

BECOMING AN
**AUTISTIC
SCHOLAR**

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**BECOMING AN
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To the person behind your mask



PREFACE

The greatest thing
you'll ever learn
Is just to love
and be loved in return

Nature Boy

EDEN AHBEZ

My name was <PLAYER II>.

I am a university professor of Computer Science, a researcher, a writer, an editor. I am a lover. I am a person with multiple faces, just like you.

There came a moment in my life when I questioned whether the person in front of the mirror was me, because I couldn't recognize my face. Seeking to understand what was happening, at age 39, I was diagnosed with Autism Spectrum Disorder.

Now, autism had always been present in my life; I just didn't know what to call what I carried inside me (or should I say what I was and am?). In fact, I had already sought to understand myself through a writing workshop where I wrote the stories in this book. I wanted to describe my experience doing a doctorate outside Chile. Two books inspired me. First, *The PhD Grind* by Philip Guo, which I read while pur-

suing my doctorate and which describes the author's experience with the same endeavor. His story helped me better understand the various challenges faced when developing a thesis in a high-performance environment, but it was also very different from mine. That's why I thought I had something to tell from my perspective. *The PhD Grind* is a free book, available online, and this book is too. Second, *Las películas de mi vida (The Movies of My Life)* by Alberto Fuguet, in which an engineer from University of Chile tells his life story through movies. In my case, those references are video games like *Final Fantasy* and *Street Fighter*. And instead of movie theaters, there are arcades or *flippers* or *videos*, or, as they're called in Spain, *maquinitas*.

Each chapter of the book refers to what happened within one year of the doctorate, except for the last one, which was written a little more than a decade after starting the program. Since the first versions of each chapter were written several years before my diagnosis, I never imagined these texts would help me see the characteristics of my autism: the masking, the mimicry, the focused interests, the computational thinking, the difficulty in establishing social relationships, the complexity of relating to one's own body and others'.

In those years, I discovered something I never imagined I would have: the capacity to love and be loved intensely. If there's an important lesson in my life, that's it. I learned it thanks to a wonderful person who taught me what love, devotion, and passion are.

I am autistic and I am happy. I want to share some of that with you today. Perhaps you want to do a doctorate, or perhaps you're already doing one. Perhaps you want to know what it feels like to be autistic. Or perhaps you simply want to know the experience of someone who has been through multiple parts of the computing world. Whoever you are, I appreciate your interest and hope you enjoy this adventure.



YEAR 1: FINAL FANTASY IN BARCELONA

Prelude

While studying Engineering, doing a doctorate was one of my dreams. I don't know the reason behind that dream; perhaps it was due to the mix of traveling to unknown places and an adventure full of learning. Put that way, starting a graduate program in another country resembles a Japanese role-playing game, where you spawn in an unknown city where they speak another language, without many possessions. You have to discover everything, even the story behind the journey itself. That's how my journey began, accompanied by my wife, Sofia Pajarito.¹

We arrived in Barcelona shortly after New Year's, in the middle of winter, without knowing anyone in the city, and with an empty inventory since our luggage had been lost. We looked like two characters from *Final Fantasy VI* who had begun living the prelude of what would be something epic for us.

Living in a Boarding House

Renting a married couple's room was difficult. We found one on a sketchy classifieds website that offered more availability and variety than the more serious sites, and at lower prices, though without contract or receipt. Our new residence was located in the Eixample, a district that, when viewed from above, like in the 2D perspective of Super Nintendo role-playing games, formed a perfect grid of streets that as-

¹Literally Sofia "Little Bird" in Spanish.

sembled the city. Its center was Paseo de Gracia, with modernist buildings, including some by Gaudí and dozens of others trying to imitate them. Although this makes it difficult to distinguish one street from another, it's a neighborhood that stimulates walking and imagination, without skyscrapers stealing the light.

Our room was on the fifth floor, equivalent to an eighth floor in Chile. The numbering begins with the ground floor as zero, followed by the mezzanine, the main floor, and finally the first floor. Despite its majesty, this building had no elevator, but we got used to it quickly. The room received good natural light and Pajarito could read without problems in the afternoons. Although it wasn't small, it felt somewhat uncomfortable because the space was devoured by built-in melamine furniture, installed by the Catalan landlady.

One night, a spider appeared in our bed; black, with long red legs, like the brown recluse spiders in Chile. When discovered, it quickly scurried behind the furniture. What if it bit us later? What if there were more under the bed, which couldn't be moved? We got up and went to a 24-hour supermarket. We discovered that items were different: here there was no spider poison. On Google, I couldn't find anything similar to the *Raid* we used to use in Chile. In Spain, a spider bite like this wasn't much different from a mosquito bite.

Some days I woke up disoriented, not recognizing the mattress, the light bulb, or the ceiling joints, asking myself: "Where am I?" The answer moved like the spider between the wardrobes, traversed my memory just as we discovered the streets, marveling at little balconies full of flowers and plants in El Born, underwear hanging in plain sight in El Raval, bars that opened all day, daily meeting places for different elderly people in Santa Caterina. We got lost in the passages of the Gothic Quarter and tried Italian, Turkish, Japanese flavors and seasonal sweets. Unlike the Eixample, which was built in a planned manner, the streets followed no orientation, and there wasn't a mountain range

that could serve as my reference like in Santiago. Sometimes it was impossible to answer a simple question: “Where does the sun rise?”

The First Labyrinth

I called the laboratory where I would do my doctorate *lab*. Although it was a stimulating place, getting around in it proved difficult. I stressed about introducing myself, saying my name, telling where I came from, and describing my research topic. The first time I did it, I forgot what I wanted to say and, worse, felt that no one was interested in my presentation. Within minutes, I had forgotten the names of everyone I met.

People socialized when meeting in the hallways and having coffee, or when playing *futbolín* (as they called foosball). Around the wooden players, stories were told, research problems were defined, plans were made for nights and weekends in the city. I, who understood every word, saw ellipses appear in the air when I wanted to express something. I ended up distancing myself because I didn't even know how to play foosball well. Others did magic with the ball, even without spinning the pieces like whirlwinds, not like in university or beach games in Chile, where anything goes. My break times were dedicated to enjoying the splendid view of the Sagrada Familia and its eternal cranes.

The scientist Cid Pollendina was my advisor, but he spent so much time traveling that, in practical terms, I had no one to really turn to, since I didn't trust anyone yet. I didn't ask anyone directly because I didn't want to give a signal of weakness.

I didn't have lunch with my colleagues either. It didn't take long to realize that, being married, the scholarship stretched much less. This had a positive aspect: I had lunch with Pajarito. Our routine was simple and pleasant. She prepared the food in the mornings and brought it to me by bicycle, taking advantage of the public system. Barcelona, with its scarce cars and abundant bike lanes, made cycling pleasurable. After eating, we walked around the *lab*. Once, we reached the Poble

Nou rambla and the beach. My return was considerably delayed, but no one questioned my tardiness.

The first adventure in the *lab* was a *demo day*, an instance where each doctoral student presents what they've done with a proof of concept. I was struck by my colleague Giuseppe Trieste's project, a visual news explorer. Giuseppe described that, as we click on news articles, we create a unique information trail, as if leaving virtual breadcrumbs in our path. He used these records so that information systems would better adapt to people, and not the other way around, as happened on the web, where our "information diet," as Giuseppe called it, was at the mercy of what engineers and their content recommendation algorithms decided.

Ideas for his project occurred to me, but I didn't dare raise my hand and say them aloud before everyone's gaze. I feared making a fool of myself, didn't know if they would be good ideas or if I could say it in English. I wrote him an email after the event. Upon receiving it, he frantically stood up and came to look for me at my desk. To my surprise, we talked without problem, with fluency. Since it was just the two of us, I didn't feel insecure.

In *Final Fantasy*, labyrinths usually have hidden treasures. Sometimes they're found by luck, by taking risks following a path that seemed dangerous. Other times they have a faint, small glow that only reveals itself to those who observe with thoroughness. I don't know if this time it was luck or my observer skills, but in that conversation I found a treasure. In a corner of his screen, almost covered by a terminal window that kept showing results of data analysis running at the moment, a music video was playing with graphics from a video game. Curious, I asked him to show it to me full screen: *Final Fantasy VII*. I told him I liked Nobuo Uematsu, the composer of every *Final Fantasy* that existed until that moment, and that in Chile I used to listen to him daily while programming. We went to the living room and talked about game music until it got dark.

We left the *lab* together. We walked to the Glories metro station, where Giuseppe would take a bicycle to his home in Barceloneta. Before saying goodbye, we realized that I was trying to speak in English, while he was trying to do so in Spanish. We agreed to help each other by correcting our mistakes in the future.

Pajarito's Side Quest

After having lunch with me, Pajarito would return unhurriedly. Sometimes she visited the historic center, taking advantage of the extensive free cultural offerings. Other times she looked for work. She couldn't practice as a psychologist because the cost of validating her studies was unattainable for us. She tried to leave her resume at bookstores and fashion shops to be a saleswoman, but they wouldn't even accept it because she was foreign.

One day an email landed in her inbox from a Lacanian psychoanalyst she had met during her degree. He had evaluated Pajarito's work about her favorite movie, *The Pillow Book*, by Peter Greenaway. In the email, the psychoanalyst told her that, while walking through Mexico City, he noticed a building that caught his attention for its architecture and the texts graffitied on the facade. The latter reminded him of the movie and instantly made him think of her, or rather, of her writing. I can understand it: since I met her, Pajarito could spend hours talking about psychoanalysis, writing, skin, and body; that's why that was her favorite movie. Her ability to stimulate memory through stories inspired me.

She told him that her plans to become a psychoanalyst were on hold because she had moved to Barcelona. In a second email, the psychoanalyst suggested visiting his colleague, named Carlos Libedinsky, whose office was on Via Augusta, in the middle of a wealthy commercial district.

So she did. Pajarito was fascinated by Libedinsky's library and its more than six thousand books, which included Sigmund Freud's complete works, Jacques Lacan's seminars, all of Yukio Mishima's translated work, and other works she could explore freely while they talked. I imagined a library with geometric shapes and colors falling from stained glass skylights and felt envious because the *lab* was modern, but not magical.

She also told me that she had talked about me to Libedinsky. "I won't tell you what," she said with her mix of shyness and mischief.

Guides and Insecurities

Cid traveled a lot, but when he was in the *lab* he took advantage of teaching us things. One of them was the game of publishing. He explained that publishing a paper isn't always synonymous with merit or quality, but rather other factors influence the game:

- "The moment when one decides to publish something."
- "The conference or journal where it's sent, because each has its own nomenclature, its own worldview."
- "The people who review; sometimes they simply have a bad day, other times they don't understand what they read; it's not that they don't understand because they don't want to, rather they don't because the article might be from another area of specialization."

After saying this last part, he paused and then pointed out: "In this era, computing has so many subareas that it's impossible to be an expert in all of them, and someone has to review each work."

I learned that writing an article requires strategy. One must be cautious and anticipate possible criticisms, explain clearly for non-experts, considering the emotional impact of what's written,

despite science believing itself objective; and one must choose the right conference to present it.

Although Cid showed us the rules and strategy of the game, this applied to the publication of individual papers, experimental results. But what about the thesis? What is a thesis, in fact? Cid didn't explain it and I didn't know how to ask, because I didn't believe myself capable of understanding the answer. I found one, shortly after, when we visited the Picasso Museum on an open doors day.

The museum was a medieval mansion on a narrow street in El Born, where the sun reached the ground at exact noon, with rays of light piercing between the stones on the ground like a javelin. There were two exhibitions, one dedicated to Picasso's Blue Period and another to *Las Meninas*, his own version of Velázquez's classic work. From the first, I was torn apart by the painting titled *Les deux saltimbanques*, where a couple sits at a Parisian café table, in a physically close and intimate attitude, with expressions of tedium and gazes pointing in opposite directions. It was like seeing myself naked in an enchanted mirror, but the nakedness wasn't my flesh, it was what I understood was separated from my body, the "I." I saw in the reflection that I didn't feel secure about my research topic, nor about my sociability, and I wondered if I would always be a misfit in a city to which I didn't know why I had come, because no one explained to me what doing a doctorate meant, where there was no path traced, because no one told me how to keep advancing, and where I had to constantly discover what the next stage was, both for me and for Pajarito. So many doubts produced anxiety and in that work it was incarnated in the distant closeness of its protagonists. I cried as I always do, without tears, and didn't say anything until we left the room, when my throat had recovered its functionality.

In the next exhibition, *Las Meninas* were shown: fifty-eight versions of the work, each a different experiment, one more step toward the vision he wanted to capture in his final canvas. Instead of releasing to the world that single vision, presumably the last one, Picasso exhib-

ited each iteration, making me understand that the result of an investigation isn't obtained immediately, neither in one leap nor without rethinking the destination along the way. Trial and error were necessary, detours were the backbone of the process. Something easy to say and interpret. I questioned if I was capable of achieving it.

Already outside the museum, in the Passeig del Born, I told Pajarito that I was terrified of not knowing how to get out of stagnation. I feared we would both fall. She told me she was insecure, because I was surrounded by brilliant people and she never would have that level of knowledge. But she harbored the sensitivity that I lacked, she could see what I wouldn't manage to see no matter how much I sharpened my vision. We didn't want the same thing, we looked in opposite directions, but we were together.

That was the secret I was searching for in the sinuous path of research. That was the thesis: my proposal of where to look. No one had described it to me because I had to discover it on my own.

Giuseppe Joins the Company

Giuseppe was younger than me. He had entered directly into the doctorate after graduating. In Europe, professional careers are shorter: his computer science program lasted four years, plus two for a master's; mine, six, and I also delayed two years and took two more, also in a master's. Despite the age difference, we clicked, which caught my attention because there didn't seem to be a generational gap in our perspectives on life, something I did perceive with those who were slightly older than me. However, there was a technological gap, because his favorite version of *Final Fantasy* was VII, not VI. *Final Fantasy VII* was released on PlayStation, a console that presented an abysmal change from two-dimensional graphics (like on Super Nintendo) to virtual worlds in three dimensions, with music synthesized by a chip to real instrument samples.

“Hey, <PLAYER II>, do you see this song?” he said to me one afternoon, referring to the theme “One Winged Angel” from *Final Fantasy VII*.

“In Spanish we say that songs are heard, not seen,” I corrected.

“I’m serious, I see them. Here, try them,” he insisted, passing me his Sennheiser headphones.

“How old your headphones are!”

“Yes. They were my dad’s, they’re older than me.”

I felt a slight envy for not having an object that linked me to my father. My parents had given me an MP3 player ten years ago that I remembered fondly, but it had already stopped working. Giuseppe put one ear to one side, with a gesture indicated that I should do the same. He pressed play and we listened to the song’s chorus:

*Estuans interius
Ira vehementi*

Pause.

“It means ‘burning inside with violent anger’ ” he explained, and pressed play again.

I heard noise, he explained to me that it was chaos. Pause again: static and fog. Play. The harmonic sound of complex percussions and their connections with the rest of the instruments was pure synergy. What Giuseppe was relating helped me give a name to the sensation that his ideas and the source code of his projects produced in me. Creation algorithms with violent anger. Just as I programmed as I wanted to write, he programmed as he wanted to compose.

That afternoon I arrived home with a feeling I thought forgotten: that of having a new friend.

SAVE ROOM

In his last meeting, Libedinsky asked Pajarito what she thought of doing. They had had long but informal conversations. It was time to formalize that relationship. Would she undergo psychoanalysis with him, to begin her training as a Lacanian psychoanalyst? Analysis was a major decision, a goal she had always wanted to achieve. The idea that she still lacked life experience to analyze made her doubt. She responded that she would think about it.

When she wanted to think, Pajarito walked between the Gothic Quarter and Santa Caterina. Near the street that separated both neighborhoods, Via Laietana, she saw a building she hadn't paid attention to before, another of the many restored medieval mansions. It was a community center for women called Espai Francesca Bonemaison and had its doors open for an event, the presentation of a gender diploma for public policies. The proposal interested her and she entered. Later, at the subsequent wine reception, she met a Mexican woman who was going to study at the Espai's library. She also liked Peter Greenaway and read Lacan. They talked all afternoon and she could understand how much she needed to talk with someone who wasn't me after so many months in the city.

Her name was Dolores. She also lived in a shared apartment, though she had already been in the city for a couple of years. She had even worked "under the table" in various restaurants. Her conditions were better than ours: she lived with two other people and they had two bathrooms. We, on the other hand, could no longer stand the boarding house, since we shared a single bathroom with eight other people. Added to the endless up and down of the stairs, to the television being turned off at midnight, to hot water starting to work at seven, to only being able to wash on Saturdays, to the kitchen not having an oven, to ambulances to the Hospital Clínic passing every night waking us up with their sirens and to not being able to *fuck* (we

acquired this word²) without thinking that the whole building found out we were doing it... we glimpsed that the search for a new nest for us was something urgent and necessary.

My First Side Quest

On the *blog* of the Picasso Museum, I found a call to participate in a hackathon, an event that brought together programmers and makers to “democratize digital heritage collections.” In two days, one had to create and implement a proof of concept of the idea. A thousand-euro prize would encourage the continuation of development. It was a tempting amount, almost my entire monthly scholarship. I proposed to Giuseppe that we participate: not only would we be a good team, it could be an opportunity to learn and do something different. I would contribute my rational way of seeing problems and my experience working with code; he, his unbridled curiosity and enthusiasm, his originality and presentation skills.

We went to the laboratory cafeteria to discuss our preliminary ideas. Giuseppe brought a package of cocoa cookies with glazed stars. He couldn't conceive of passing a day without having soaked them in café con leche, they were something like Tip-Top³ cookies for me. Every time Giuseppe traveled to Italy, he returned with a suitcase full of them.

“What if 17th-century paintings are equivalent to social media posts today?” he commented. “If Leonardo had tagged the Mona Lisa, today we would know who she was.”

We soaked our cookies, thinking.

“We could also use Wikipedia and thus know who the artists were related to,” I suggested.

²The vernacular word that refers to sexual intercourse depends on the country. In Spain, it is *follar*, whereas in Chile it is *culear*.

³A traditional cookie brand from Chile.

We soaked more cookies and looked at each other. Our minds converged in imagining an application to navigate the network of connections between artists and their works, fed with available data. We submerged more cookies until our macchiatos were finished, happy because we had a project, a parallel adventure.

All that was missing was Cid's approval.

Since he wasn't in Spain at that moment, we wrote him an email. Within three minutes we got a response: "You don't need my permission, you are learning to research and a researcher embarks on adventures whose destination is unknown. Good luck!"

Dolores Joins the Company

The following month we found an attic next to the Church of Santa María in El Born, in a sector where the street names come from the professions that were performed in each one during medieval times. We were on Trumpet Street, but there were also Streets of the Squires, of Pickled Foods, of Laundries, and similar ones. It seemed that the size of the streets depended on the degree of necessity of what had been sold in them: Trumpet Street was narrow and short; Squires Street, long and very commercial.

The attic was on the fifth floor or seventh story. The building had narrow and irregular stairs; it didn't have an elevator either, but in that neighborhood there were no elevators except in renovated buildings. This one seemed built by hand, as if each floor had been added on top of the other some years later by the people who lived there. It sounds worse than our previous accommodation, but we were happier there, we were more motivated and cheerful. We had our own kitchen with an oven! On weekends I made desserts, my specialty was baked milk custard (which our friends insisted on calling *flan*). During the week,

Pajarito cooked savory dishes. Other times she made bread. One day she baked marraquetas⁴ for the choripanes⁵ for afternoon tea.

One afternoon I was returning from the *lab* by bicycle and, while waiting at a traffic light near Parc de la Ciutadella, Giuseppe appeared next to me in the lane. We hadn't coincided that day because he had to do paperwork. I invited him to eat with us. I wanted to let Pajarito know, but I didn't have a data or call plan on my cell phone. She knew him and Giuseppe already got along well with her; in fact, he had tried her Chilean meat pies. So I invited him and we went together to the nest. We stopped at a meat shop in front of the church to buy good Iberian ham and Manchego cheese. Upon going up and opening the door, we found Pajarito frying the chorizo sausages and Dolores chopping tomato in the kitchen.

At noon, Dolores had called Pajarito to go out in the afternoon. A conversation parallel to the one between Giuseppe and me happened: also the choripanes, also the marraquetas, also the impromptu invitation. So Dolores bought a bottle of wine and the ingredients to prepare pico de gallo sauce, which is the same as Chilean pebre: chopped tomato and onion, cilantro, and garlic. We talked about typical foods, about the colors of the Mexican and Italian flags, about how Dolores and Giuseppe shared the same birthday. So much coincidence seemed taken from a fantasy game story.

We began to see each other frequently. Often we met at our home, where we prepared completos and cheese empanadas. I learned to make barbecues, taking advantage of our terrace, something I had never done in Chile because I had nowhere to do it and, outside the house, there was always a designated griller. Other times we met at Dolores's apartment in Gracia, where we ate beans, enchiladas, and chicken with mole poblano. The mole surprised me: it's a sauce

⁴A traditional Chilean bread roll with a distinctive shape, crusty outside and soft inside.

⁵A popular Chilean sandwich made with chorizo sausage.

with more than forty ingredients, including cocoa and multiple spices, and, of course, chile; it's rough and bitter, exquisite. Giuseppe also cooked. In his apartment, right on Barceloneta beach, he usually prepared different variations of risotto: with zucchini, with seafood, with mushrooms, with tomato.

On one of those spring nights in Barceloneta we went out to sit on the sand. Since the beach bars had already closed, we bought beer from the "pakis," the Pakistanis who sell it for one euro on the street. We talked until, without anticipating it, I discovered the answer to a question I had stopped asking myself: I saw the sun rise over the sea.

The First Boss

On the day of the hackathon my eyes were trembling when we arrived at the Picasso Museum library, located in a hidden plaza called Flasadors. According to the translation, it's the street where blankets were made. I wondered if someday there would be a Hackers' Street, although in Catalan they use the expression *pirata informàtic*, which I don't think is an appropriate translation, since a hacker is someone who squeezes a computer system beyond its apparent capabilities, not necessarily a pirate.

In total we were ten teams from all over Europe. The only Latin American was me, who for practical purposes counted as someone from Catalonia, more for my surname than for living there. At the initial cocktail we met Jaume Sabadell, a Catalan with a hoarse voice who seemed to speak through a hole in his throat. Always angry, with each word he raised his voice fortunately keeping his phrases short. Although he defined himself as a free culture activist, in truth he was a fundamentalist condemned to be oppressed forever. In fact, he complained that the hackathon wasn't for true hackers, because there was no collaboration, but competition for money and lack of vocation. He

wasn't so wrong. We wanted the money, but we also wanted to collaborate and learn. They weren't mutually exclusive aspects.

After the presentations we sat at our posts, equipped ourselves with our headphones and immersed ourselves in our virtual spaces. Between each earphone began to flow a ray of ideas, algorithms that were built to the rhythm of Nobuo Uematsu's music. We programmed with anger, our code was dirty; however, it did the job, it didn't need the formalities nor the good practices of engineering. To tell the truth, those were obstacles that Giuseppe didn't have, it was me who was complexed with the correctness of a system. I was, because that day I finished breaking that obsession with the predictable and measurable that I learned in Engineering at the University of Chile. None of that served in the hackathon. While programming I thought: "To hell with Software Engineering!"

A Fork in the Road

El Raval was also known as Chinatown, a place of prostitutes, cheap food and cell phone unlocking shops. Muggings were frequent, some people were afraid of that neighborhood, especially Europeans. But two Latin American women know how to take care of themselves and be alert, so as to be able to enjoy the idiosyncrasy of the place and its attractions. The day of the hackathon, Pajarito and Dolores sat at a stall that offered Moroccan tea with mint and pistachio baklava. Dolores told her story: she had been married, living in Colombia; studied Economics and Anthropology in Mexico, and traveled to Barcelona to study Sociology.

That night Pajarito told me her decision. The desire for psychoanalysis was from a past era, from someone who was left behind in Chile. She had resolved to enter the program at the Escola de la Dona. I liked hearing her determined, but I liked even more how she described places in the city that I didn't know yet, her new ways of discovering

corners and tastes with Dolores. Pajarito told me stories and I listened delighting in the shine of her small eyes.

Experience and Gold

On the second day of the hackathon, the judges walked around the programming zone, prying into the progress of each team and offering symbolic help, because each group had their ideas prototyped and there wasn't much that could be changed. They approached us to ask about the project. We responded that it was "a Facebook of cultural heritage, where the profiles were of painters, musicians, writers...; that is, an artificial social network in which every artist who appeared in Wikipedia or in any digital collection would have their profile." People could be friends, couples or relatives if the encyclopedia indicated that they had been so during their lives. The site also included groups, determined by artistic movements, which also appeared characterized in the encyclopedia through their multiple taxonomies. In cubism was Picasso; in surrealism, Magritte; in modernism, Gabriela Mistral. The photo albums were the collections of the organizing foundation. The famous quotes of each character, posts on their walls that came from the multiple pages that collected proverbial sentences. The reactions that Timebook generated were like this: "Wow, how original!", "Can you imagine if we use it in our museum?", "The educational potential is enormous", "What's the web address? I'd love to see it!"

We felt the prize was already ours upon hearing the praise. Although something the judges made clear is that a good idea doesn't win by itself, we had to sell it well in the three minutes of presentation, in a pitch. We programmed until smoke came from our machines, prepared the pitch until smoke came from our heads. I would speak first, offering the general context and commenting on the technology; then, Giuseppe, the magician who knew how to guide the audience's attention and amaze them.

The presentation went so well that even the hoarse Jaume Sabadell applauded us.

A cocktail sought to relieve the half hour of tension while the jury deliberated. I ate everything I found. I was anxious, not only about the result, but also because I felt I had been the assistant to the act. I knew I had to improve, that I had to learn from the magician, but without diminishing myself. I was clear that we both contributed equally to the project.

Then the museum director presented the results. In her speech the situation was win-win for everyone and we should be happy about it. She was grateful for each team's effort, we all applauded hypocritically because we knew there was only one winner and the rest would be losers. Fortunately for my nerves, the winners were announced immediately, without suspense. Play. It was the mobile application that notified when one passed near a historic place that had artworks. Pause. I didn't understand anything. If our idea was so popular and generated enthusiastic reactions, why did the judges say something else? Play. To tell the truth, I wasn't disappointed because I was used to defeat. I had lost them all, from the smallest *Street Fighter* tournament to attempts to obtain a Chile Scholarship to study abroad. Giuseppe, on the other hand, was frustrated, as if all the cookies he had had dissolved in the coffee.

I remembered the strategies that Cid taught us. I concluded that we let ourselves be carried away by one aspect of the work, the emotional one, but didn't consider the others. Giuseppe's frustration made me understand that my extra years of experience were worth something. Just as he taught me how to transmit the results of a work, I felt it was my turn to teach something. I hugged him and said:

"Giuseppe, this was only the first adventure. The game hasn't ended and we won a beautiful experience. Let's continue together."

We don't know if it was to celebrate what we achieved or to forget the defeat, but we went to drink beers at a lost bar in El Born, where

Pajarito and Dolores joined us, like when the complete team in *Final Fantasy* goes to a tavern. Already drunk, we began to walk through the neighborhood, laughing at the graffiti against tourists and enjoying the hidden mural artworks in the narrow streets.

At the end of the tour, Dolores and Giuseppe went walking together, despite living on opposite sides of the city. With Pajarito we returned to our nest. With the windows open, that night we didn't care if anyone heard us.



In the end, our greatest enemies were our own expectations.



YEAR 2-1: PRESS START TO CONTINUE

My second year in the doctorate was full of contradictions. I felt trapped, partly due to my insecurity, partly due to my blindness. I summarize it in three moments: first, when I doubted whether I should continue in the doctorate; second, when we went to San Francisco to answer that doubt; third and final, when we returned to Barcelona, already knowing that I should continue on the path. This process ended well, because I not only knew why I was doing a doctorate but also why I needed to finish it.

Barcelona

The Personal: I was happy with Pajarito and we had meaningful friendships. We enjoyed Barcelona and with the passing of time, we stopped feeling the distance from our country. Like in Chile, we had a common world in our marriage, but also unique spheres of friendship for each of us. Academically, I was in a privileged situation: I belonged to one of the most important computing laboratories, where I collaborated with people from all continents who carried out world-class research. There were always topics to discover, both academic and outside the *lab*.

The Academic: But even within that fruitful environment, I couldn't move forward. I wondered if doing the doctorate had been the right decision. The reason for starting it was clear at all times, but I couldn't find one to continue it. It ended up being a risky adventure, like crossing a rope bridge over a ravine and becoming paralyzed halfway through when seeing the rocks below. When comparing my English, my

ideas, my publications, and my potential with those of others, I always came out poorly. My calculations weren't optimistic either: I was the oldest in my generation and, if there was any rate of contributions to science per year of life, I was no longer in time to stand out in any career. In contrast, in the laboratory there were researchers younger than me, with more achievements and more future. I felt frustrated and hopeless, and sometimes invisible, because no one noticed my situation. The thesis student's work is, after all, individual. Moreover, within the laboratory I was a *rara avis*, because my research topic was from a different discipline than the others.

Foreign Lives: Barcelona is a cosmopolitan city, but some people are more cosmopolitan than others. I considered myself more foreign than the rest, while, although there was international diversity in the *lab*, many people had a shared identity, because they were from Europe, or, despite being from non-European countries, they had the possibility to travel wherever they wanted, because going anywhere was cheaper than flying to Chile. Worse still, immigration procedures were complicated, because the police treated an *expatriate*, as they called other Europeans or people from developed countries, differently than an *immigrant*, as they called us South Americans. In reality, we also chose to call ourselves that.

Local Lives: We were aware of the Catalan independence movement, but we didn't understand it. We also didn't see the various social injustices, perhaps because our point of reference was our country, where from afar everything seemed worse. Instead, we had a genuine interest in knowing what was happening in Chile. We were impacted by the homophobic murder of Daniel Zamudio, whose repercussion reached our new city. It distressed me to know that one of his murderers, the one who imitated Michael Jackson, had shared space with me: he also visited the Diana Arcade on Paseo Ahumada in Santiago.¹ I

¹A famous arcade in downtown Santiago that was central to Chilean gaming culture in the 1990s and early 2000s.

went to play *Street Fighter*, he went for dance games, like *Dance Dance Revolution*. I wondered if, perhaps, due to the popularity of “Los Diana,” young Zamudio had also been there at some point, coinciding with me or with the one who would brutally beat him in a park years later.

Cid, with whom I thought I would work: I came to the doctorate thanks to Cid Pollendina, a renowned scientist in Chile whom I met through the algorithms courses he taught at the University of Chile. Then he moved to Barcelona to create the *lab*. Cid traveled constantly, so much that in Chile they joked saying that he spent more time in planes than on solid ground. Sometimes I imagined him as an engineer who lived on floating ships, like his namesake from *Final Fantasy IV*. Both resemble those enormous kind bearded bears from fantasy tales. And, just as in *Final Fantasy* Cid’s character is a scientific guide, he was my doctoral guide. The English word for the role of guide is *advisor*. They are similar words, but not equivalent: a guide accompanies during the journey, while an advisor appears like the Cheshire Cat, gives advice and then vanishes leaving an ambiguous smile that takes time to disappear.

Rafael, with whom I worked: Rafael was my co-advisor. He was a sociable person, at one point he organized a potluck where he opened the doors of his house to us. It was a nice welcome to the *lab*, which contrasted with his reception of my academic results. For each new result, I usually received three types of response. The first: “it’s not good.” The second: “you must do it differently,” though he wouldn’t tell me how, despite my asking. I assumed I had to discover it. The third: “you have to collaborate more with other people, you don’t collaborate with anyone in the laboratory.” My shyness and the fact that my research topic wasn’t within the main lines of the place didn’t help me approach other researchers. Collaboration with other thesis students didn’t count for these purposes because we were in a formative period. We would learn from each other, but we also had to learn from those who had already finished that game.

Others' Achievements: My main point of comparison was my generation classmates. Giuseppe, my best friend, and other colleagues had already published one or two full papers in their first year. Because of that they had visited India, Japan, the United States and other countries that I also wanted to know. But even in my own topic, information visualization, I felt that others achieved more things. In the problem of visualizing time series, that is, data where for each date there are one or more numbers, Giuseppe proposed using Archimedes spirals. In itself, the idea of using spirals isn't new, but he made a design that mixed a spiral with a traditional graph in a kind of visual metaphor inspired by the cassettes of the eighties and nineties. In a topic that wasn't his own, something novel occurred to him. For things like that, I admired him.

Own Achievements?: I took Giuseppe's idea and developed it. The result was a short paper that I wrote with Rafael and that was accepted at a conference in Lisbon. It was a good event to present the work; however, it wasn't one of those that mattered to the laboratory. I didn't care, because I got excited anyway. It was my first international conference, although academically it was disappointing, because I was the last presentation of the event, many people had already left and those who remained were tired. In summary, no one paid attention to my work. I did make friends and tried the city's delicacies, like a fried fish sandwich that reminded me of the seafood sandwich they sell in Tongoy,² which I've liked since childhood.

Moving: A common topic of conversation among doctoral students at the conference was doing an internship, moving to a different place for a period of between three and six months. Several people asked me how to do an internship in the laboratory. It was a place admired by everyone. Until that moment I was unaware of the attractiveness of the place where I studied. That accentuated my insecurity even more, as I felt that I wasn't valuing or taking advantage of my situation.

²A small beach town in Chile.

Staying: Upon returning to Barcelona I had a new sensation: when the plane was over the city and I saw the Sagrada Familia from above I was moved to be back home. Pajarito confirmed that emotion by surprising me at the airport. On the train to our apartment I thought about how happy we were, we had everything we needed; therefore, an internship didn't seem necessary. However, Rafael's voice saying "you have to collaborate with other people, you don't collaborate with anyone" resonated endlessly in my head, and with the passing months I saw Giuseppe and other colleagues obtain internships at Google, at Twitter, at the University of Cambridge, in Qatar and other places. I wondered then: should I stay in Barcelona?

The answer didn't come from my own initiative, but by chance. On Twitter a friend connected me with a startup in San Francisco. The company was looking for someone who had three skills: programming, visualization, and knowledge of video games. They wanted a full-time person, but given the unusual intersection of their needs, they accepted that I do an internship. It seemed like a good opportunity: the monthly salary was triple my scholarship and they paid for our tickets.

We decided that I would pause the doctorate and during the internship would evaluate whether to continue it. We traveled in the summer, after Pajarito finished her classes. Three months seemed enough to try a different path and clear my doubts about the doctorate, to take a step aside and understand my relationship with Rafael, with research, with my academic ambitions, with the *lab*, and continue discovering new worlds with Pajarito. It seemed to be a good idea.

San Francisco

I was clear about why I had started a doctorate. The next thing was to discover why continue it. I needed to *press start* to pause it and take a step to the side to consider options. Although I couldn't see anything positive about it, because hurtful questions arose in my mind: desert,

like a traitor? withdraw, like a coward? fail? This new stage was an opportunity to leave those questions behind and make a decision.

The Beautiful: We found an apartment on O'Farrell Street, near Union Square. The building was in the Tenderloin neighborhood, which contains the civic district and is well connected with the rest of the city. We rode the street cars, visited art exhibitions, went to Mexican and Japanese restaurants. We went to eat pastries and have coffee in the Italian neighborhood. We visited the Japanese Garden in Golden Gate Park. We bought new clothes, because we discovered that summer in San Francisco is as cold as autumn in Barcelona and, moreover, is covered in fog. Near Union Square we found a place called South Town Arcade that held *Street Fighter* tournaments, which I unfailingly signed up for every weekend. Additionally, Silicon Valley had attracted several former Engineering classmates from University of Chile. I reunited with one of them, Rodolfo, who lived in San Francisco with his wife, Pía, and their dog, Kapo.

The Sad: The Tenderloin is full of hotels that were grandiose in past epochs and that today are paid for by the municipality to house the multitude of homeless people who wander during the day. They call them *homeless*, they are people with nothing, not even sanity. Not many days passed without us seeing homeless people injecting heroin, doing their necessities on the sidewalk without consciousness of themselves. With time one ends up getting used to their presence. In San Francisco it was enough to cross a street to leave the homeless behind and find industrial buildings reconfigured as lofts, whose inhabitants drove convertibles. That precarious situation so visible made me wonder if in Chile that reality was hidden, segregated.

Deserting the University: Rodolfo left the university in the third year due to economic problems, despite having shown capabilities and even teaching as an assistant. He began programming 2D video games, like the classics; he also programmed utilities for making games and published them on the network freely for anyone to use. His code

didn't go unnoticed: a large social gaming company contacted him. They verified that, besides being skilled with code, he also knew how to relate to other people, and they hired him. Rodolfo, who on paper wasn't an engineer, was wiser and more efficient than many of us who did finish the curriculum. Listening to him tell his story, I thought that if years ago I had compared the lines of our lives, I would never have thought they would cross again. And I would have been wrong because I considered our trajectories as straight lines that move away instead of as curves that mold themselves to time and space.

Persisting in the University: To tell the truth, the path from Engineering to doctorate was the only one I conceived for many years. I finished the degree, not without intermediate crises and, rather, thanks to my father's pressure, who made me understand the family effort to finance my studies. Upon graduating, I knew I couldn't go directly to the doctorate, as I needed money and experience. I worked for some years, in parallel as a research assistant and as an engineer. These latter jobs were unsatisfactory: either they paid little, or they didn't have a good environment nor did they work on something important. I lasted a short time in each one. Certainly I didn't know how to look for work, I didn't have networks nor did I negotiate my salary well. At university they didn't teach me how to do it and I had assumed that because I was "from la Chile"³ the path was assured. Understanding that it wasn't so wasn't so serious, because I knew I would get to the doctorate at some point, although I didn't imagine how. They rejected me several times for Chile Scholarships, but I was convinced to apply until achieving it. Until one day, by chance, I ran into Cid at the university. We had coffee, I told him about my sinuous work life, about my failure seeking scholarships. He responded that he had a scholarship in a topic that might interest me, knowing that it was different from

³The colloquial name for University of Chile, Chile's most prestigious public university. Being "from la Chile" carries significant social and professional weight in Chilean society.

what I was looking for. In fact, I wanted to go to the United States. I accepted because it seemed to be a good adventure, an opportunity that wouldn't repeat itself.

What You Boast About...: The startup where I did the internship was an interesting place, with a work rhythm different from what I had known in Chile and Europe. It wasn't more intense in time; on the contrary, the schedule was sacred and at five in the afternoon there was no one left in the office. The difference was in the company's ambition, which sought to be sold for a billion dollars. There was no bullshit, there were no excuses, there was no nepotism, because otherwise that objective wouldn't be achieved. They didn't skimp on expenses when it came to hiring people, they needed the best people for each of the tasks: operational, technical, management, workplace decoration and more. I learned that that attitude and that goal were common in Silicon Valley. In essence, a company defined a "secret sauce" to solve a problem and then demonstrated why that recipe made it the best in the market. Since they all seek the same thing, in addition to a very high salary they offer perks, which aren't just work benefits, like health insurance, but also comforts like free food, usually international; places to play, both video games and ping pong or ice tables. The biggest ones offer laundries and gym inside their facilities, they even bring artists to do concerts and shows every week. I saw this as an excess and even a contradiction with the restrictive schedules. But that's how the United States is, a country of contrasts that, surprisingly, works. In my case, if the company boasts about working with the best people to meet its goal, I couldn't help feeling validated. Until that moment I was convinced that deserting, changing objectives and assuming failure was something bad. But startups change course all the time. Their goal is to be sold and if for that they need to discard their secret sauce and look for another, they do it. What matters is what they maintain with each change of course: their teams, their people. That's the true recipe. In fact, the problem for which they had hired me no longer existed within

the company. They had changed direction several times, so many that they didn't even remember why I came to work there. They did know that I could contribute and that was all that mattered to them.

...Is What You Lack: One perk was that they brought us food from different restaurants each day. Thus I tried several dishes for the first time, like Vietnamese pho soup, made with meat broth, lime, cilantro and rice noodles. Until it was Mexico's turn: tacos and other tortilla preparations. I remember we were at the table and no one started eating. I noticed they were looking at me with curiosity. When I asked what was happening, they answered: "You come from Spain, you must know how to eat tacos, how do we take them with our hands?" First I thought it was a joke, but no, they really didn't understand that Mexico and Spain were two different countries on opposite sides of the Atlantic Ocean and with different culinary traditions. I found it hard to believe that technically capable people could be so ignorant.

Team Building: One day we took a break from technical work to work on our group relationship, with emphasis on interaction between people and team formation. The company's CEO separated us into randomly formed groups and gave us the following mission: build a transmission tower using model sticks, thread and white glue, with a limit of six minutes. In my group we imagined a design similar to the Eiffel Tower. Each group did something similar, inspired by famous towers. It was fun, because there were people with whom I had never interacted beyond hello and see you tomorrow, and among all of us we explored our creativity. When the deadline was met, all groups arranged our towers on a table, in sequence. The CEO thanked the participation and enthusiasm, and began to test the towers by putting weight on them or giving them a small hit. One by one they began to fall, including ours. They all ended up in ruins except the last one.

Personal Growth: We designed our tower and built it, in a sequence that was repeated in all groups except one. The CEO related that the only one that remained standing was built in three stages of two min-

utes each and in each stage it was verified that it was resistant. Then he said: “Time will never be enough for a single perfect construction stage. That’s why it’s important to iterate. And iteration speed is more important than iteration quality.” I automatically related this idea to what I had done in the *lab*, and couldn’t identify any idea or project that was comparable to the tower that remained standing when the lightning fell from the sky, thrown by the CEO’s hands. The destroyed towers, on the other hand, did resemble my ideas and projects. I imagined a work, a program or a text and only considered that I had one opportunity to make it reality, one attempt, that could be endless, could be suffered, could even be paused, but it was still always unique, atomic. In my conception of how things work, not doing it this way was impure, improper. Dangerous. The concept of iteration wasn’t within me, because iterating implies accepting that what’s done can fail. Thinking about that took me back to the Picasso Museum in Barcelona, where his study of *Las Meninas* is found, an iterative process that I thought I understood when I saw it, because I thought that what mattered was the final result. I wished, then, for a new opportunity to investigate, to start a new iteration. It was necessary for time to pass for me to truly understand Picasso’s *Las Meninas*. I was decided: I would return to the doctorate.

What Was Said: The last week of work, two before leaving San Francisco, I presented the result of my work to the CEO. I had applied visualization techniques to data exploration in the startup’s service. He told me it was great, among other compliments, and the last thing he stated when saying goodbye was “<PLAYER II>, this is awesome, we’ll use it.”

What Was Done: Later I discovered that *awesome* doesn’t literally mean great, but just that it’s okay. Moreover the company never used my project, not because it was just okay, but because before it could be of any use, the company had already changed direction.

Monday to Friday: While my work routine lasted, Pajarito came to pick me up at the office in China Basin every day. Sometimes we walked home, each day on a different route; others, we went for walks or went to eat. One day we visited the Museum of Modern Art, where we found a surrealism exhibition that had works by Roberto Matta. With his images I realized that I missed Chile more than I thought. I wanted to be in front of *Ojo con desarrolladores* at the National Museum of Fine Arts and then go for a drink around Merced Street like we did when we met at Universidad Católica Metro Station.

Saturday and Sunday: On weekends I went to the tournaments at South Town Arcade, excited to feel again the nostalgia of neighborhood video games and competition against other people. In Spain I met people who played, but there wasn't a place like that, which reminded me of the best years of Diana Arcade on Paseo Ahumada.

What I Assumed: Pajarito reads and laughs, when I'm there and when I'm not. One of her favorite quotes, from *The Pillow Book* by Sei Shōnagon, is "life has two pleasures: the pleasures of the flesh and the pleasures of reading." Since we both enjoyed (ourselves), I assumed she was completely happy, that she had always been.

What I Ignored: I didn't realize that she would have been happier with me touring the city, going around the same places where we wandered during the week, this time with more light and less rush, instead of leaving her at home reading, with the possibility of moving in a city with which she didn't share the language, because she didn't speak English nor had favorite places like I did. This was evident the last month, when the arcade unexpectedly closed and Pajarito expressed her happiness about it. Initially I felt it as an attack against me, but when she told me why and I saw the wet shine in her eyes, I knew that until that moment I had prioritized machines, whether for work or play, over our bond. Pajarito saw me so enthusiastic that she didn't tell me anything and I, in my blindness, was beginning to lose her. She loved me, but that love had to be nourished to stay alive.

An Encounter that Opens Doors: Shortly before returning, already decided to resume research, we had lunch one day with Vanessa, a researcher who had been in the *lab* for several years and had later moved to the United States. I told her about my adventure seeking questions and answers, and that I only had one question left for the moment: who to collaborate with? I didn't know how to do it because I didn't see common topics with other people. She recommended talking with a researcher who had arrived recently. Her name was Rosalie, she came from Algeria and, within the topics worked on in the *lab*, hers was probably the furthest from mine. Vanessa explained to me that looking for intersection points with other disciplines is also research.

A Farewell and a Terrible Ending: Our last night in the United States we stayed at Rodolfo and Pía's apartment. We played with Kapo, talked about plans, about the eternal desires to return to Chile that are always postponed, about what it means to be children of teachers, something I shared with Pía, about how ambivalent the feeling about time in the Engineering Faculty of la Chile is, something I shared with Rodolfo. It was a tender and melancholic evening. However, after eating, I received unexpected news from Chile: Catalina, a former classmate that Rodolfo had also known, had died in a clinic after days in a coma, because her husband had beaten her until leaving her unconscious.

We weren't close, but from time to time I saw on Twitter what she published and knew we had some tastes in common, like Depeche Mode's music, and that she seemed happy. Her husband was an engineer too. That night I thought about how *machista* culture percolates into our bodies and comes to be within each of us even when we believe it isn't so, as if it were a virus of evil that infects society at some point.

I remembered the hate crime against Daniel Zamudio, in which one could point to the culprits directly, because they came from marginal environments, where, yes, there was hate, but also lacks that distract when interpreting what happened: since he had no education and

danced in the street for money, then that was the explanation. The lack of education. About Catalina's husband, instead, it was said that he was a good neighbor who lost control. There was no apparent explanation for what had happened because the guy seemed like a good person, he was an engineer. And I wondered if, perhaps, I should protect Pajarito from myself on the path we had ahead.

Barcelona

Back in Barcelona, the next step in my doctorate was to contact Rosalie. I discovered that, indeed, we had nothing in common. There were no tools, concepts, ideas that united us, except being physically in the same laboratory. She told me that excited her because she would learn from me. It was the first time someone told me something like that. It's not a false "we'll use it." In academia someone believed in me just for being who I am.

Where Was Giuseppe?: Just before our return, Giuseppe left for his internship in Silicon Valley, at Google. He found a research group that worked with music. I hadn't seen him so enthusiastic about a topic, and in Timebook he had already surprised me with his motivation.

Where Was Rafael?: Rafael was invited to a Chinese university for six months as an adjunct professor. I wrote to him, telling him I was happy because I felt stronger. I told him I followed his advice and found someone to collaborate with. But his response was a one-line message: "You can collaborate with whoever you want except her." I didn't understand what that reaction was due to, I wondered if perhaps they had a personal rivalry. Rosalie hadn't mentioned anything about it and she knew that Rafael was my co-advisor. She had no obligation to tell me if there were problems between them, but if it were relevant, she could have refused to work with me, and she didn't.

Those Who Worked with Rosalie: I thought about a German colleague from the doctorate who worked with Rosalie. She was efficient

and focused, something I assumed was a characteristic associated with her origin. This time, with a deeper vision, I noticed the second-order interactions: I discovered how her meetings with Rosalie were, how she gave her space to grow and to expand her development. Those possibilities had been unknown to me until then.

Those Who Worked with Rafael: I began to see that those of us who worked with Rafael weren't well. Before I focused only on what dazzled; therefore, I only saw my shadows, and not my own light. Taking that into account, one day when Cid was in the laboratory I went to talk with him and told him this story. He turned, looked at the Mediterranean Sea and, after a minute of reflection, asked me if I wanted to work with Rosalie as advisor. I answered yes, I didn't have to think about it much. "One last thing," he told me before I left the office: "Do you want me to talk with Rafael?" I answered that was something I had to do.

Before leaving I took advantage to ask one last question. I saw the characteristics of my colleagues, and as I knew what each person stood out in, it was inevitable that I compared myself with them. So, I asked him why he had offered me the scholarship. It was a difficult question for me, because I had regular grades in Engineering when I met him and didn't stand out in anything specific. He answered: "You are someone who wants to learn constantly and that's what we need in this laboratory."

I discovered that Cid was closer than I thought. I just had to knock on the door and enter. Instead I never reached Rafael; moreover, he didn't care that I changed advisor. Why would it matter to him? He had been promoted and now had teams in charge in other cities where the company was. He got what he wanted, something that isn't bad in itself, but without measuring the collateral damage or worrying about the people who were around him.

That night, while the lights of Santa María del Mar were turning on, I hugged Pajarito on our terrace and told her what had happened. She welcomed me as she always has done. I understood that the challenge

of supporting all this process with me was difficult. It was worth it because we were together. We contemplated the church towers lit in green, and I thought that I not only wanted to keep learning in academia, I also wanted to love and care for what we had for all my life.



YEAR 2-2: MINERVA VERSUS THE BEAST

If there's something I had in common with my father, it's that I work too much. I used to criticize him for being a workaholic. Without me realizing it, the thesis was the perfect catalyst to develop that seed that was inside me. There was always a deadline to meet, a new idea to pursue, an experiment to finish. Being a workaholic also implied a feeling of guilt, which arises from not taking advantage of all those academic opportunities, since even before managing to finish one challenge, there were three more in front of me. Worse still, despite having learned to work, I still needed to learn to deliver results, because my work was constantly rejected. And an academic rejection that repeats over and over feels like a set of stabs to self-esteem, each one accumulating pain and opening the wound more, to the point where it's inevitable to think that everything done should be thrown in the trash and that one shouldn't be there, because why work so much if nothing serves?

My obsession with work became so intense that at one point I felt my relationship with Pajarito was threatened. Fortunately, she told me clearly one afternoon in San Francisco: "You have to choose your priorities." The clarity of her voice and the peace with which she stated them was enough for me to discover the solution. Because I had always chosen her, but I wasn't acting in accordance with that choice. We agreed that, upon returning to Barcelona, we would take tango classes. We went to the school Monday through Friday, at 6:30 PM, in El Clot, near the lab. Going dancing every day had several effects, from spending

more time together during the week to limiting my work hours, and, unexpectedly, dedicating ourselves to our own hobbies on weekends.

It was precisely in one of those hobbies that I found the answer to my vocational doubts.



One summer Sunday, after lunch, we sat on our attic bed. “Pajarito, I’ll put on headphones,” I said while crossing my legs on the bed and placing my laptop on them. “I’m going to watch a *Street Fighter* tournament,” I announced. She replied: “I’ll read the Mishima book we bought,” and lay down. Her feet touched my legs, her white back was arched. She had her hair up, revealing Mexican earrings whose colorfulness contrasted with her pale skin. We were comfortable, immersed in our inner worlds, she in a paper rectangle, I in a digital rectangle that showed, in close-up, a man dressed in suit and tie.

“Welcome to the final rounds of *Street Fighter* at Dream Sports, Europe’s most important gaming event!” announced the commentator. “In the next match we’ll see Japanese Daigo Umehara, also known as the Beast, against Spanish Minerva, the first woman to reach these stages in an official tournament.”

I was excited to watch the fight. During our first Christmas here we had some scholarship money left over and Carrefour had put Xbox consoles on sale. So I bought one and began looking for online competitors, until I found one of Spain’s best, with the alias Casteller. I knew about him from the discussion forums where he participated. But when I fought against him, I realized something didn’t add up, because I won easily and I knew I wasn’t at his level. Later, looking at the same forums, I learned that I had faced his partner at the time, who hadn’t yet chosen her alias. Her name is Nuria and the alias she chose later is Minerva. That’s how I met her first, just as she initially met me as <PLAYER II>.

“Minerva’s participation has been phenomenal! Looking at the match table, she’s left a sea of blood in her path. It’s impressive! However, like the Minotaur, ‘The Beast’ has now appeared, straight from Japan! Whoever wins three rounds will be declared the winner. The time limit for each round is 99 seconds. Intense minutes await us, so... prepare yourselves!”

While the commentator explained the differences between the characters that Daigo and Nuria chose, I continued remembering those first encounters with her. One afternoon I had told Pajarito: “I played against a Catalan woman, she’s dating one of Spain’s best, but I don’t understand why she plays so badly. She’s interested in *Street Fighter* and that’s great, but why do you think that, being able to train with one of the best, she’s not even at half his level?”

Pajarito looked at me as if intuiting that in a whole life of *Street Fighter* I had never known a woman who played well. In Chile I came to believe that they simply couldn’t be better, that just as in theory men have better global orientation and women better local orientation, men were simply better at this game. After looking at me, she replied: “Maybe she wasn’t interested and now she is. You know I don’t like games, nor do I know how to play.” Saying this, she paused and looked up, as if projecting herself toward an imagined future, and continued: “If I wanted to beat you, I would learn and achieve it.”

My first reaction was to think she was wrong. Although it wasn’t difficult to realize that the error was mine, since I was clear that in engineering one has the same prejudice regarding women, a prejudice that I had managed to uproot from myself. I just had to contemplate my colleagues in the *lab* to know that they could not only be as good as a man, but could be much better. The mere fact of being in the same place as one already demonstrated it, because the path they had to travel was more difficult: they had to face the prejudices of other people (I include myself) and, sometimes, their own.

When the transmission showed Nuria next to Daigo sitting in front of a monitor, I remembered the first time I played against her in person. It was in Granollers, an hour by car from Barcelona. The municipality had provided the Municipal Theater, motivated by interest in attracting tourism. The tournaments had a good level of production; the smaller the town, the more budget and infrastructure for events that make the place known. It was a big tournament, in which more than fifty people who traveled from all over the country participated. Although I had prepared for the competition, she maintained absolute control of the fight, I only fled, prolonging my agony. At that time she had been playing for a year; I, three decades.

Upon returning to the City of Barcelona with other Catalans I realized we all invented excuses to justify our defeats, because no one wanted to feel like a loser. She had run over all of us like a truck without brakes.

My screen showed the game image, whose clock marked 99.

“Are you ready? Fight!”

Time had begun its march.

“Neither decides to rush toward the other. They advance slowly, retreat, stay in place, testing possibilities. They use quick and safe movements that cause little damage, whose intention is to throw off the opponent and truncate their intentions when they get close. They want to wear down the other little by little instead of attacking directly.”

The clock was surrounded by two bars representing the remaining life of each character. They shortened with each hit they received.

“Minerva knows she must not move away from Daigo, must not give him freedom of movement. She needs to knock him to the ground, but she has to find the opportunity to do it. This round is about patience. Whoever makes a mistake, however tiny, will open a door of no return and will be the loser. In this tug of war, Minerva has the best chances. Her character, Cammy, can capitalize on distant hits into a powerful

entrance. Indeed, Daigo's Ryu has received more progressive damage. At this pace, if Daigo doesn't change his strategy, he'll lose."

Nuria was comfortable and Daigo possibly expected a change. It wasn't necessary to take risks yet. The first round doesn't determine trends, it's rather an experiment to test the terrain.

"Nuria takes this round without much excitement. We'll see how Daigo responds to this first defeat."

The screen updated the score:

DAIGO 0 · MINERVA 1

"The second round has begun. Wow! Daigo has adopted an aggressive strategy from the start. Did he want to take her by surprise? But Minerva has reacted well. She executes the precise movements at the instant she needs to. Without doubt she's concentrated: a hundredth of a second more and it would be her character lying on the ground now."

Ryu lay unconscious after a kick right to the face, received from Cammy's military boots.

"Sooner or later Ryu will stand up. Will he do it with his characteristic *Umeshoryu*, the most unpredictable special move in the world?"

"Daigo usually uses obviousness to his advantage, turning the other's deception into his own weapon. Ryu is getting up. We'll see."

"Daigo does the *Umeshoryu*!"

"My God! Minerva has blocked the *Umeshoryu* and severely punishes Daigo. She was well positioned to continue attacking and has the opportunity to force Daigo to guess what he should do. Things aren't looking good for the Japanese!"

Seeing Daigo against the ropes took me back to a small tournament, organized in a Chinese restaurant near the Arc de Triompf, where I sat down to talk with Nuria. She made me feel comfortable, perhaps because she liked literature; we had already talked many times through

chat. I told her about tango with Pajarito: I compared the connection felt with the other person, that wordless communication, just with movement, with the connection (and rivalry) within the game. I also described what I felt when I saw her dancing with other people in the first classes. It troubled me, not out of jealousy, but because I felt I had to do better, more entertaining and original steps than the others. If not, why would she want to dance with me? Nuria made me see that the magic of the game wasn't in complex and original moves, but in correctly perceiving the other person's intention and choosing the appropriate movement. We concluded that the difference lay in that mutual pleasure is sought in tango; in *Street Fighter*, what matters is personal victory.

It was true. A walking-only dance with Pajarito was enough to fly.

"The first unforced error of this match. Will Daigo be able to escape Cammy's vortex?"

"Daigo has fallen into the trap again. Will this be the end of this combat?"

"Here it comes. Minerva has jumped through the air and executed the aerial kick from just the right height so you can't see which way the hit will come. Will it be from the left or from the right? Will Daigo know in time?"

"Even if Daigo blocks correctly, he'll still be in a defensive position. He continues in a disadvantageous situation."

"He blocked it! Though Minerva keeps pressuring. Perhaps she'll manage to trick Daigo to take away those few pixels of life he has left."

"How does Daigo keep blocking? He knows that if he doesn't get out of that place he'll be dead. The round doesn't end until you hear K.O. And at this moment Cammy only must..."

"The *Umeshoryu* has allowed Daigo to escape from the pressure and stay in the race! Just a small hit for Cammy to claim the round; however, Daigo doesn't give up!"

“You’ll see, Daigo has returned from retirement. He was out for five years, when he went to care for elderly people at a home in Tokyo’s suburbs. What might he have learned about life in that place?”

“Minerva fails to undermine the Beast’s balance. His will seems infinite!”

“There’s another loop from which it’s difficult to escape: Daigo’s psychological game.”

“Time is getting closer to zero. Fifteen seconds left! Minerva could win by time. Although those fifteen seconds are an eternity in *Street Fighter*.”

“She seems determined to obtain victory by hits, despite the difficulty. For each of her attempts, Daigo finds the perfect answer.”

“And each of Minerva’s attempts takes away her life bit by bit. Without realizing it, she’s tied with Daigo!”

“Both test quick movements of little reach, aiming to limit the other’s advance. In this situation whoever manages to land a hit, however simple it may be, will win. What tension, ladies and gentlemen!”

When the clock marked seven seconds, Daigo made an unexpected decision. He left the safety of the ground and jumped toward Nuria, who, by not committing to specific attacks or strategies, couldn’t see beyond her own fists. Perhaps what differentiates a veteran like Daigo from those who are just beginning the path of fighting isn’t technical capability, but the acceptance of risk.

“He jumped! Ryu jumped! Why did he do it?”

“It’s Daigo, doing what he knows how to do! Giving us unexpected moves that no one can predict.”

“Cammy can’t react in time and has made another feint, this time in vain. She won’t manage to respond with her *Cannon Spike*!”

Ryu fell with closed fist on Cammy’s face.

“K.O.! It’s been a spectacular comeback! ‘The Beast’ has awakened!”

The screen updated the score. In the transmission you could hear the audience cheering both contenders.

DAIGO 1 · MINERVA 1

“What will happen in this round? Whoever wins will be at match point.”

“Never in history has Daigo lost against a woman in a tournament. And if he does, it will be here, at Dream Sports, Europe’s most important tournament!”

“Even if Minerva doesn’t achieve it, we will still have witnessed one of the best matches of the tournament.”

“Do you hear the audience? Minerva carries on her shoulders the weight of history and young people’s enthusiasm. Each second that passes, she’s closer to obtaining the most important victory of her career.”

“This will be a round of pressure tolerance. Whoever manages to hold on more until surprising the other will be who takes the victory.”

“What a change of rhythm! Minerva has begun an unstoppable attack. Will she seek to surprise Daigo? From what we’ve seen, she knows how to initiate a safe offensive.”

I thought about one of the tips Casteller gave me at a *Street Fighter* meetup: “Excessive attack isn’t the best strategy. It tends to provide opportunities to your opponent, who looks for gaps in your attack patterns to counter and regain rhythm.” He said it with that same serious tone with which my advisors explained mathematical concepts to me. “Although... if you don’t want your rival to be able to think of a strategy at all, then it’s the best thing you can do,” he said with that harsh Catalan tone, which was hard for me to understand because it came with a friendly smile. Had he ever said that to Nuria? I don’t know, but I applied his advice in my research. I learned that I couldn’t rely on a single strategy, because an experiment could fail and an idea could fail. Fail-

ure was allowed, but the program has a deadline. At some point time runs out and the score updates.

“Daigo manages to defend. From the field emanates a tension that surely reaches our international viewers! The Beast keeps blocking, without taking damage, though he’s not looking for a way out either. He owns the time.”

“Cammy’s continuous attack is tight, but it’s not waterproof. There are infinitesimal instants in which Daigo could... oh, he’s done it!”

“The return of the *Umeshoryu!*”

Time froze on screen, that familiar pause that every fighting game player knows. The crowd erupted in sudden, collective recognition.

“He’s chained the *Shoryuken* to execute his Super Art! Sacrificing all his power, Daigo has gotten out of the mess without problems!”

While time was stopped, Daigo’s character performed the animation corresponding to his special move, the famous *Hadoken*, whose sound has accompanied me my whole life. Once the animation finished, time’s advance was restored.

“Wait! Cammy also executes her Super Art!”

This time the audio saturated completely due to the audience’s screams.

“This is impressive! In an unparalleled technical display, Minerva executed the special move before Daigo. By keeping her control buttons pressed, she delayed the execution until having released them. She did it right at the instant when the game resumed time after the *Shinkuu Hadouken!*”

“It requires great precision to execute it in these circumstances, because when the screen freezes the game doesn’t register the buttons pressed by the players.”

Cammy gave her automated final blow, the game’s audio announced K.O., and the score updated its points.

The camera showed Daigo and Nuria's faces. Daigo impassive, as usual. Nuria moved her hands from excitement and smiled.

"Minerva is at match point! She has Daigo against the ropes after an impressive play. She is the best in Spain and could be the best in Europe!"

I knew the Spanish community didn't agree with that comment. In the forums it didn't matter that she spoke perfect English like few others or that she could articulate her ideas well. They criticized everything about her; within the game more damage could be done, one could be faster, one could be more showy, more spectacular; outside, in the physical world, they told her she could have a "less confrontational" opinion, that she could have a "less shrill" voice. Shortly after winning her first tournament in Spain, a French team sponsored her. They paid for trips to other tournaments in Europe, subsidized her internet connection and the purchase of an Xbox. That achievement wasn't well received by some members of the community, who said she got it because "she had nice tits." Even so, she beat them all, and now she was one step ahead of Daigo. In a short time she had achieved more than all the others together.

"The fourth round begins. Will the Beast mount a comeback or will he be defeated by Minerva?"

The first movement in the fight was a big mistake by Nuria. An unsafe movement that can bring great rewards, but that is usually reserved for situations that present no risk. Daigo took advantage and punished severely.

"Minerva is making too many unforced errors. Could she have given up?"

Then came another slip.

"Could it be possible that Minerva succumbs to the pressure of victory?"

And another one. Nuria was deflating. For her it was the great opportunity of her life and, apparently, she was already exhausted. The

nerves were controlling her, and not the other way around. For Daigo, instead, it was just another tournament. His status wasn't at stake.

I glanced at Pajarito, who was underlining the book *Forbidden Colors*. I asked her what she was marking. She handed me the text, which highlighted a line of dialogue with a pastel color: "To give pleasure to a woman is to expose yourself to a hundred sorrows without a single benefit." Next to the underlined line was a mark that led to a footnote written in her wide and round letters: "Miller said that men fear female pleasure. Cultures are made to control it."¹

I like reading books after she has read them. Seeing what she underlines, studying her notes, imagining her reading endears me and also gives me perspectives I can't reach. I no longer think women are worse at *Street Fighter*, but how deeply rooted was that idea within me? I had to fight against Nuria, I had to witness her success and value it to be able to expel that prejudice.

I returned the book to Pajarito and went back to the combat. The camera showed Daigo and Nuria's faces. He remained indifferent. She had her lips tight. There was no smile anymore.

DAIGO 2 • MINERVA 2

"The last round begins. The moment of truth has arrived. Japan versus Spain. Man versus Woman. The Beast versus Minerva. What a great spectacle!"

I was nervous. I imagined decisions that Nuria could have taken in the game to have won, but that she didn't take. And I wondered if I could do the same with my own decisions in the doctorate. I remembered a YouTube show where Nuria analyzed matches. In one of the first episodes she commented on one of mine. Her appreciation focused on the negative aspects of my game and didn't mention anything good. She felt disappointed that I applied predictable strategies

¹Jacques-Alain Miller is a Lacanian psychoanalyst.

and committed numerous unforced errors. Naively, I replied that it was easy to see the negative in others' game. It was the same reaction that doctoral students have with the first reviews of their works or upon receiving a rejected paper. At that moment I didn't understand that the purpose of her analysis wasn't to disparage, but to help me improve.

"Adrenaline is at its peak. We see the same as the first round, a cautious game, although we know that our contenders' blood boils to obtain victory."

"Now they both know each other and have sufficient resources to do great damage. The tension is extremely high."

This time silence took over the audience.

"Daigo takes an aggressive attitude. He jumps straight toward Minerva. Why does he do it? Is he nervous? Certainly it hasn't been something calculated. Minerva has counterattacked without problems."

"I wonder, dear audience, if this is the beginning of the end."

"Or perhaps he's preparing an *Umeshoryu*?"

"No, Daigo is blocking. He looks timid."

"*Shoryuken!*"

"It's been a feint by Minerva! If Minerva takes advantage of all her resources now and her execution doesn't fail, this will end soon."

"Ryu is in the air. Cammy prepares her punishment. Minerva will make history!"

After being deceived by the feint, Ryu fell to the ground, fragile, open. Cammy kept her gaze fixed on him. I imagined how Nuria moved the stick to bring her character closer to Daigo's. I saw how she pressed the second button of the first row on her control panel, then the directional, down on the stick. Cammy crouched and Nuria pressed the same button again. Maintaining the rigid posture, product of concentration, she pressed the second button of the second row, a medium kick that generated a sequence of three consecutive hits within a four-frame animation window, at a speed of sixty frames per second, the limit of human eye. The number that describes the time in which the button

could be pressed correctly is irrational, has infinite decimals. A good approximation is 0.067 seconds. After pressing the button, Nuria made a double quarter-circle movement toward her opponent, and pressed the third button of the second row, a strong kick. With that she executed her Super Art.

Nuria's reaction time exceeded the crucial 0.067 seconds. That minimal delay was enough for Cammy to project herself into the air, hitting emptiness and becoming vulnerable. Daigo took the opportunity to execute the blow that finished the fight.

DAIGO 3 · MINERVA 2

"It's been a painful defeat for Minerva. She showed the potential of her training and gave us the best fight of the tournament so far. However, at the end of her path she met the Beast. We hope to see her in the next edition of Dream Sports, Europe's most important gaming event!"

The screen showed Ryu, who gave a punch to the air toward the screen and said: "The more I learn, the more I realize how far I am from the end of my journey." I thought that in the time in Barcelona I have fought against the ignorance and prejudice that were within me, that I have been unconscious of the effect of my actions on Pajarito, and on myself too. I know many things and will learn others. However, I cannot predict the simple and important things in life. I don't know the path that leaves falling from trees in autumn will follow. Witnessing that fall and marveling at it is to live.

The camera returned to show the physical stage where Daigo and Minerva were. They shook hands. Each one left in opposite directions. The game screen displayed the classic "GAME OVER" message and I closed the computer.



I remembered that Cid warned us in our first year about the rules of the publishing game. Perhaps the last one that is internalized is that good work can be rejected and a bad one accepted, because the factors that influence the selection are, largely, random. It's not that I had forgotten his words, but upon closing the computer and ruling that the tournament had ceased to be of my interest, I finally understood it. I had already learned to iterate and to pitch, but I was still missing the most important part: dealing with the unknown, finding the connections between two apparently distant things, like Minerva, who learned from scratch and was about to defeat the Beast. She didn't achieve it, but she didn't leave the confrontation empty-handed either.

She lost due to a technical error. Next time she won't make it. Without realizing it, she has given me a new lesson: what's relevant aren't the errors themselves; in fact, one only learns when losing, not when winning. The exercise of analyzing my experimental proposals within the context of my research topic was what made up my doctorate. I wasn't there to learn to execute in an engineering way, but to reflect. It wasn't about working as much as possible within the available time, but about making more mistakes. It's the only way to learn. I had my whole life ahead to get things right, but only the now to err.

Pajarito rested her head on the open book while I massaged her back. Seeing me thoughtful, she suggested: "We could go for mint tea in El Raval." We went out, and when we crossed the city's main avenues, which were infested with tourists, I remembered the occasion when I first told her about Nuria. I told her about that conversation and Daigo's recent victory. "I don't remember that. When was it?" she replied. She tried to remember, but couldn't. "Anyway, I'm not interested in beating you," she said, and laughed. We kept walking hand in hand, imagining tango hooks and turns. In one of them, I realized another lesson. I didn't have to prove anything to anyone but myself.



Living together our individualities has enriched our relationship.



YEAR 3-1: THE WOMAN'S PART

Sueño el sueño milonguero
y voy gastando mi albedrío.
Y tu cuerpo que era ajeno
se hace por un rato... mío.

Otra noche en la viruta

OTROS AIRES

It's a summer night in Barcelona. The humid air weighs and sticks to our skin, mixing the salt of our bodies with that of the Mediterranean Sea. Outside the Maremagnum, there are no more tourists, restaurants close early and those who want to party go to the bars in the Gothic Quarter. It's dark, the public lights barely reach us in this plaza. Of those around us, we only see the silhouettes. Like them, we're still waiting for the moment. Pajarito exhales slowly near my ears, with a hint of fear. I'm nervous too, but our embrace comforts us. In the distance, someone presses a *play* button. The silhouettes, like puppets in a music box, begin their rotating dance. A state of alertness arises in me, driving me to capture every detail of the environment because the tango has begun in the milonga.

Gradually, couples join the milonguero circle; all advance in the same direction, never retreating more than one step. The song doesn't seem fast when we hear it outside the dance floor, but within it the

rhythm feels accelerated, like a metabolism that knows its lifetime is four minutes and eleven seconds, no more, and wants to make the most of it. There's no time to think, to remember a sequence of steps learned in class or to make a *sanguchito*, at most an *ochito* or, if there's confidence, a turn around me. My job is to give Pajarito space to move and dance as she wants, as I want, as we want, in spaces chosen by me for her.

I'm nervous because I can't see who's behind me, and staying on the dance floor brings its own kind of tension - this dance is also a delicate game of avoiding other couples, a constant negotiation of shared space. It's a problem because the basic eight-count step begins backward. And every movement is born from it, it's the *lingua franca*. You have to know where you and your partner are, have panoramic vision. And that perspective isn't conquered with the eyes, but with the body; otherwise, colliding with someone will be inevitable. The old stories tell of how, in the tango halls of Buenos Aires, a single misstep could end in a knife fight on the street corner. They recount these tales with a strange nostalgia now, as if yearning for that dangerous authenticity.

One step back and our union acquires its own life. With my ears, I hear the music; with my skin, I hear Pajarito's movement, her embodied voice that penetrates my being telling me she has already taken a step, that we should take the next one.



Yo no sé cuántas noches de insomnio
en tus ojos pensando pasé
pero sé que al dormirme una noche
con tus ojos pensando soñé...
Yo no sé que me han hecho tus ojos
que me embrujan con su resplandor
solo sé que yo llevo en el alma
tu imagen marcada con el fuego de amor.

Yo no sé qué me han hecho tus ojos

FRANCISCO CANARO

When I met Pajarito, I knew that besides literature, she loved to dance. I, on the contrary, couldn't do it. Salsa and Cuban Son, for which she seemed to have a natural talent, made me so uncomfortable that I would short-circuit. The frustration was enormous even with the basic step, because I couldn't understand that it was *one, two, three, five...* the absence of *four* prevented me from coordinating my body, listening to the song, and paying attention to her. And although Pajarito never pressured me to dance with her, I would have liked to value that activity like she did, just for the pleasure of doing it together.

I met her through the Diana Arcade in Santiago, and there they had dance games where I could follow the rhythm of songs. I needed that linear and homogeneous structure ensured by the arrows on the screen and the steppable tiles of *Dance Dance Revolution* machines. I didn't like those games, but I could play them and finish a song, especially when the song had a constant rhythm and the difficulty was in moving around the machine, and not in following a changing rhythm. When we decided to get married, I told her that appreciation, and she said that she didn't know how to dance tango, but that she understood that the rhythm was constant in the songs and that it was a dance of movement more than coordination. So, for our first dance as husband and wife, we went to tango classes.

For the celebration, we rented a café near Santa Lucía Hill. The basement had the dance floor, which in mid-winter was dark and cold. I still sweated from nervousness. We chose a tango by Francisco Canaro that reminded me of her bird-like eyes. She, used to dancing with many people around, moved well on the floor, despite all the eyes fixed on us. I, however, felt evaluated by others. In our families' and friends' eyes, the dance went well because they never knew I was whispering the steps in her ear. They applauded and hugged us but didn't manage to appease the feeling of debt that remained in me: at the most important moment of our life, I couldn't transmit my intention with my body.

As a man, my role was to lead, that is, to direct the woman step by step. Now, what happened when she didn't take the step I indicated? It was easy for me to assume that she didn't understand what I wanted to express. My engineering training made me believe there were no ambiguities in dance, just as there aren't in a mathematical formula or in program code.

Shortly after we moved to Barcelona, where our studies distracted us from tango for a time. In our third year, we decided to take up dancing again. We found a school that was near the *lab*, run by an Argentine couple of teachers, Paloma and Benteveo. In their vision, tango was summarized in three concepts: the gaze, the embrace, and the walk.

The class wasn't just about dance, but also about integrating into the milonga. There you invite another person to the floor through eye contact between songs. If they avoid your gaze, they don't want to dance with you. If they receive and maintain it, you have a dance partner. I danced with Pajarito and, therefore, didn't worry about that.

However, I did worry about the embrace. The tango embrace is inclined; both people join their chest, sometimes physically if there's passion; other times, converging to contact, without achieving it if there's skill, and with separation if there's no self-confidence. The left hand is offered to the other person, who, upon accepting it, presents their

shoulder blade for one to receive it with the right hand and, afterwards, the other part rests their right hand on one's own shoulders.

It's a mistake to say that one embraces other people because the embrace is built between two. When one embraces another, resistance is created; when both embrace, synergy is created, an entity that is more than the sum of the two people who form it. I learned this when I embraced a Bulgarian woman in a class. She didn't speak Spanish nor know my worldview, and I didn't speak Bulgarian nor know who she was. Although we were both generously dressed, since it was winter; when we embraced, I saw the curve of her body form in my head and, when we moved, I felt how her breasts and abdomen reacted to the small shocks imposed by walking to the rhythm of a song. I wondered if she would have created a similar image of me and of the parts of my body, so that the dance consisted of drawing those two silhouettes in a shared imagination that gave pleasure to its members. Said pleasure caused contradictory emotions in me. On one hand, I would embrace Pajarito better. On the other, I felt it as an unfocused infidelity. I couldn't verbalize that conflict and it remained as an uncomfortable sensation each time such a moment repeated.

In a later class, that tension dissolved. Since Benteveo and Paloma often gave exhibition dances and rarely danced together, someone asked them if they felt jealous seeing their partner dance passionately with other people.

"When I dance, with whoever it may be, I do it with the woman of my life," Benteveo responded.

Taking advantage of the moment of trust, Benteveo answered other questions and commented on something: he was irritated because supposed tango schools had emerged led by people who had taken classes with him, but who didn't dedicate themselves to tango as he did. In that tone that characterized the character he adopted as a teacher, the Great Piola, he said:

"You cannot give what you don't have."

In that class he taught us turns dancing with Pajarito. I saw her leave a trail as she moved, a silk thread that Benteveo gathered with his body and made flutter through the air with delicacy and tenderness. She is the woman of my life, I knew it then, I felt it, but I still hadn't found the way to express it in the dance. That dynamic space between our bodies formed a void that I had to learn to give meaning to.

During that class, women and men separated to prepare their techniques. On that occasion, we both practiced the *ochitos*, called so for the tracing of the feet when moving. They are practiced separately because the directions are opposite. Men practice without supporting ourselves on anything, making the figure-eight path while maintaining ourselves vertical as we move. Women maintain their torso in a constant position, supported on a bar, while they move and rotate their legs.

"How beautifully Sofia moves her legs," Paloma commented in a class while Pajarito practiced at the bar. We contemplated her for a few moments. Her face was toward the wall, so she couldn't know that I was watching her. I understood then that my vision of the world was limited, that I had tried to give something that I didn't have. Until that minute, I focused on the forms, not on the movement, both in tango and in her body.



Avanzo y escribo
Decido un camino
Las ganas que quedan
se marchan con vos
Se apaga el deseo
Ya no me entreveo
Y hablar es lo que se me va mejor

El mareo

BAJOFONDO CON GUSTAVO CERATI

I discovered that the relationship with tango isn't so different from the one I had with video games. The basic tango scheme consists of eight steps. It has a walk on *three* and *four*. On *five*, the woman stops and crosses her feet. It's a beautiful movement, and if the woman wants, she can draw figures on the floor and in the air with the tip of her shoes, figures that the man doesn't see or feel. Figures she makes for herself. To break that scheme and walk freely, then, it requires that, instead of the *five*, the woman keeps walking backward. That disruption is communicated with the chest; not with the mouth, not with the arms, but with breathing and with the projection of momentum controlled by who leads the couple. Doing it well requires as much precision and subtlety as a hummingbird drinking nectar from a flower. It's an impossible movement to discern from outside. It's a secret, just as in fighting video games one appreciates spectacular movements on the screen without knowing how the person controlling the characters moves the stick or presses the buttons. But that person did have to press them in a specific sequence. In a *combination*.

We used to practice these movements in class. I would say that tango lessons consist of building and rebuilding that basic structure until discovering one's personal way of destroying it to dance freely. Knowing more and more steps doesn't contribute to walking better.

“Would you like the men to do the woman’s part?” Paloma suggested in a class.

After a prolonged silence, the first answer emerged.

“I’m too manly for those things,” said an older man.

“There’s nothing wrong with it,” Paloma responded. “It’s good to try new things. Remember that tango was born in the outskirts of Buenos Aires, where men danced with each other while waiting for prostitutes outside the brothels. Besides, in Spanish we call it ‘the man’s part’ and ‘the woman’s part’ for each role, but in English it’s leader and follower, without sex distinction.”

In the milongas, I had seen women leading other women. I had also seen diagrams of steps for both roles, though I didn’t understand that it was more complicated than seeing the world from a mirror and that changing direction around an axis wasn’t enough.

“For women it’s fucking hard to lead in tango,” Paloma continued, “not because they’re smaller, but because they’re not used to it. It’s not like in sex, where the woman leads or, if not, she doesn’t receive all the pleasure she wants. Men, listen: putting in and taking out isn’t everything; in fact, it’s almost nothing. The same here: knowing the steps by heart won’t get you anywhere on the floor.”

Her comments of that style were common. On one occasion, she commented to Pajarito:

“What nice tits you’ve got! If <PLAYER II> embraces you in bed like he embraces you here, you must have a great time.”

We blushed. We’re not ones to comment about our sexuality. We’re shy, though it’s also part of Chilean culture to be reserved. We understood there was a mix of factors in Paloma’s outspokenness: nationality, tango, and Barcelona’s freedom.

However, there was an additional factor that few knew about and that I discovered when we enrolled in the school. I’m obsessed with information, with its storage, indexing, and searching. I know how to find data about whatever I set out to look for. That’s why, when I want

to know who someone is, the first thing I do is search for this person on the web. In her personal blog, she openly shared her experience living with vaginal agenesis. This syndrome prevented her from developing a uterus and made her vagina an opening toward her interior. The way to give it shape was to have surgery to construct a vaginal canal, a procedure she underwent during adolescence. Being a teenager, day after day and for years, she had to push and press her interior with a tubular device. In her blog, she sought to share and receive experiences from other people living with this syndrome. Therefore, when I saw her dance, I imagined that for her tango was sex; it wasn't just another passion, but the passion that led her to give her entire body, to merge with another. I felt her dedication when she danced with me, felt the desire, not for me, but for the dance, for the expression.

"<PLAYER II>, would you like to dance with David?" she asked, perhaps noticing that I was drifting among my memories.

David was an acting student a decade younger than me; he was of fragile appearance, elegant, with small eyes. He wore overalls that displayed the vortex of his navel in his dark skin, connected to his pelvis by a path of thin hair. He helped the school by teaching classes and thus could opt for some free ones. I accepted the proposal with fear, not of dancing with another man, but of making a fool of myself. My legs and movements had no grace.

I positioned myself before him while the rest surrounded us.

"Embrace me," he indicated.

He offered me his right hand, I accepted it and extended my right arm. I surrounded his back over his shoulder, gently feeling where my hand fit well as if palpating a delicate membrane that could be perforated with the slightest excess force. Once embraced, he began to rotate his torso on its vertical axis. He rotated left, right, for me to follow him and manage to connect with him. It wasn't working for me. I got frustrated and made my body even stiffer. David moved his face back so our gazes could meet.

“Close your eyes.”

And I closed them, made the world and our bodies disappear. I gave myself to David in the territory formed by our embrace. Touch, sounds, breathing, all the blood circulating through my body; the movement of us both resonated in my inner universe, dark, without stars or lights. I recognized the *one*, the *two*, the *three*, the *four*. I didn't recognize the *five* and kept walking, although David had marked me a *five*. He reacted to my decision and kept dancing. My body interpreted his soundless words at will and he reinterpreted back, adapted, led me and let himself be led at the same time.

David taught me something: tango is a dance of two and of no one at the same time, of something between us capable of stirring pleasure regardless of what we carry between our legs.



Dicen que tu pasión me alucina
dicen que nuestro amor es prohibido
dicen que mi razón se ha perdido
¡y hasta dicen que huimos de Dios!
Dicen que tú desviaste mi vida
y me das este horror o martirio
pero yo, pero yo solo digo
¡la razón está en tu corazón!

Tu corazón

DONATO RACCIATTI Y NINA MIRANDA

Before learning to dance, I felt the pressure to do it well, as if there were dozens of eyes in the air scrutinizing us, demanding that I lead Pajarito well, that she experience the pleasure of dance and that we display a complex and acrobatic performance. Just walking? No way, it was too boring. If it were a competition, there would be no associated

score. If I were at Diana's, the flashes on the screen would matter, the victory counter would matter, the complexity of combinations and the message "42 HIT COMBO" would matter.

But I no longer care about the score. Today, in the shadows of the Maremagnum, among the silhouettes of couples composed of different carnal parts and linguistic parts, we move in rhythm, like thrushes, until finding a place to rest and feel our way through our steps, imagining that there are no more than those ghostly trails that I no longer fear.

Pajarito turns around me; one leg behind the other, without me lifting my feet from the ground; I keep my shoulders firm, caress her shoulder blade, wrap myself in her perfume. I want us to continue walking, for no *five* to come after the *four*, but another *four* and another, for there to be many *fours*. The floor isn't a circle where all couples form a flow that unfolds in the same direction, it's a Möbius strip where we won't stop walking, where our roles of man and woman cease to exist, where our genitals are no longer the parts that define us. I don't care about anything more than her breathing, the texture of her skin, the softness of her abdomen, the silk touch of her fingers in mine, the sufficient sway between us to strip ourselves of the world. She is the woman of my life. She *is* my life. I hold my breath, decrease the pressure of my fingers on her back and, determined that this instant be a sublime death, we continue.

The scene remains dark. The stars are visible in the sky; the shine of her small eyes that shows me the way illuminates more, her way, our way. As if I were the night and she were an infinite plain of pale and fine sand, I begin to caress her body with my mantle, without finding curves or divisions or parts, engulfing her presence with my darkness.



Without words, the tango embrace contains our union.



YEAR 3-2: RANDOM ACCESS MEMORY

One morning in summer I received an email from my mother with the subject “URGENT”. Hours later, through a screen, she told me:

“<PLAYER II>, your father is going to die. You must return.”



The return wasn’t immediate. With Pajarito we had to close the life we led in Barcelona: there were agreements to reach with the *lab*, furniture to sell, friendships to settle. With my advisor, Cid, we agreed that in December I could return to Chile and finish the remaining year of thesis remotely.

Meanwhile, I talked every day with my parents through Skype video calls. Conversations where we pretended the examinations were routine and focused on superficial topics. We didn’t comment on the photos my mom sent me of the spots he had on his legs and arms. He didn’t know, or didn’t want to know, that I had seen them.

Sometimes they asked me difficult questions, like “What do you do in your thesis?” I, like many of my colleagues, didn’t fully understand what I did and, therefore, could even less explain it. Still, on one occasion I told them about one of my experiments. I wanted to achieve that people with opposing political views could relate on Twitter based on their common interests. The inspiration behind the idea emerged from the memory of having met our friends Giuseppe and Dolores:

“The technique is called ‘intermediary topics,’ which are a bridge to bring people closer. For example, Dad, you could watch a soccer match with a communist who was also a University of Chile fan.”

“I’ll never watch a match with a communist,” he responded with his rough voice, worn by the tumor he had in his throat years ago.

I limited myself to listening to his opinion. Once he finished, I laughed. Sometimes I imitated his way of saying things, of getting angry about small things like the traffic light. That irritated him even more. Despite being such a grump, one of those who yell at the television, I loved him. We liked to eat ice cream, chestnut (him) and *lúcuma*¹ (me), watch Anthony Bourdain’s programs touring Chile. Eating was our intermediary topic, we liked remembering when we would go eat cheese empanadas at El Rápido, on Bandera Street, making the gesture of entering the door, indicating a three with our hand and, upon reaching the counter, having the empanadas hot and ready for tasting.

After ending the theater of the calls, I would usually cry in Pajarito’s arms, without any mask.



His condition deteriorated after our return. Since my schedule was the most flexible in the family, I dedicated much of my time to accompanying him at the clinic. I carried my laptop to work in his room, writing an article for a conference with the results of my experiment and preparing the presentation I would give in Korea. He enjoyed telling me stories about the school he directed and was interested in Pajarito’s experiences, who had joined as an educational psychologist. Sometimes, the room became an improvised office: he planned schedules in notebooks and maintained telephone conversations with his administrative team.

¹Lúcuma is a native fruit from the Andes.

I saw him full of vitality and felt sure everything would turn out well. If he felt fear, he didn't show it. I didn't either, though I couldn't stand seeing the nurses prick his legs again and again looking for the last vein that could resist one more extraction. I would escape to Independencia Avenue, take the first bus heading downtown. I would get off at Merced and play a few tokens at Diana's. There I wouldn't cry, I wanted to, but couldn't; I could beat whoever came looking for a fight at *Street Fighter* as many times as I wanted.

One day hope arose. His oncologist found frozen stem cells from the bone marrow autotransplant he had done years before. They were in the blood bank of University of Chile. We didn't know they existed (neither did the doctor), but they were intact, ready to return to the body they came from. They weren't a cure, rather they would give him extra time, a *rewind* in his immune system. We just had to wait for his condition to allow him to receive the transplant and three checks in cash. Everyone's mood improved; mine, enough to travel to Korea with enthusiasm.



I walked the streets of Seoul thinking of all the things I could tell my father: the colorful streets, the fanfare that sounded in the metro every time a train arrived, the respect for older people and the *machismo* visible in public spaces, different from Chilean *machismo*, but no less pronounced. I took spontaneous photos with my phone and, since I didn't have roaming, would send them from any open wifi network.

The conference took place in Gangnam, a district of excessive skyscrapers. I rented a small apartment, surrounded by bars, cafes, gyms, and barbershops. Each venue had speakers toward the street playing k-pop at full volume non-stop. There I had the opportunity to reunite with Lidia, a friend from the doctorate. She finished writing her thesis right during the conference and I accompanied her when

she sent it to print. I imagined myself at my own thesis defense with my parents accompanying me.

The day before my presentation I met with a Korean friend I had met in Barcelona. We went to a barbecue place. They gave us the meat marinated in sweet and sour sauce, handed us scissors and lettuce leaves. The meat was prepared on a grill integrated into the center of the table and, once ready, was wrapped with the lettuce in hand. While we toasted with soju, she told me she had abandoned her doctorate, that she felt better working at a startup, without the stress of uncertainty or expectations. I told her I didn't know what I would do once I finished my thesis, though that wasn't my concern at that moment.

Tipsy, afterward I walked thinking about what I would tell my father about this Korean BBQ experience. It was midnight. There were still offices with lights on, Koreans working non-stop, twenty-four-hour convenience stores open with rice balls and flavored drinks, and teenagers kicking beer cans.

Upon arriving at the apartment I had dozens of messages from Pajarito. She told me, with increasingly sad words, that my father had had an attack. His gallbladder had burst, filling his blood with dead and infected cells. He spent an entire night writhing and moaning, between emergency exams and on-duty nurses who told him he was exaggerating to avoid injecting him with morphine.

"They'll operate on him as soon as possible. Go to sleep and connect when you wake up. I'll try to get you to talk to your dad. I love you," she wrote.

I couldn't sleep. I couldn't cry either, despite the anguish. I was in an apartment that wasn't mine, twelve hours in the future. And, just as we did in Barcelona almost every day, I began to listen to Cerati, from whom I would steal lyrics to use as thoughts:

And when I look for you,
there's no place where you aren't

Thinking about it,
I know I always knew the outcome
A compass of light the lighthouse drew on the sea,
with a blue kiss
the foam turns to salt.

At dawn, Pajarito sent me another message: my father was about to enter the operating room. It was my last chance. I connected to Skype and called him. I imagined the situation: she, with her tenderness, holding the phone next to him, lying down looking at my mother, telling her with his senseless optimism that everything would be fine, that he was strong, that we should believe in God.

“Now <PLAYER II> is connected,” said Pajarito. “He’s on the phone.”

“Son...”

Son, son, son. It seemed like an echo. I responded to him, but he kept saying the same thing. Couldn’t he hear me? Was the connection bad? Perhaps nerves prevented him from hearing. Perhaps I didn’t shout as loud as I could shout. Perhaps he thought the same and that’s why he resigned himself to telling me the following:

“Son, I love you very much.”

His serene voice erased all fear.

“I love you,” Pajarito told me again, and hung up.

I thought about the pain that had tortured my father all the previous night. I couldn’t imagine it.

It was the first time I gave a talk without nerves at a conference.



The journey was long: from Seoul to Istanbul, with many hours of travel; from Istanbul to Madrid, with many hours of waiting walking non-stop through the airport to distract myself; from Madrid to Santiago, where

I was lucky to be in a row with three free seats. I was so tired that I slept during the entire flight.

I recognized Pajarito and my mother behind the sea of taxi drivers with signs in the airport's arrivals section. I hugged Pajarito first, buried my face in her neck. Through the strands of her hair I saw my mother's face as in a broken mirror and hugged her afterward. She told me he was no longer suffering. He was in an induced coma from which he would never wake up.

I wanted to shower. If I was going to face death (his death), I wanted to do it clean. Or maybe I simply didn't dare to see him in that state where the little that remained of life was artificial.

The last floor of the clinic was reserved for those who would die sooner or later. There was his inert body, with a mechanical respirator, in a pose articulated every four hours by a physiotherapist. A nurse explained to me that the machine only supported, it was the body that kept breathing. The vital signs shown on the Holter monitor were real.

While waiting for the connection at Madrid airport, I had asked Pajarito to read something to Dad. It was half of what I felt, half of what I could express, because I didn't have him in front of me. There, too, I sent a WhatsApp message to a doctor I knew, asking if one could dream while in a coma. If when I spoke to him, he would be inside a dream, in a world that was breaking apart while searching for his memories and hearing my distorted voice from the outside. The answer was negative.

In front of his body, I barely managed to evoke the other half of what I felt. My father's pulse line maintained its rhythm throughout, a smooth curve unmutable before my crying.

The next day we received a call saying the moment had arrived. We went to see him and that curve flattened before me. His hand reacted to breathing and, in an instant as imperceptible as a hummingbird's wing beat, it stopped moving, stopped trembling, stopped harboring blood flows.

My father had died.



“I dreamed about Padilla,” my mother told in the car, on the way to the cemetery.

My father considered that Gastronomy teacher his enemy at the school. Both were military admirers and Padilla had a martial attitude. His students respected and loved him. He had problems with the owners, as he accused them of keeping the subsidy and not investing in the infrastructure of kitchens necessary for culinary training.

According to my mother, Padilla once said: “It’s unacceptable that we prepare food in rusty kitchens! My students don’t deserve these undignified conditions. The only new things are the knives. And that’s because each student must have their own.” That was a problem the school had suffered since before my father’s arrival as director. Perhaps, taking advantage that the boss was new, Padilla began to organize a mutiny among the students to take over the school and create a scandal.

“When your father found out, he went to talk to the owners to increase the budget. They said they wouldn’t do it, that the law didn’t require them to.”

But Dad didn’t tell that to Padilla. Silently, he financed the kitchen improvements from his own pocket. That temporarily solved the problem. When Padilla learned that the money had come from the director’s pocket, he criticized him that it wasn’t his responsibility to solve the problem that way, and told him he would seek ways for the owners to stop using legal loopholes to keep the money that the State provided for the students.

Dad was loyal to the owners and knew that, in terms of money, it was impossible for them to yield. It had already happened to him the first time he had cancer, when he begged them to keep the non-taxable part of his salary, because it would be lost with medical leave. Despite

the refusal, his loyalty didn't break. I'll never understand his attitude, but I do understand his motivation. And it's that Padilla and he had opposite views, but their intermediary topic was their students' well-being.

The shadow of Padilla and his mutinies was always present in my father's management. His illness interrupted everything. And that day, on the way to the funeral, Padilla was also behind us, in his huge pickup truck, with so many bouquets in the back that some flowers fell on the road. Behind him, a bus carried the students who, in their most elegant restaurant uniforms, had kept vigil over my father's coffin during the mass.

Already with the coffin in its final stage, a master of ceremonies expressed memorized phrases that were emotional for other people, though for me they were just empty words. I remained as the strong person in that situation, the son who maintained composure and ensured things worked, including playing the music he would have chosen for that occasion: the Gladiator soundtrack. The moment I burst into tears was when I pressed *play* on my phone, just as the coffin began to descend.

Then the condolences began. Adults older than me approached to shake my hand and thank me.

"He was my homeroom teacher in senior year and saved my life," said one of them.

My experience during the doctorate allowed me to understand how important it was to guide someone and that afternoon my father indirectly taught me that if you guide someone well, you can even save their life. It seemed that his legacy was in the hands of someone so different, so opposite: his own son. I understood that he wasn't a man of emotions either and that, besides our intermediary topics, we had the same mission.



Months later my experiment was accepted at the conference. I cried again because that time I spent working, instead of attending to my father, hadn't been lost. *Thinking about it, I know I always knew the outcome.* I remembered an afternoon with him in the clinic along with Pajarito, with a Brazilian soap opera in the background, telling him about the results I was obtaining. I remembered another afternoon with him in the clinic along with my mother, with a morning show in the background, showing him the results on my PC, explaining the graphs to him, telling him that yes, maybe he would watch a match with a communist, because he had already watched movies with me, a leftist who came from who knows where.

I remembered another afternoon with him in the clinic, just the two of us, watching action movies on DVD.

When remembering these scenes repeatedly, they would become distorted like a VHS tape copied many times. I had believed that memory worked like a library indexed by Google, where you make a query and get exact results, ordered by importance. But rather I had a RAM, a random access memory, where everything that happens in the moment is stored and only some things persist on the disk. How to know what was saved and what wasn't? I don't know which of the memories in the room is fiction.

There are two photos on my computer that catalyze images that, I'm sure, are memories. The first is the last photo we have together: we took it on my birthday, a few days after returning to Chile. I don't remember the specific night with the photo, but rather previous family birthdays, Dad and I driving down Irarrázaval after going to get a lúcuma cake at Teatro California. Always the same one, with a chocolate heart. Today, as if the flavor were a bridge, every time I taste lúcuma I feel he's close, eating chestnuts. Thus, I can conclude it's a real image.

The other makes me remember the echo of his voice in that last call. I traveled to Korea with the hope of the transplant, so much so that I stopped understanding our dialogues as a potential last conversation. The photo shows people entering a train: in the center, a boy was reading *The Great Gatsby* in hangul. I wanted to show him how complex the metro network was compared to Santiago's, in a map that timidly peeked out from above. He responded within minutes, wishing me success in the presentation. At that moment no one imagined that the leukemia was advancing, microscopic and undetectable. The photo has no framing, is out of focus and lacks color, like an invented dream.



I have difficulties differentiating between real and imagined memories. Dealing with that uncertainty and its consequences in grief has been part of learning to be autistic.



YEAR 4: PALABRAVENTURA

My art originates from hallucinations only I can see. I translate the hallucinations and obsessional images that plague me into sculptures and paintings.

YAYOI KUSAMA

I met Lidia in one of the first doctoral program seminars, one afternoon of that winter that can't decide to be cold in Barcelona. She was the last colleague introduced to me and the first Spaniard; most people in the program were from other countries. The fact of speaking Spanish made us connect immediately: "<PLAYER II>? Pajarito? You really use different names in America!"

One of the first things we discussed was the fact of doing a doctorate. In this era it seems a lost effort; in fact, it's demonstrated that, if considered from a financial point of view, doing one is losing a lot of money ("Ah, *pasta*," she said, after asking us what *plata* means). And for those of us who moved countries, it's even worse. With those antecedents, anyone might think Pajarito and I were crazy. As if to console us, Lidia told us: "Having a doctorate is important, you know? Doctors are the only people who don't have to take off their hats before the

king.” She told us that the king signs doctoral diplomas and that’s why they take so long to be ready after graduation.

At that moment, graduation seemed like something far away, beyond the horizon. Besides, neither Lidia nor I were there because the investment wasn’t good. Sometimes you have to sacrifice something to get where you want to be. Although we didn’t yet know what the something was nor what the destination was.

My comment about sacrifice prompted Lidia to share her story with us. She had returned from London a year ago, where she did a master’s in Natural Language Processing. She had been sponsored by one of Spain’s most important banks. Her return was forced, because shortly before defending her thesis she suffered a panic attack. One day she woke up on a stretcher in the middle of a hospital hallway where she didn’t know how she had arrived, she only remembered her name. She hallucinated with letters and words in the air, which interfered between her and reality. That was her turning point. Contrary to what intuition indicates, she decided she had to work more, prove more. Once recovered, she defended her thesis and returned to Madrid determined to find someone who would guide her, not as a professor, but as a mentor. She looked for people who could orient her, but she wasn’t convinced by any professional’s trajectory until she found Cid Pollendina’s curriculum, which surprised her because he seemed to be one of the few people in academia whose research had “impact in the real world.” She wrote him an email telling him she was a linguist by profession, that her master’s had introduced her to text analysis and that she was looking for an advisor for her doctorate.

Cid’s electronic response contained several topics of academic nature. However, a paragraph of two words was like a black hole that absorbed everything for Lidia:

“Are you dyslexic?”

When Lidia received the response, she asked herself incessantly: “Yes, I’m dyslexic... How did he discover it?” That was something only her parents knew, a secret that she strived to guard. Her teachers at school had already forgotten her and her diagnosis was only registered in a folder in some dusty storage room. And, nevertheless, a person had been able to realize it. That’s how she knew she had to do her doctorate with him.



Although one in ten people is dyslexic, those who had Lidia as a student (and perhaps most teachers today) aren’t aware of it. They believe that when a child can’t read, they have no reading comprehension. As they told Lidia, “she was born stupid and will stay that way,” or “if she doesn’t understand the text, how can she be taught?” Lidia lost count of all the times they told her she would be a failure. The truth is that she understood very well, although the cognitive process that recognizes letters and words, and gives them meaning doesn’t work in her the same way as for other people. For Lidia, reading was like trying to maintain balance on a great wave of floating letters: “It’s not like seeing a spelling mistake, because if someone writes a word with ‘v’ instead of ‘b’, you can still interpret it well. It’s like facing a text that has been censored with letters instead of black spots... like moving letters that sometimes escape from the pages.”

That Lidia had to review each text she wrote for hours didn’t help either. Although it might seem to her that she had properly written an email, she couldn’t know if it was really correct or if her dyslexia made her believe so. She verified word by word multiple times, and although she wrote wonderful texts, she didn’t believe it possible. Nevertheless, she was aware of the importance of the discoveries she made in her experiments, like when she determined that sans-serif typography is more legible for dyslexic reading. She even characterized the move-

ment of pupils while reading: those of someone dyslexic resemble a seismograph during an earthquake, while those of non-dyslexic people make a smooth sweep following the flow of the narrative.

Language misunderstandings carried over to her conversations. When she talked with me or Pajarito, we always had to ask ourselves what words meant. And it's that, although we spoke Spanish, we were Chilean. No matter how much I tried to neutralize my accent or vocabulary, there are words that are rooted inside, like *pucha*,¹ or words that are used in both countries but have opposite meanings, like *chulo*: something *chulo* is *bacán* (cool) for her, but *cuma* (lousy) for us. Lidia said I was *tiquismiquis*, but Pajarito emphasizes that I'm less *mañoso* (picky) than before. And when we had a problem with the hot water thermos in the apartment, Lidia advised us to call a *manitas*, because in Spain there's no *maestro chasquilla* and even less *gásfiter* who checks an apartment, but rather *lampista*. There were also mix-ups in her meetings with Cid, because when she showed him her research progress, he responded *ya* (yes) and for her that meant he was dissatisfied. And she would explain her progress again, now with more detail (and concern), and he would respond *ya* again.

There are tests to detect dyslexia, but they must be administered by specialized personnel. Instrumentation and time are required, resources that school teachers don't have. Just as Cid recognized that she was dyslexic, and as she eventually understood that *ya* meant something else, Lidia wondered if a machine would be capable of detecting if a child was dyslexic. If she could demonstrate it, then all those students who are erroneously evaluated, and seen as a failure, could aspire to receive a fair education. From this perspective, discovering or inventing the program that detects dyslexia in children wasn't just a research interest, but a life purpose.

According to the scientific method, once you have a hypothesis, you need to gather data to conduct an experiment. But which data? Cid

¹A expression of sadness.

revealed to Lidia the secret behind the discovery of her identity: he believed there were recurrences in dyslexics' writing that were different from those typical of neurotypical people. Dyslexics' writing errors were like linguistic fingerprints, unique and distinguishable from common spelling errors. Under this premise, Lidia conducted campaigns for parents from different schools in Spain to send her scanned language tests, with their children's results, regardless of whether they were dyslexic or not. One by one, she reviewed them and coded the characteristics of each child's writing: number of words and the location of errors, separating orthographic from grammatical ones, and considering repetitions of the same mistake in different tests. And, of course, if they were from someone with dyslexia.

The next step of the scientific method is to test the hypothesis with statistics that would allow discerning if the differences in errors corresponded to structural differences, or if they were a product of chance, because it could be a matter of luck (both good and bad) in data collection. Lidia had to ask herself how much errors varied in the dyslexic group and in the non-dyslexic group. And once that variance was determined, ask herself if it was enough to systematize detection. Thus she could answer the question that no one had asked about her for many years: if a child makes errors in their writing that resemble these patterns, the probability that they have dyslexia increases. That's what's known as a screening test and allows accelerating a diagnosis by specialists. Lidia found that it was possible. She had made another discovery, the most powerful of her thesis.

But publishing papers wasn't enough for Lidia. She wanted to impact people's quality of life and that's why she had turned to Cid. Now she knew she could create a tool and make it available to the Spanish educational community. Money was the only thing missing, because the existence and operation of such a tool requires engineering, storage, marketing, public relations... among other qualities that are far from the reach of a thesis student or an academic at the beginning of

their career. Therefore, Lidia decided she wouldn't follow a traditional academic career, but would raise her own venture. Besides the papers and finishing her doctorate (that was beyond question, she would finish it), she would create a company and seek funds.

She had already competed against others in academia and against herself in life; competing with other entrepreneurs for funding would be another challenge in the same line. Instead of convincing academics who review articles or grant scholarships, she would have to convince those who invest money. The idiosyncrasy of both profiles is different, but the mechanism of action is equivalent (or so she believed). After several attempts to seek capital for the company, the path began to look promising when a telecommunications company gave her a prize to finance her proposal: a video game that helps children develop linguistic skills. It would be based on overcoming reading and writing challenges, and the errors that children make while playing would be used to evaluate the probability that they have dyslexia. Its name would be *Palabraventura* (*Wordventure*).



Shortly after the creation of the first version of *Palabraventura*, a fulminant force took us to Chile: my father's terminal illness. Thus, I learned that the sacrifice that corresponded to me was his last years. Along with my mother they were teachers, and he had managed to fulfill his dream of directing a school, where he gave work to Pajarito as a psychologist. After a few months leukemia took him away.

Shortly before my father passed away, I had the opportunity to go to Korea to present my thesis results. At that conference I met with Lidia. She had already finished her thesis, but hadn't submitted it yet. She would do it from the conference because Cid was there too. I remember accompanying them in a café near the event building, it couldn't be in the meeting rooms because there would always be someone in-

interrupting Cid. Lidia, with all her recognitions behind her, still felt she needed to review the text one (and another and another) last time. Cid reviewed the format, since the document was written in the LaTeX system, the same one we use to write papers, where the format is programmed instead of edited visually like in Word or Google Docs. When he was happy with that, he left; he had to travel to the United States for the next conference. I stayed accompanying Lidia, having matcha tea, reviewing how impeccable her writing was. But she couldn't see it that way and didn't want to press the button that would send the PDF to her boyfriend in Barcelona for him to take it to the printer.

She couldn't. She even asked me to do it. But I refused, because it was her quest, not mine.

I had a return flight scheduled for the next morning. Hours before I had learned that my father was in an induced coma, because, conscious, he would have felt pain a thousand times greater than what he had felt before being urgently operated on. My duty was to wait and accept. Lidia's was to press the button.

I hugged her. I didn't say anything, there were no words in Spain, or Chile or Korea that could capture what we were living. And when she gathered the courage to accept that she couldn't and shouldn't make more changes to her text, she sent the email and cried. I cried too... and finally I did manage to find a word for that moment: *saudade*.



I finished my thesis working remotely and, at the same time, Lidia defended hers with honors. A year and a half later we returned to Barcelona for my own doctoral defense. We went with my mother, who was also a principal of a high school in Peñalolén. Like the one my father directed, both were establishments aimed at vulnerable students. They weren't good students according to traditional measurements; they couldn't be with classrooms with more than forty children, each

with terrible stories behind them. For them, school was a temporary escape, not a place of learning.

The teachers, regardless of how much vocation they had, had to navigate low salaries with critical situations, from abrupt violence in the classroom to nighttime delinquency at the end of the day. In this context there were children who, despite having to sleep next to five other people, or having nothing to eat, or even having to be witnesses to their caregivers' sexual activity, not necessarily their parents, wanted to emancipate themselves from their environment and grow. They had the potential to transform the world. That's what my mother and Pajarito told Lidia and Cid the night before the defense, at a restaurant.

Lidia told us about her current experiments. She was aware that her model, as the set of programs, equations and data used for prediction is called, was valid for Spain. She wanted the detector to work for any variety of Spanish, not just for her country. She had recruited teachers and psychopedagogues from several Latin American countries to conduct tests *in situ*, but Chile was missing. It wasn't easy to find collaborators because it had to be prepared people, who had the ability to install programs, observe children, take notes and, above all, evaluate learning difficulties. Upon catching up with our story, she glimpsed an opportunity.

That night two Chilean schools joined the experiment. Lidia felt fortunate, because in a meeting with friends an opportunity appeared that would allow improving *Palabraventura*. Pajarito could directly supervise one school and, indirectly, the other. Moreover, Lidia verified (and my mother discovered) that I wasn't so *tiquismiquis* because I tried the baby squid, cooked in their own ink. They didn't know that I had stopped being *mañoso* because of something Cid told me at some point: "If you're a researcher, you must try new things, not only in academics, also in personal matters, and that includes food." Both of

us learned with Cid the power of language to understand, predict and transform.

Time later, from Santiago, Pajarito would tell Lidia her intuitions about children's behavior through video calls, like "transcription games with ambiguous consonants are very difficult for dyslexic children." They were doing pilot tests to determine the difficulty and scope of the final tests. They knew *Palabraventura* was fun. But that wasn't enough to know if it fulfilled its purpose of detecting dyslexia in a general and, above all, vulnerable population. Lidia and her team looked for ways to systematize the detection of errors in what their players wrote and how they interpreted texts. Pajarito monitored how children played and applied different surveys and tests to those who had played. She would go to a class's room and take out, with permission from the teacher in charge, a group of three or five students. Each night she would tell me that she had interviewed ten, fifteen, twelve or even twenty children in total.

Rumors started spreading during recess: "What was that game that Miss Sofía had? Why was it mainly reserved for the misfits? What made them special?" In a school like this, where violence hides in plain sight, children without any evident problem could be counted on the fingers of one hand, so Pajarito had to focus on the most severe cases. Non-dyslexic children didn't realize that participants of all types were needed, not just dyslexics, but, being more numerous, they felt discriminated against.

After some months of experimentation in Chile, in parallel with the tests that were also being carried out in Argentina, Mexico, Colombia and other countries, there was already enough data to evaluate *Palabraventura's* effectiveness. As a main result, 86% of the predictions made by the system were correct. The team couldn't believe it: a tool that could be implemented anywhere in the world at low cost had a success rate they hadn't imagined. A game made it possible.



Palabraventura's path wasn't free of problems. As the global results were strong, Lidia sent them for review in the academic big leagues. However, the enthusiasm that arose with the results didn't find an echo in the community: the article was rejected.

With time one learns that the pain of rejection can become the joy of a new opportunity. That's why Lidia knew that *Palabraventura* would grow more and that, sooner or later, that article would be published. The opportunities didn't cease. A technological giant offered her dream funding. The meetings were hopeful and, if there was something that could guarantee the application of *Palabraventura* on a world scale, it was the participation of a company like that. Lidia had learned along the way and asked Cid to review the contract they proposed. He discovered they were granting all exploitation rights of the game in exchange for little money. The contract was written in such a way that it was difficult to realize the maneuver if one didn't know about it beforehand and the difficulty increased for a dyslexic person. Life and business were a game, and it was easy to take a misstep that would end everything. Fortunately Lidia relied on Cid's advice and found more trustworthy partners. "All that glitters is not gold," is said and understood the same way in Chile and Spain.

If upon returning from London, after her master's, Lidia had known that she would end up making a game and that game would change the world, she would have thought it was another delusion like the one that took her to the hospital. She wouldn't have imagined that *Palabraventura* would be a tool used by municipal governments to evaluate entire populations. She wouldn't have imagined that she would receive tributes like a mural with her portrait in a school, among other shows of affection and admiration. The impact of *Palabraventura* was such that one day Lidia received a telegram: the king of Spain communicated that

she would be recognized with a national award. If there was a recognition that could boost the adoption of her technology in Spain, it was that one. She attended the award ceremony without a hat.

P.S.: After a long time I received my diploma. It didn't come signed by the king, but by the university dean "in the king's name." How *fome* (boring)!



Pajarito and Lidia taught me to overcome death and uncertainty when these wanted to drag me to the bottom.



YEAR 12: THE ECHO OF A SCREAM

Along with Pajarito we were away from Chile for just over three years during my doctoral process. Upon returning we discovered that not only had we changed, but so had the entire environment. And now, almost ten years after our return, I've realized that I can't connect with those who were my friends in Chile. Despite having the opportunity to see them often, I feel that the distance separating us grows every day. Sometimes I ask them how they are via WhatsApp or respond to their posts on social networks and, truthfully, almost nobody responds to me. They don't comment on the content I publish either, and don't even talk about meeting physically. I can count on the fingers of one hand how many times they've asked me to meet for coffee.

I've heard similar stories from people who say you can't make friends in your forties. I wonder if I ever really had them, especially in Chile. And I remember when I studied at Liceo Lastarria, a traditional school in Santiago where only men were enrolled and where bullying was part of the daily routine; I dare say it was even key in relationships, as it defined groups and hierarchical positions. In fact, not everyone had a group to belong to. One of them was Sebastián, a withdrawn boy who liked mathematics, soccer strategy, and Islam. This last interest defined his nickname: "the Muslim."

It was an interest that his classmates didn't understand, since his family was Catholic (or so we believed). Soccer saved him from harassment sometimes, because he used to be the class coach in playground matches or in any type of competition where the class was present.

In high school, one of the ways to demonstrate hierarchy (and, therefore, power) is the number of friends someone has. That's why boys like Sebastián were often rubbed in the face that they had no friends. He, much more pragmatic than the rest, on a day when he was being harassed by a group of mocking boys, pushed away those who were pawing at him and shouted at them: "I'm not friends with anyone!"

The classroom fell silent, everyone perplexed by the depth of his raspy voice that echoed due to the height of the ceiling.

And then we all laughed unbearably.

Back then we didn't have memes, at least not under that name, although certainly the shout became another of the vocal legends that used to be repeated during recess. Sometimes they would say "I'm not friends with anyone" as a response to something, other times it was used as a way to settle a matter that perhaps had nothing to do with Sebastián, even when he wasn't present. The shout (it was always said shouting or pretending to shout) had acquired its own meaning, inspired by how he won his argument: it wasn't that he had no friends, it wasn't that others didn't want to be his friends. He simply was not a friend. He didn't seek friendship.

Sebastián moved to another class within the school the following year and in the four years of high school we didn't exchange a single word. We met again later, at university, because he had also entered to study Engineering, although he wasn't interested in computing, like me, but in mathematics. We only coincided in the hallways during classroom changes. We didn't greet each other. Perhaps he didn't recognize me, why would he? I was one more of the others, my face wasn't important to him, I was just another shadow that sometimes mocked and was sometimes mocked too. Why do I remember him so much, then? I imagine that, just as he was a fan of soccer and numbers, I was (still am) a fan of stories. That's why I didn't forget his shout.

Now, from my adult diagnosed perspective, I recognize in Sebastián the signs of neurodivergence, such as the focus on special interests (perhaps soccer wasn't such a special interest, but Islam was, especially in Chile at that time), having a different way of (not) relating to other people or, rather, not seeking relationships and focusing on the relationship with oneself. When thinking about him and his shout, I can understand two aspects of my life that I was afraid to comprehend. To be honest, I still am: using a mask to fit into society and not understanding *close* friendship.

I emphasize *close* because I have friends in different places around the world, whom I've met in my travels. With these friends we see each other once every few years, without the expectations of seeing each other more often. When we coincide in a place, whether for an academic conference or other circumstances, we meet and that cliché phrase of feeling as if no time had passed since the last time becomes reality. Perhaps it's precisely this lack of expectations in others that makes this type of friendship work for me. I've wondered if these people were ever friends or if I was under an illusion where I misinterpreted having acquaintances who are always friendly and who get excited to see you because you remind them of good times. I've also wondered if I really handle the social mechanisms to sustain a friendship.

Perhaps someone did consider me their friend, but I wasn't there when they needed me or I didn't say what I had to say when I should have said something. I've made mistakes too.

Perhaps friendships die when separating at the different crossroads that each life takes, but we don't want to assume it because we see it as a failure, despite it being just the natural course of things. Some friendships are a fire flower that lasts a second; others, the flame of a lamp that accompanies you on the path. Both are made of light.

Perhaps I needed to build more bridges, find more than “intermediary topics,” seek also “enduring topics.” For the interest to not be outside, but inside.

I turned forty shortly after my diagnosis and I feel fortunate to share a common life project with Pajarito. And I exclaim: I am neurodivergent and I can feel and love, because I dare say that I understand love. Together with Pajarito we’ve been together for twenty years, taking care of each other and learning from each other. I don’t need more than that, but I cannot deny that I’m immersed in a world where what I need isn’t the only thing that matters. Thrushes are monogamous and territorial, but they still shelter in small flocks during winter nights.

The doctorate and what came after was our winter; our adventure friends, that flock. But each one has already migrated to their own place. Dolores and Giuseppe are still together, living in the United States, but they no longer research. We send postcards to each other every year, we meet every two. The last time we saw each other we toured Chile: Giuseppe didn’t like piure, Dolores loved Chiloé. Nuria retired from *Street Fighter* to dedicate herself to poetry and teaching, away from the community where I met her. Lidia continues changing the world with *Palabraventura* and also seeks an internal path, as she divorced once and has married for the second time in Pamplona, an event we were able to attend. Cid got caught up in power struggles within the company and the *lab* closed, though he was compensated and reinvented himself as an artificial intelligence innovator in the United States; we continue trying new flavors when we meet again. Rosalie is research director at a technology company. With my students I try to have the same treatment and respect that she had with me. She gave me part of her humanity and now it’s my turn to share it. Rafael has also been successful. I don’t hold a grudge against him, we’ve talked in a friendly way when we meet at conferences. I understand he took the decisions he considered correct for his career. Academia is a competitive and ruthless place, where numbers matter more than

people, so I understand that some people follow that path. It's a matter of personal priorities.

With Pajarito we have a publishing house that has allowed us to create something of our own. My mother has already retired and there are still people who recognize her and thank her for her work in the schools.

Now, this text is unfair because it focuses on the relationship with my father, but, just as Pajarito and I have our publishing project, my parents had their common educational project. When I review family event photos, I realize that my father appears in more photos than my mother. Her absence in family photos reflects a systemic inequality that persists: while men starred in events, invisible women worked in the kitchen. I hope those inequalities end. Sometimes I commit them too despite being more aware of them. On the other hand, perhaps the nicest record I have is a video of both of them grinding corn to make a cake in Santiago, when we visited them during the doctorate.

I've had the fortune to surround myself and meet with people who have taught me to love and grow. However, the echo of Sebastián's shout will continue following me wherever I go. For decades, before my diagnosis, I strived to appear neurotypical, masking my true way of being, a second player instead of my true self, and I pretended to have friendships and knew how to keep that illusion alive. The illusion has broken, I'm clear about who surrounds me and whom I love. I won't seek to publish a paper with what I've learned and continue learning, although it's possible that I'll publish some stories where I accept who I am now: the <PLAYER I> of my own life.

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