, to the women who used a steel needle for the first time. With Rita Maria Tzap, Aurora Camara, Sofia Canun, Andrea Escamilla, Flor Quintanar, Beatriz Maldonado and Margely Tzap, we are doing a re appropriation of the technique, using patterns from their native land. This collaborative performance is merging coexisting memories of extinction, mandatory deconstruction, geopolitical imposition, culture hybridization and domestic life.



Figure 3.1: Fragments of the Crater in process. Ch'ik'xulub project. 2017 – 2021; Digital Image

3.1 Mappe, Alighiero e. Boetti



Figure 3.2: Afghan Women Working Together on a Boetti Mappa, 1990, © Randi Malkin Steinberger

When I talk about my idea of creating a cartography with embroideries made by women from the Mayan community, some persons associate my explanation to their memory of Alighiero e. Boetti. An Italian artist, who was part of the Arte Povera movement, members of this movement worked changing the significance, purpose, and value of everyday materials. This transdisciplinary artist worked his ideas through processes, materials, video, books, embroidery, sites, music, math, collaboration and others, always using time as a productive experience. After the Soviet invasion of Afghanistan in the1970s) the Italian artist directed a cross cultural series of large-scale embroideries in which eastern Europe was conversing with western Europe. For his project *Mappe*, a network of people from Afghan refugee camps embroidered sections of a fabric that had large designs of the world map, their job was to fill inside the shapes with the color that the drawing was specifying. (similar to Rita Maria's process, since she has commissioned her neighbors to embroider her drawings of the photomicrographs). The employed Afghani women were led by men who would receive and bring the large fabric to the refugee camps in Pakistan.

Some women who worked for him had to leave home in Afghanistan due to fear and violence from the invading Russians. Due to the lack of education accessibility the inhabitants were not familiar with maps or global knowledge, thus their relation to maps was vague and not as important as it is for people with different characteristics. The artist is exploring geopolitical boundaries with the performative action of creating 150 large scale round maps. Each country's color is based on its flag, some of the countries no longer exist, they became ghosts. The director chose to leave space in the corners of some maps, the male workers told the embroiderers what to write within the frames, some texts are faith propaganda and gratitude messages for their employer. Apparently, the women didn't know what they were embroidering, and they never met the artist. This project was made between the 1970s and 1990s; therefore, each map is different according to the time of production. The artist mentioned: "It includes several oddities and some tragic ironies, all of which underscore that nothing is permanent on our earth"25 probably the artist was thinking of Earth as a living entity. Some of the textiles are carrying world-memories, they were made during conversations about the embroiderer's feelings or struggles. For example, the sense of community while the women sew together as they handle time using colored threads. They are sharing the same experience in time and space, sharing the same present, while the colored threads are an extension of themselves, of their unique memories. The embroiderers left a part of their life on it, each stitch was accompanied by a word, a thought, a noise, or a breath in their present along with light. They are also capturing time with time, but with another tool and technology, instead of camera and film, using needles and thread. The process of finishing the whole image took a long time, as if the shutter speed were open for three months

²⁵ Alighiero Boetti, Map of the world. MOMA https://www.moma.org/collection/works/80620

and the lens aperture the size of the point of the needle. Thus, time travels differently for each dimension. In the case of Alighiero's pieces their memory started when they got the fabric, then during their interaction with female hands that talked to each other about their lives and fears, healing trauma together while producing history. They are also at museums and have produced millions of sensations while witnessing others' actions and conversations. I wonder why they didn't use the same color and thread for all of the maps oceans, when I see many of the images together I think about the plate tectonic transformation through time and movement.



Figure 3.3: Alighiero e Boetti, Mappa del mondo, embroidery on canvas, cm 120 X 220. Image Credit: Courtesy Archivo Alighuiero Boetti for koones magazine

Part 4

My Fiction: Exchanges of Memory in Practices of Fiction (Posthumous Correspondence with my Grandfather)

In 2020, I dreamt of my grandfather.

He was my true grandfather.

I sent him a letter, but got an answer from my fictional grandfather, then we began sharing letters, mixing real and unreal facts.

Jose A. Zorrilla:

Dear grandfather,

First of all, I want to let you know that I feel awkward typing a letter to you in English. It is also weird that I am trying to communicate when you are already dead. On October 3rd was your seventeenth death anniversary. God! It's been a long time since I took a still picture of you with my first camcorder. You were so peaceful in your coffin, a miracle. I couldn't stop staring at you. I felt my body numb, as if it were soil lined up by ants moving leaves back and forth in seconds. Anyway, I am writing to you because you were in my dream last night and today my mother's neighbor, who rents your house, told me that she heard steps in the kitchen... around the same time I was dreaming of you. Was that you? Were you trying to tell me something?

In my dream, I was wandering at Forever21 when I got to the second floor, it was a long hallway with crystal walls. Near the end of the hallway. I saw two surgery rooms. On my left side a baby delivery by c-section. I saw how the doctor burst the sac followed by the newborn's first breath. Then on my right another baby was being delivered naturally, I also saw their first breath. I probably breathed as well. I kept walking to the end of the hallway, where I could see a snowy village outside, a group of elders gathered on the mountain slopes. I focused my eyes, so I could see what was going on. There was a man with a megaphone saying, 'Who do you think will win? Let's wait until they get to the top and we'll see!' Then the group of elders cheered and yelled three names at the same time. I gazed to the top of the mountain and saw you dressed as usual. As I saw you earlier on your photographs: light blue shirt, khaki shorts, white long socks and white classic Reebok sneakers. You stared at me, wow, I felt it, even if we were so far, I could see your eyes in front of mine. I saw you as history. You went inside a cave, but your face was still outside. The snowy mountain transformed into your lab coat. The first thing I saw when I woke up was your great granddaughter's book "Hoja" laying on the floor, showing an illustration of a polar bear inside the same cave you were in.

I wonder where you are. I imagine you as a breeze, invisible but present. Like any element traveling around, from inside and outside the Earth's atmosphere. Are you wandering around the exosphere? Do you know where you are? Are you still a being?

Did you and my grandmother feel something when I projected the photographs the day that I dreamt of you? Do you know that I displayed your image as a colored light on a wall in your downtown building? Do you feel that you were being re-recorded? You became part of a chemical process that printed light as time and with time. Do you know and feel that you are part of a physical memory? I have your archive, and since I dreamt of you, I've been thinking of the relationship between a dead person and their archive.

Anyway, I have too much to say, but I don't know if you are going to receive this letter. I must mention that I am writing it with the intention of getting in touch with you, whatever that is at this stage.

Let me know as soon as possible if you read me.

By the way, thanks for giving me your analog Minolta a couple of days before you died.

With curiosity and love.

Your granddaughter,

Ana

Mi nieta que ya es señora:

I am so glad to read from you. I understand how virtual expression has been increasingly dominating the world. In my life, I saw how the typewriter evolved, that was my writing machine. Do you remember when I first typed on your computer keyboard? When I was young the virtual world was a speculative medium of communication. I think about language and I have to mention that I always had an easier time understanding than speaking or writing English. But as you know, I'll try to do my best, as usual.

I did not consciously try to reach you, I was just thinking a lot about your grandmother and I know that you were with her this November 5th, 2011. When you opened the hospital room, those four walls were loaded with your grandmother's last essence. You felt her dense energy, that made you feel like soil again. This way was different, you open the door spreading her invisible mass while disappearing, instead of photographing her at the coffin. Two days before, she mentioned that she was joining me. It was November 3rd and we heard her saying: "the fifth", "I am going to be with my husband" while her son was driving. I was there, we were passing the International highway of Tijuana, by that famous country limit fence. You kept touching her shoulders from the back. Your uncle is the "black sheep", an abusive asshole. I know, he didn't pass to the beach at a parallel street when you were taking her to the hospital. I also want to acknowledge that I am happier having my films and photographs with you at my building. Mi tiempo está contigo.

Did you ever think that you took me to that cave in your dream? after you handle the slides that day? You interacted with me, touching the cellulose by accident to project the photographs. As usual, you weren't using gloves, therefore I felt a particle of my time adhering to your hand. A fragment of my past had been transferred to your thumb. That night you read "Hoja" with Yatzil, both of you touched the printed image of that mountain. Your thumb took me to the cotton fiber of the paper, and as you moved your finger, I went back to your skin, then you touched that injured eyebrow with your thumb. It wasn't me, but I was there, it was an old debris of fixed light traveling to another time as a non-existing memory. Then you slept and I went to the other side of that mountain, where we found each other with our gaze.

I understand how vivid some dreams are, once I dreamed with your adorable grandmother, dressed as a queen, waiting to hold my hand at the end of the darkest alley. She was a queen, I first saw her dressed as one, the town mayor was putting her a crown, she was dressed with a long velvet red cape. She was nominated as La Reyna de Pátzcuaro for their town's festivities. Then I started thinking how to make her

my queen and started writing her love letters. We love each other for the past and future longest period of time.

Wherever I am I witness situations. If I am in an urban environment, I can perceive the dust, sand, smoke, and the skin remaining of the people that are passing by. You know what else? Cloth debris, when someone takes off their sweater and shakes it, both remains of fabric and skin are incorporated to the emptiness of the place where the action happens. I think about this because the other day, I saw something that I still can't decipher.

I can't exactly describe where I am, it feels as everywhere and nowhere at the same time. But I understand all your points. For example, I know how the dream-like experience is, but I don't know if what I am experiencing is real or just a juxtaposition of time generating nonstop memories. I feel like being inside a high-speed microscopic capsule, when I observe something the speed slows down. Like a time machine without specific intentions, but always wandering, taking me to any place. I never forget anything, even if I just pass by in the high-speed capsule.

Your letter made me feel the world again, I could feel my skin and the air coming in through my nostrils. Thank you for giving me the opportunity to be José Zorrilla again.

With all the love of my heart.

Your Grandfather.

José

Each mind processes its own memories of time

Querido Papápepe:

When I got your letter, I felt like soil again. The same ants wandered inside my trunk, as if my body were their home. I told you! I was in front of a miracle, you made me feel the same way, but I don't know how to refer to you. I believe you're a non-matter being, since you were able to communicate with me. I feel that you're not only one, it seems that your self is disintegrated and your fragments are scattered everywhere. I am impressed by your capacity of observation and how your actual molecules (if any) are traveling at the speed of light, while retaining information. I can't explain to myself: how is it that a fragment of your time became your past self where you can be present as what you are now? By the way, are you still in my thumb?

I can't stop thinking about my grandmother as well. I know you were in the car with us that day. I really don't know what's your state of being, probably you don't know either because you don't have a shape that functions. You are intangible, amorphous, invisible, I am glad that you're around, but not as a corpse. Are you really able to see the micro-particles that float in the wind? How big are they in proportion to themselves? You mentioned how shedding constantly happens. Are we surrounded by our own corpses, even in our beds?

When your beautiful wife died, I kept the violet comb that she used since I have memory, do you remember which one? Even though she was elegant, ordered, clean, and had an obsessive routine with time, she didn't clean her comb. I kept those thin gray corpses interweaved between her comb's teeth. I left it on the roof of your house, exposed to the elements. I wanted to see how long it would take for the hair to disappear, but my uncle threw it away before renting your house. I could write a whole letter complaining about your son, but right now the only thing that I can do, is thank you for everything that you have shared with me.

As I told you, I already brought a new living being to Earth and you are one of its roots. Yátzil says that she comes from Little Prince's planet. Since I knew she existed, I started thinking about life as a collective action that mixes tangible experiences with invisible elements. Always evolving in different forms, scales and percentages. We weren't alone; actually, I have never been alone, the material that makes my body contains you, your grandparents, and my grandmother's great grandmothers, my ancestors. Sometimes I think that I am made of something closer than my ascendants. I feel that I am a fragment of my planet, but most of the time I'm separated from it by my shoes or cement. The other day, Yatzil and I were looking at a sample of soil under the microscope, once she put her eyes on the lens, she yelled "The Little Prince's planet" "there he is". She saw a planet on a fragment of rock that I collected from Chicxulub crater. Can you believe it?

Are you what I breathe?

When I was a little kid, a couple of years older than my daughter, I saw you. You were working at a laboratory. My brain recorded the image of a body that was you. Isn't it more appropriate to say: the body where you were? or, a body that had you? the body that you made? or a body that made you? I don't know, but my eyes processed and transformed the image of your whole physical live structure into a memory.

I remember a big white shape bowing. Your face was connected to a thick white metal machine. It seemed as if you were watching through a type of binoculars. That tool had a tiny aluminum square as a platform which you could control up and down with a wheel. You placed a delicate rectangle piece of glass with something on it. Suddenly, your arm appeared and touched a part of the machine with your fingers and pressed a button. You turned on a light which was pointed towards the platform from below. I walked inside the room, then I perceived you, wearing a white long blouse, seemed like a dress. Your other arm moved from inside of a lab coat white fabric, it touched the focal control of the microscope. Another wheel, similar to your yoyo made of wood, but this non-yoyo was blue.

It seemed that you were possessed, your hands were managing two grids, I heard you whispering many things, something surprising had happened. Then your body trembled in front of the white table. I felt like floating and turned my eyes up, I saw your instruments shelf moving as your knees. An earthquake was making us shake as if we were ground. The test tubes fell down and broke, the mortar hit my eyebrow and I woke up in a hospital room. You never took me to the lab again. But I still remember your objects: fibers, metals, rocks, flowers, tubes with minerals, water, many books, images of molecular structures. Also, another shelf made from boxes of carousel slide trays with a projector above. I would like to know what you found that day, I never knew.

What I know is that the day of the earthquake my mother was with my brother at the dentist. Which is two blocks away from your ex-laboratory, and now I work on the third floor of that building. This was your property. How were you able to own properties? What do you think about the action of stopping interacting with materials when you stop being a material? I mean, you have your body, I have mine, everyone has their own, but when (in this case) you died, you stopped having your body. You stopped having those white socks, cameras, family, your properties... Did you stop having your memories?

Do you read my letters in a couple of nanoseconds? Am I the only one who has written to you? Thanks for being around, I am so excited!

With all my best wishes of reading from you again. Your Granddaughter

Anacaro

Dear actual woman that once was my granddaughter:

It has been a while since I stopped being José Zorrilla, I also question to myself: am I still being him? Am I another being? probably when I become the other being I do not know that I was or I am José. And if that is the case, I feel comfortable when I am this being. I started remembering me since you reached me and I know that I am happy with what I

had the opportunity to be.

Now that you remind me of that earthquake I am finding out that it has been a long time, even if for me that day could be today because I do not know where this capsule is going to take me, also because once I remembered it I felt worried again, I did not remember the feeling of being worried. Oh dear, it seemed that you were about to lose your eye, I could not think of anything, not even my fifty year experiment, I was desperate to call an ambulance or reach your mother. The digital communication style was not that advanced as it today. Anyway, your eyes survived and I am glad to know that you are now a mother, which is impressive.

Giving birth is the most natural action in the world, and it is also a reminder that humans are still mammals. I saw my wife giving birth to our six kids; during labor, she was the most powerful woman that I have ever seen. I helped her in whatever I could, I would get up at midnight to lay our babies next to her breast, so she did not have to wake up during her postpartum. I loved her and cared for her all my life, I had hoped to keep caring for her when death would bring us together again, but she is not by my side. Having her next to me is my only hope.

Your grandmother was the noble divinity that represented the maximum ideal of my life. I met her in 1940, two years after graduating as a biochemist from the National Academy of Chemical Sciences. I had accepted a job offer in her town. Once her uncle saw us close to each other by the woods, he took her away. I do not blame him; she was eighteen and I was twenty-eight. Her family did not know mine. I was a foreigner that was arriving in their town. They did not like me as her husband because I was not Catholic. But I only needed one second to know that I would do anything to marry her, and to succeed I became Catholic.

I am the husband of that incredibly beautiful queen of Pátzcuaro. As I told you, I am around without knowing where I am going, but one day the speed took me to my room. You were there, looking around her stuff, I remembered our secret right in the moment that you found it. You opened a drawer and found her hidden nightgowns, curiously you

unwrapped the silk cloth finding out that they had holes at the pelvis. I remembered when we used them, she kept all of them. I was already eighty, but we still chose which nightgown she was going to use. That day I was begging the speed to bring her into our room as well, but it did not happen. Imaginate que eso hubiese pasado, habría sido el hombre más feliz de los muertos! La amo y la amaré siempre.

That speed capsule (I will refer to this phenomenon as that, but I am not sure if it is that) takes me wherever, even to the wings of a fly inside a prison cell, or to an eagle's feather that is being refreshed by the dew of the Niagara Falls. I would love to be transported to the kitchen where my wife Carmencho used to make breakfast and coffee after watering her plants. I would love to be at her back smelling her nape and admiring how she squeezed oranges for our juice. But nothing is easy after death.

I do not know where I saw this, it is something similar to a dream, but I am aware that I do not dream anymore. Seriously, this experience sometimes gets out of control. This one time, I was inside a drop of water that fell down from a cloud, there was a community of meteorologic natives, a multifaceted sustainable human species. They were as small as dwarfs, similar to those Mayan mythological creatures that were created by the ancients to take care of their lands forever: aluxes, (I assume that you know them because you wrote about Chicxulub... I am curious, why do you have soil from there?) The meteorologic creatures could adapt to everything; when the weather is low their hair grows long enough to wrap their bodies and cover them. They don't need coats, nor shirts, nothing, no clothes. If it's cold their hair grows abundant, if the next day is hot, they lose their foliage. A natural transformation. The weather leads to their anatomy, just as it does with the land when its bloom period ends and the drought starts. I believe it's an interaction between the Earth and living species, I know that this happens to every living being in the world. You dreamt something similar at the breathing hall, when the mountain became my lab coat, I was the mountain, I was the Earth.

Please keep in contact, as I already told you, you make me feel alive and I am grateful.

Always grateful to have saved your eyes.

José Albino Zorrilla Jaramillo

P.S. I did not remember my complete name until now

Querido Papápepe:

I am still with my eyes wide open, amazed by this letter exchange. I can't believe that you were there when I found those nightgowns, I didn't know what to do. I felt that I had to hide them from your son, by the way, were you around when he kicked me out of your house and changed the lock of your door? He was mean, but he had inherited it, maybe it was his right to yell at me while I was scanning your archive at your studio. I feel sorry that you engendered this type of person. Well, he is decrepit, so whatever.

Now I feel confident to tell you how uncomfortable and dizzy I felt, when I heard and saw you on top of my grandmother in the room that I shared with you when I was a kid. During that day I knew who had the joker because I didn't know how to play but I could walk around the table to see everyone's cards. You were playing continental for about eight hours while drinking Bacardi with Coca Cola and ice. Now I know that you were making love, but I got scared. The noises weren't normal. I thought that you were the bat that was printed in your drink's glass, a huge white bat landed above my grandmother, covering her with its wings made from white sheets. You both were breathing hard, your bed was shaped as a hill, your head faced towards the ceiling while chanting a relief chorus together. Then you laid down next at her left side, your side of the bed.

By the way, I never heard that you went to Mesoamerica. When I got your letter, I found a reel of 8mm from some Mayan archaeological sites. It appeared that you sent it as well. I had seen all your archives, and I only saw your journeys to Europe, Asia, North America, and other states of Mexico, but I never saw your printed time on the *other peninsula*. You were always photographing my grandmother, reproducing her to admire her again. You were able to look at her twice: as fixed time being projected; and by your side. Once I saw you at your studio, your left arm was moving towards your mouth, your hand took a glass and raised it to drink your *paloma* while touching her leg with your other hand. There were two bodies looking at their past-self on the screen, when strings of smoke came in slowly through the window. A thin smoke invaded the studio. It seemed that my stomach smelled it because it started growling, then I heard *"la carne asada ya está lista" and* I went outside to eat.

A couple of weeks ago we built a swing for Yátzil. It's on one of the three trees that you planted when you started building your house. It seems that their trunks have carved tattoos because they're not natural scars. As if you etched codes or formulas on their trunks. I have been observing their transformation since the day of the *carne asada*, when you stayed with my grandmother at your studio full of smoke. Were you hiding something? because they appear to be secret data, or sacred? Why would you want them to remain etched on the tree trunks even if they were going to deform with time, as me and everything that's rotating in the universe.

Once I found a stone in Yucatan. It was made of limestone and had a calcite crystal inside. I kept it because it made me feel good, even if it was hard, it felt soft. Its crystal projected colors, the stone had its charms and a capacity to transmit peace, at least for me. I couldn't bring it back to Tijuana, so I took a photograph of it. I reproduced the crystal as pixels, the light turned into digital information that I sent to my mother. Guess what she told me? That when you dug the ground to build her house, she found an identical stone at the hill where I was conceived. Since then I have been visiting the other Península often, I even got pregnant there.

Last December, we went to Yucatán, we walked at Samuel's land plot. That day was so hot that we needed to find shelter behind a tree that protected us with its shade. The soil was covered by a thick, soft layer of mulch as a carpet that I enjoyed with my feet. while trying to get to the shade. In order to get behind the giant mango tree, we passed by a semi deep carved ground canal when my two-year-old daughter pointed to a couple of red rocks that were below the corner of the desirable shade. Yátzil ran towards the rocksand yelled, "casita!" showing extreme happiness while jumping as though celebrating something important. She stayed close to the rocks petting them for a while emanating an unbelievable joy and she kept saying, "casita". My daughter found her home in the rocks where I had sexual intercourse with her dad, while we were watching unknown entities flying in the sky, transforming their shape while disappearing with unique movements. Probably there was an invisible force connected or coming from those interactive living pieces in space, who probably sent information to our surroundings at the same time of our climax. She made me have the idea that our native origin could be the exact territory where each of us was conceived. It appears that having the opportunity to go back to that spot and get in touch with the essence that belongs to us could give us peace. What do you think about this? I know you read a lot, probably there's a theory that mentions this. I haven't found anything yet.

You are right, delivering a child is one of the most natural actions in life, but the most impressively surreal pain as well. You know what? I made a list of 66 types of pain that I felt during my 66 hours of labor. I appreciate that you helped your wife during her postpartum, when that happens whoever gives you a glass of water is an angel. Probably you became one and that's why you haven't met her. Sorry, but this is an adorable reason, don't you think?

Let me know anything that you remember, think, or observe. Anything. Please, I'm so excited!

Thanks for saving my eyes.

Your living fragment,

Anacaro

A memory is a fiction.

Anacaro:

Hoping you and Yátzil are very well. How is your mother? My adorable daughter, Luchita de mi corazón. Por favor abrázala de mi parte y salúdala, even if she does not understand it. I have been around her, she looks a lot like your grandmother with the difference that she also looks like her father, José. I have traveled around her watching her early days. She is, as a baby, older enough to sit. When I saw her, she looked like a porcelain doll, dressed in a baby blue mini dress. I acknowledge that your daughter is as beautiful as mine.

I want to let you know, I do remember the stone your mother found when we were settling the ground to start the construction for their house. It was similar to those I also have seen at Yucatán, like the one you described. I did not say anything because my visits to 'la otra peninsula' (como tú le llamas) were confidential and it was prohibited by your grandmother. She was afraid that her father would find out my past. When I read about this region in your letter, I was where your grandmother threw away those films. Being dead is weird, I do not know how you got the reels, I only thought about them after reading your letter.

During that journey, we drove my pearl color car: El Granada, I liked speeding up on the highway, mostly under the stars, breaking the humid environment while driving inside our yellow car. We made the roadtrip, I needed to get more henequén, (she did not know) I carved the reason on the trunk of those trees, where you have been paying attention. I told my Carmencho I wanted to look for a relative who lived in Yucatán. I just wanted to take her and our youngest daughter to Chichén Itzá, Uxmal, Kabah, Labná, I was part of a collective science research in 1937, before meeting her, she asked me to keep it a secret. I took them there because I was endlessly curious about how their frequency would feel at historical lands. The tempo changed when she found out my real purpose. Disappointed, she grabbed my film camera and took the reel out the window. The vehicle speed unloaded the film behind a stormy sky. I only thought about how my lost negative was going to mix itself with the ground while disintegrating itself through time. As the loyal husband of María del Carmen Leal, I did not slow down, she needed to express her feelings immediately. By contrast, the male human type is different, thus I kept my other passion a secret. But we did pass by the field where I found my passion, organic fiber in its different stages.

Pienso en la imagen de Yátzil acariciando la roca diciendo "casita". It is out of this world, but I do understand her. Disculpame Carmencho, pero tengo que compartirlo. In 1937, during the research field trip we stopped to eat Salbutes y Panuchos at an agave field. I do not know if it was the fact of working hours trying to find ancient genetic information, but I felt as if my DNA was going out of a cage. As if the agaves were

magnets, I just sat by a huge one to contemplate the others. Are colonial residencies with native Mayan field workers still normal?

As you mentioned, our home is the place where we were conceived. I have not read anything about it, but I felt so connected to the agaves and wondered: how does home feel? So I asked my mother for the exact place where I was born. I went to a residence in Tamaulipas. I have never been there, as you know I am the son of the housekeeper's daughter and their owner's son. I never met my father, even if he supported me financially during a considerable part of my life. I went inside the property and found a huge field of Agave sisalana. There were a group of people who worked there, processing the plant in order to get fiber out of it. They were producing threads to sell. (Curiously, I had been conserving some of this fiber for a personal experiment). I couldn't believe it; my parents must have had sex between those plants. I understood why I had been so passionate about the henequen fiber at the Southern East Peninsula of Yucatan. I had been feeling a connection to the fiber, probably it was related to a microenvironmental filtered element which made me the being that I was.

Invisible substances surround each body in our planetary environment. Conception happens after the interaction between an ovule with a sperm while traveling to the uterus. But there is also an outer environmental resource who mixes with the parent's bodies to generate a new life. I have been around. It is another type of high speed element wandering inside the atmosphere which filters a woman's body while ovulating. It only acts to wrap emerging chromosomes. This is probably why you feel that we are not alone, in fact our real home is where we were engendered.

After many years I was doing a secret experiment at the laboratory you went to. Thrilled, I whispered because I had preserved the fiber in a jar for fifty-three years, for all those years I spit saliva each week. When you saw me viewing through the microscope, I looked at something moving. It was the first time I took out the substance and blended it with other chemical mixtures on the mortar. Anyway, there was an earthquake and my experiment fell on your face, so I could not do anything but save your eyes.

I am not sure what an angel is, do you think you could help me find my real angel?

Honored by my own memories,

José A. Zorrilla

What do we have to know?

Grandfather's non-living being,

My hands are sweating, I can't believe any of these coincidences. It seems like another dream, where the films were thrown away and I found them after decades. Are you able to ask your microcapsule to take you in nanoseconds to the moment when I found them? How bad was that issue with your political family and your research?I can't imagine how it is like to keep a part of your life in secret because of religious concerns. You were so passionate that you even let your lover manipulate you to be able to live your love. Are you going to tell me what the work was about? I am also working around the region and I will share it with you. But I need to acknowledge that it's impressive how you understand home as I do. We have a lot in common without knowing, maybe you noticed it before, during your wanderings as a non-matter being. It seems that you are with me in this phase of my life, even if you died when I was a teenager.

I refer to my daughter's home as an ancestral rock because its location is part of the Chicxulub buried crater, which is 180 kilometers of diameter (obviously this is not the exact distance, Earth is always moving); its ring peak was discovered by geophysicists when trying to find petroleum in the Gulf of Mexico. Did you know that the impact didn't affect only this region? Other researchers have been exploring Haiti, New Mexico, Colorado, Nuevo Leon, Tamaulipas, and other sites in Europe finding K-T (Cretaceous-Tertiary, Paleocene in specific) sediments that evidence the geomorphological changes from that period, as the cenotes in Yucatan. My dearest grandfather: imagine that this meteorite is part of our home as well. You found the agave field in Tamaulipas, where others have explored this state finding iridium debris to prove the Earth's affair of that era. I found an identical stone to the one that my mother saw erupting from the subsoil. The asteroid was powerful enough to reach other lands, maybe Baja California's lithosphere was affected by this event, or probably the rocks migrated according to the Earth's plate tectonics.

Do you know the importance of Earth's interaction with outer space entities and how this has been essential in her evolution? It seems that every once in a while, the planet has a love affair with other cosmic organisms attracted by Earth's vibration. They mix their molecules and properties during a magical encounter. Have you seen Mars or Jupiter ejaculating? Meteorites could be their active sperm, who are able to cross the Earth's membrane, causing catastrophes in many levels, scale and duration (as my body's reactions to hormones during pregnancy). Some asteroids are able to share their genetic information, incorporating their matter to ours, deconstructing ecosystems and ways of living.

I have been interested in Chicxulub, an asteroid which impacted my Earth (is it still yours?) 66 million years ago, when this happened, Earth started a long-term

metamorphosis. During their encounter, it discharged a high amount of iridium along with other chemical compounds. The land where it collapsed is rich in calcium carbonate, so their mix evaporated generating a "global acid rain". The atmosphere was covered by particles forming a dust layer that did not allow the sun to penetrate on the Earth as usual. The darkness altered the photosynthesis dynamic, causing the loss of many plants, and organisms that were part of the food chain. The loss of ammonites made part of the non-avian dinosaurs go extinct.

Dear Grandfather, is there a way to know exactly what happened? Are you able to observe the Cretaceous – Paleocene era transition? Is it true that some dinosaurs became birds? The avian realm could be transmuted dinosaurs. Many species of plankton disappeared while cyanobacteria (the first and most effective practitioner of photosynthesis) survived. Do humans coexist with dinosaurs? I wonder what happened during that lapse of darkness. I know that mammals evolved because there weren't any huge predators that would obstruct our growth. As I told you before, evolution is a phenomenon: now the most predominant mammal species are humans and we are obstructing not only other lives, but our own as well. Being able to domesticate the avian realm in cages. I'm sure you have observed how my species has been taking enough space on the planet for disturbing our environment. We are the epicenter of our own extinction... or transmutation.

Tell me if you passed by Oxkutzcab when you went to Uxmal during the 1930s? It's known as the state's orchard because of its fertile ground. Funny, right? It is where Yátzil found her ancestral rock. If you were working in that region you probably visited the Lol Tun cavern, La Hermita cave, or any of the cenotes-big rock holes with subaquatic systems. Ts'o'not is what it's called in Mayan, which means sacred wells. another of their water sources. The first time I experienced a cenote, I went with Don Samuel Uc, Yátzil's grandfather. We got there in a red pickup truck that was used to carry seasonal fruit, and sell them at the market. When I stood out of the truck, I saw the surface made of lithophytes. The wild flowers were trodden to make a path in which I walked towards a ceiba, its roots above the rock guided me to a big hole. I stood in the corner of the rock, it was a window to the underground, its aperture was about 8 meters in diameter. It was a deep limestone hollow containing water, I saw how the light interacted with the cave, the sun was positioned in a way that its rays could reflect straight in the middle of the hole. An ephemeral landscape formed by the contrast of a cobalt blue with a predominant marine blue, the light could reveal the depth and its floor. We were admiring the photosynthesis in action and I wanted to join the plankton. We went down several narrow steps made of wooden planks with rope, it was tricky, I decided to jump. Are you able to witness the constant photosynthesis as you witness the shedding? When I was in the middle of the cave, submerging inside that light reflection with my eyes open, I felt anxious of that amazing feeling, it was so beautiful that it frightened me, I have never been consciously part of that Earth+Sun dance. My body was surrounded by microorganisms which danced with the sun at the same time. I was floating in filtered water from the ocean. It's the Earth's shedding, which forms

these sites, millions of years ago, fossils, skeletons and other organisms that had calcium carbonate were deposited on the water's floor, compacting themselves along with the clay, transforming into rocks. The roots of the *ceiba* that guided me to the entrance were hanging from the window. I could appreciate them next to a couple of stalactites coming down from the surface, they're a reaction of water traveling through the ceiling, while filtering, the water evaporates mixing its minerals with the stone creating an icicle shaped extension of the ceiling. Their process is impressive because they are releasing drops of water and with it, they can make a stalagmite grow from the floor. Subterrain miracles. Did you get a chance to visit any of these spectacles? A lot of birds and bats are flying in and out the cave, some of them have their nests inside, on those plants that grow out of the rock walls.

Do you remember when we went to Seaworld? We saw a bird show while eating popcorn. The birds from the cenotes are not caged. Do you think that us as humans are contained in cellular cages?

I truly want to keep writing about my work, but this has been a long letter.

Thanks for not regretting about losing your living experiment. With all the gratefulness of being able to reach you again.

Your granddaughter.

Ana Carolina Andrade Zorrilla

To my dearest living fragment:

I am starting to feel sure you are my fragment, a living one, such as your decrepit uncle and all my appreciated descendants who are still human masses of tissues being able to breath and feel, therefore embodying time. Growing shapes moving with time. I do not have specific times anymore, but I still remember it, thus I have the notion and language.

You are right, those dinosaurs that you talk about from the avian realm can be locked inside cages, there is even a chicken wire. Why are you thinking about the human experience as being inside a cage? I felt similar each time I wanted to share my biogeochemical thoughts, data and experiments. Jesus María y José were the elements I forced myself to believe in. To be honest, I did not have any inclination towards a specific religion, but I did feel something stellar when being next to my fiber source: mis sisalinas. When I felt them for the first time, we where doing a research conducted by The Astrobiology and Human Culture department of the Primera Academia de Cultura y Ciencia Ancestral (PACCA) in Mérida Yucatan. 1937 was the year when I was in tune with the Earth.

During that research trip I was abstracting genetic information from human hair and bird feathers. An archeologist found an artisanal box while digging the ground. We drew a map of the road to get to the site where it was found. The object was made of limestone with carved glyphs on the cover. The philologist translated some of them as "all creation is actively alive", "after darkness survivors turned into monkeys", "all those giant reptiles according sun" "notes destroyed by the others" "we see objects that are not made from earth", "they took our time prohibiting activities and offers to Gods"," man nailed on a wood cross is god". "they force us to give our land and pray". "our debt is eternal", "our world already ended". "Halos, "our ts'o'nots are watched by human forces". It was written by an undiscovered community group. The hair was the last evidence of pure Mayan genetics before the Europeans arrived in their region and spread everywhere they could, transforming the Mayan science into a myth by overshadowing it with their Christian myths. Even if I was not part of their beliefs when I met your grandmother. I do have faith in the culture and science that we discovered. The white feather had unknown DNA but it was close to a Trogon Collaris bird. I carved all this information on those trees, curiously you noticed it and you have been around the same area. So this was another experiment that I could not finish because I had to forget about spreading alternative beliefs, and be able to love. The only two experiments that I did not finish were because of love. The only thing that made me persevere other than love, was my jar with the henequén experiment. Qué crees

Anacaro, ahora pienso en que Ella no aparecerá, con mayor razón pues ya plasmé el secreto.

When I think about human interaction with the Earth, I remember the image of a flower growing out from stones or cement. Nature will always defend itself. I do not know what is going to happen, but according to the Mayan speculations we are part of a higher purpose. Cosmic eventualities gave life to their Kairos calendar which is determined by phenomenological events. Their priests would study how evolutionary time cycles are correlated to the celestial movements. They also refer to the origin of life as the primordial synchronizing event when the four forces of nature; energy, matter, threedimension, space and time came to existence. The Universe was created in three dimensionalities of length, width and depth, as well as the four directions and periods of time. It is impressive how they refer to consciousness as the mixture of time, life with senses and mind. They have thirteen heavens for each of their nine underworlds: this was their way to look at life evolution. Their Lords were characterizations of the cosmos. They used to offer human bodies as gratefulness for their existence. Humble enough to not worry about leaving their lives. Many of them were thrown to the cenotes that you talked about. How wonderful it is. Si tenemos cosas en común es porque eres mi fragmento.

Seriously, I was aware of the significance of cenotes for the Mayan civilization but after reading your letter I found a linkage between them and the Chicxulub impact as an astrological interaction, which gave mammals an opportunity to become humans of course but it was not the only one. Take a look at some meanings for how the Mayans will refer to cenotes. I will let you decide if it makes sense or it does not:

IK'-WAY-YA which means "black water well for the origin," WI- TE'-NAH stands for "home for the lineage origin," IK'K'UH POLAW K'UH: "cave of the wind divinity," STI'NAIL WITZ: "portal of the hill," SLOK'IB IK': "departure for the clouds," YAJNIB CH'ULELETIK: "shelter of the soul." 26

I know which Hermita you are talking about, the one that is above the aluxes cave. Did you know that a witch had to intervene with the ancient Mayan spirits so the cave could be open to the public? We had to hire her when we went, otherwise a serpent or spelled air could intervene with us. On our way to the cavern I met a couple of embroiders, they were stitching in front of the church. I do now know how to describe the feeling of looking at them embroidering with steel needles instead of bone needles. Creating the shape of a flower by making crosses with colorful strings, even if their work is beautiful I could not stop thinking about their history. I can refer to my

66

²⁶ Romero, Sandoval Roberto. "Cuevas y cenotes Mayas: Una mirada multidisciplinaria". *Universidad Nacional Autónoma de Mexico*. Centro de Estudios Mayas, pg. 58

experience of being threatened for my passion, and the experience of their past women being imposed by European religious corporations.

Anyway, your grandmother's family could not accept anything outside their catholic realm. But I accepted them as that.

I feel sorry that you had to go to a catholic school, but proud you are thinking in all of these cosmic connections to life, finally someone from the family knows how being in those lands takes you to a primitive state of being.

If your grandmother gets in touch with you, please tell her I am sorry, I broke the promise, but I still love her and hope the same from her.

Your death fragment.

José

Dear one of my patterns:

Wow, wow, wow multiplied by a thousand more wows. First of all, you are the most extremely in love person that I have ever known. Courage or dumbness is required to leave your first professional path because of a lover. I appreciate that in this case it wasn't dumbness. I am part of this because your resignation was effective. I wish I could pay you back by being able to reach her. It's something that I've been trying to achieve without success. Sorry about that.

Every time you were photographed you looked to the horizon. Your eyes pointing to either the right or left but never the lens. It seems that you're discovering something, as with the microscope. I haven't told you yet why I have soil from Chicxulub, it's because I've been scouting various cenotes collecting soil and water from their underwater. I have been tracing half of its invisible crater. A ring of cenotes is part of it, that's why I've been collecting metamorphosed fossils mixed with water. I photograph fragments of the crater with a camera adapted to a microscope, the images are intended to create an embroidered cartography of the crater. Come on! You met embroiderers where I found the only woman from the town that accepted to try to sew my microscopic images. Are you sure you met them, or did you filter in a drop of water again? I was tired of photographing people. By the way, did you intervene in my decision? I mean, I use the same tools as you, I have your archive, live in your building, and now I know that you did something on the *other peninsula* as well. And you are guiding me through our project. I still can't decipher why I found those reels; this is a bio mystic experience. As mystic as the words that the Mayan used to refer to the holes of the Chicxulub crater.

Were you around the day that I decided to start using a microscope? My foot got stuck in the dirty mud of the Tijuana river, where I was working with deported people. My legs shook as yours when I saw you using a microscope the day of the earthquake. Your tool was another option for documenting life without having to interact with the energy of certain people. After a couple of years, I visited Samuel in Oxkutzcab, he was an involuntary immigrant who was deported. After years of living in the river canal he got sick and returned to his land of origin. We went inside La *Hermita* cave, the sound of dripping minerals like water droplets guided our journey. He turned on a lamp and the light bounced illuminating crystals all over the cave. We were inside a black hole that shined while interacting with artificial light. We also called that place the *Aluxes* house, it was surrounded by dripping stalactites and stalagmites coming from the floor. I used a tiny Ziploc to collect drops of water and photograph them. The day that I developed

those samples under a microscope, I maximize a miniature image of the macrocosms. I felt those ants again going through my tissues. The amazement obstructed my vocal cords with whispers. Like yours in that laboratory.

Now that you mentioned the relations between cenotes and Mayan science. I would like to share with you some experiences that I have had during and after my visits to these historical cenotes. When the sun is not passing by their window, their darkness produces an apocalyptic feeling. A couple of times I swam to pick chips packages, plastic bottles and cans that were floating. Once we went to *Zazil-Ha* at Tecoh. It was too dark, I couldn't get close to the walls because there was a deep dark barrier that felt as a precipice, I felt the presence of someone else, a suffocating feeling made me think that if I crossed the line I could drown, but I took a sample close to the shore. When I looked at it, I felt as small as that sample because I was as powerful as the most powerful people in the world. It was a snail trying to survive and I was a giant and could decide what to do with it. We looked at each other's eyes as if we were in my dream. Seriously, I felt something for it, was that the presence that I felt when I couldn't swim farther? Are you able to decipher interconnections of different types of beings? I felt sad, this snail was too far from its home. I put it back on the *Zazil-Ha* tube.

There are towns where the inhabitants charge for the cenote entrance, some have artificial lightning, and are full of people. There are villages that have their own sinkholes and are unknown by foreigners. Others are hidden in between giant and old bushes in the middle of the jungle and some of them are covered by trees, probably there are many that haven't been discovered. There are private cenotes in restaurants or residencies. The Yucatán Peninsula also has wide open cenotes as rock lagoons. Last summer I took Yátzil with me to an ecotourism attraction in Cuzamá. Our transport was moved by a horse that walked over a narrow railroad track in between bushes for almost an hour. We got to Chacsinicche, Bolonchojool, and Chan Ucil. Last December I was able to get a sample from the Sacred Cenote of Chichén Itzá (I know you went there because I saw your film) where as you said Mayans conducted sacrifices. I got water from that well! Also, I collected a couple of samples from a haltun at Dzibilchaltun in which I observed green communities of microorganisms spinning as they float in the water, the cyanobacteria's tone was altered by the digital exposure of light. In other samples I witness two planktons playing or fighting in a piece of plant while consuming floating micro-particles.

I am a human, a tiny living being that seems to be big. How would you describe yourself? If you're a non-matter being but there are more like you, you must be a race with the characteristic of being from the smallest length that exists in the universe. You are able to experience the dust by your side. You are sensible enough to be transported with each gravitational vibration of Earth in the universe. I am your fragment, Yátzil is our fragment. You have your fiber, she has her rock and I have my crystal stone. We've been belonging to the organic realm, but have been segregated by our bodies, these are some of the cages that I was referring to in my past letter.

How is it to be disappearing? Probably by this time most parts of your buried body are dust. When your body disappears completely, would you donate the coffin? Burial wasn't your decision. My grandmother read an article in the Reader's Digests about how having your mortuary ready will improve your quality of life, then she proposed to get a mortuary package. I don't understand why human bodies are buried inside a fancy heavy box that is trash. Life is full of ironies, the biggest irony might be the fact of being separated from the Earth while being the Earth. I am sorry that I brought this out, but since I got your first letter I have been thinking about it.

If you are still comfortable to communicate with me please write to me again. I feel you by my side when I am writing to you, did you already read this letter?

Always grateful for your existence.

Anacaro

My existent reminder of me as José:

It is a pleasure to get another letter from you, you are my connection to a specific time. I could not write you back right after reading your letter. I have been seeking for moments to find my adorable woman and be able to look at her again, and definitely love her as many times as I can. I feel betrayed by the idea of reuniting with our beloved departed after dying. When she was saying the fifth "I am going to be with my husband" I wished her death to have her with me. I do not feel happy about my desire because I have not been with her again. I can only look at her when I am lucky with the circumstances of my involuntary destiny. Anytime I read you I feel close to her. You are right, she begged me to start an inversion for both funerary services, our coffins are next to each other. I thought she was going to be with me as soon as she died. As you wonder, my body has been evaporating, my hair is still visible, but my corpse is turning into adipocere (grave wax). She is by my side inside an aluminum casket, as me, both boxes containing a yellow greasy mass in putrefaction. Mi Carmencho, se que siempre ha sido y será hermosa, amada vida mía. I am not a soul, so probably our souls are together.

Remember when she fell? I was already using oxygen to keep José Zorrilla alive, sitting in the blue recliner chair always watching box matches. When you told me that your parents took her to the hospital, Tyson was biting Holyfield's ear. We saw each other with our eyes wide open (as when you took me to your dreams), if I hadn't been connected to the oxygen tubes I would have died. Mi Carmencho had a passion for jewelry, I told her that the metal femur prosthetic was the most noble jewel that she could wear. She agreed that its functionality was a positive reaction of having that piece inside her body. Sometimes I think about the metal, I imagine if it is now visible, would it shine? I ask myself in what phase of decomposition her body is. I am sure that she is still beautiful, but I do not want to visit her coffin. Disculpa querida Carmencho. If I were able to sleep, I would be dreaming of you all night, I would take naps just for the pleasure of smelling you again at least in my subconsciousness. Ana Caro, she is my adorable wife, my eternal queen, you have her (and others) inside you, you will never be alone. Nobody is, actually.

I do not want to forget our coincidence about the embroiderers. Honestly, I do not know if I witnessed the embroiderers as an inhabitant of the microcapsule or it is a memory from the 1930s. But I did think about hybridization through slavery. The natives would

be chosen to work the new chief's lands. They restricted their time of observation and connection with the Earth and our cosmos. They ordered them to believe in another type of element that wasn't their cosmic tree of life. The imposed responsibilities going against their access of time. They had to accept the prohibition of sacrifices, which was contradictory because Christians venerate a man that was hanged at a wood cross.

I will advise you to stop thinking about freedom. I did understand your idea of cages, but it is not only you, it is everything that makes the whole embodiment of life. Así es querida nieta, nunca hemos estado solos.

When I was alive, I saw that your father took you to the shower, he closed the door, then pointed to the floor right in between the mosaics. Enthusiastically moving his finger he said, "do you want to see our great great great great grandparents? Here they are..." Since then you've always thought of them as your ancestors. During all this year, your feet have been sending data to your brain, which makes you feel as if your body is a type of blurred gelatin made out of your waterish clay. You keep feeling the connection with your ancestors sending them your own tissue peeling, which is invisible, but real. So remember: once you start showering, the remains of your dead skin will get to the floor and you are going to notice that is the way of feeding them. Keep doing genetic transfusion with those who are manifested as shower floor mold. Taking a shower is one of the several actions that makes you be part of a biophysical exchange with the terrestrial environment that we are part of.

Ł	⊑st	OV	cansac	do,	pero	siempre	: contigo.

José.