

DEAF

AN UNKNOWN AND UNJUST WORLD

... but not for much longer



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PREFACE

In the chaotic scene of a hospital emergency room, a wounded woman with multiple lacerations desperately tries to communicate with the attending doctor. Her eyes reflect profound anguish, but her gestures— full of impatience and pain—are incomprehensible to the doctor, who, caught between confusion and urgency, watches in frustration. The woman, crying, attempts to convey a crucial message: she needs to know what happened to her daughter, who was with her in the accident.

The last image she remembers is of her daughter with a severe head injury, and she desperately needs to know if her daughter is being treated and if she will be okay. However, the doctor cannot

understand her. The only thing she can manage to say is to ask the woman to calm down, assuring her that her wounds will be treated first, and then they will try to communicate more effectively.

The injured woman continues trying to make herself understood, but her efforts are futile against the linguistic barrier that isolates her, deepening her distress. After a few minutes, the doctor realizes the truth: the woman is deaf and has been using sign language to communicate all along.

When asked about this scene, hundreds of people reflect on the pressing need for true inclusion. They affirm that every hospital in the world should have sign language interpreters to ensure that deaf patients can communicate effectively in critical situations.

Finally, someone suggests giving the woman a piece of paper and a pencil.

It is at this moment that another harsh truth surfaces: like millions of deaf people around the world, the desperate woman cannot use reading and writing as an alternative means of communication.

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Her education has been limited, and sign language is her primary mode of expression.

This moment reveals a deeper and more painful reality: the communicative barriers faced by deaf people extend beyond the lack of interpreters. They also encompass a lack of competence in written language. Globally, most deaf people cannot read or write.

The scene ends with a powerful reflection on the fundamental right of deaf people to literacy in the language of their community. They should not have to rely solely on sign language. They must also have the right to learn to read and write.

In my conferences, I often begin with this scene, followed by a brief exchange with the audience, where I ask: At your age, think about this: what would your life be like if, after studying at least through primary and secondary school, you had never learned to read and write?

This is the reality faced by deaf people. It is imperative for societies to guarantee inclusive education that enables this population to participate fully and communicate effectively in all areas of life.

This is what this book is about.

The primary goal is to raise awareness among the public and the broader community about the realities faced by this population.

This book also aims to present an alternative to resolve this situation: logogenia, an innovative methodology I discovered more than 20 years ago and have applied and developed to this day. This method has proven to be remarkably successful.

According to the World Federation of the Deaf, there are 70 million deaf people globally, 38 million of whom are children. It is imperative to change their story.

With this motivation and considering that, for the first time in human history, we have powerful technologies from the Fourth Industrial Revolution, this is the path to exponentially transform the challenges faced by deaf people worldwide. By combining artificial intelligence technologies and video games with logogenia, I propose a transformative solution in this book.

Additionally, I want to raise awareness about the real world of deaf people, helping others

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understand their behavior, actions, limitations, and the immense value of having their own language—sign language.

I want the importance of their ability to speak, understand, read, and write to be recognized.

Reading and writing, something so simple yet so powerful—why is it denied to deaf people?

It is not fair.

They, too, have the right to communication, as it decisively impacts their lives.

I have dedicated more than 35 years of my life to studying methodologies to rescue deaf people from the abandonment, indifference, and resignation in which, as a society, we have left them.

During this time, I have created methods such as oral-complemented logogenia, logodactica, logo-reading, and now I am on the verge of presenting an alternative to the world that will vindicate deaf people and help them fully participate in this world—a world that should also be wonderful for them.

This alternative, embodied in a technological development, will enable deaf individuals to achieve what few of them have accomplished: reading and writing the spoken language of their environment correctly— in our case, Spanish. While playing, their brains will acquire the language, and thanks to this, deaf people will be able to read the world and write their own stories.

Chapter 1

IN SEARCH OF A WORLD THAT ENSURES THE RIGHTS OF DEAF PEOPLE

When I decided to study Psychology and Special Education, I always imagined my work would be with children—those little beings who face challenges with silent bravery. I thought of autistic children, those with cognitive disabilities, children with emotional and behavioral disorders, but never, not once, did I think about deafness. For me, deaf people were a vague idea, something I knew existed but that didn't occupy a real place in my thoughts. They were out there, somewhere in the world, but not in my world.

Today, it feels ironic that deafness wasn't present in my vision of helping children with developmental, emotional, or behavioral difficulties. But that's how it was.

When I finished my degree, I received a job offer at an institution for the deaf. I didn't think much about it. I accepted because it seemed like a good option. However, when I first stepped into that institution, walking through its halls filled with profound silence, something unexpected happened: I felt an immediate fascination. The person leading the foundation, Miryam Zuluaga Uribe, gave me a tour of the different areas, and what I saw left me deeply impacted, as if I had discovered an entirely new world, one that had been there all along but that I had never noticed.

I clearly remember when she showed me a room where children were engaged in auditory training. They explained to me that not all deaf people hear the same way. Some can hear more than others; some perceive low-pitched sounds, while others only hear high-pitched ones.

I had no idea that the world of deafness was so diverse, so full of nuances.

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In that room, there were tables with headphones and microphones, and the atmosphere, with its purposeful silence, felt precious, almost sacred to me.

Then we went to a classroom where about fifteen deaf children—just two or three years old, maybe a little older—were gathered around a teacher. She held up flashcards, one showing a chick and another showing a dog.

“Show me the chick, cheep, cheep, cheep. Show me the woof, woof, the dog,” the teacher said sweetly, alternating between the “cheep, cheep” and the “woof, woof.”

The children, unable to hear the sounds, watched her face attentively, capturing every gesture, every movement.

When she said, “Show me the cheep, cheep,” they pointed to the chick. When she said, “Show me the woof,” they pointed to the dog.

Later, she stopped using the sounds and simply said, “Show me the chick” or “Show me the dog,” and the children pointed to the corresponding card.

I was moved by how these little ones could understand what the teacher was teaching them. To me, it was a revelation that communication went far beyond the words they couldn't hear.

I fell in love with that scene. It felt like a marvel because it showed me something I had never even imagined while studying psychology.

Later, at the same institution, I met former deaf students, now 24, 28, 30 years old, professionals who read lips with a precision that left me speechless.

They spoke—yes, they spoke, though with a peculiar tone, a strange intonation. But they did so clearly, with a determination that could only come from someone who had overcome countless barriers. They read lips, wrote, read, and were professionals in their fields.

I met an architect, a textile industrial engineer, and a lawyer. It seemed incredible to me that these people, who couldn't hear anything at all— not even loud noises with hearing aids—had managed to understand oral language solely through lip-reading, even from a profile view.

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I was astonished that they could discern such details, comprehend language in that way, and also speak.

This sparked a profound interest in me, an insatiable curiosity to understand how it was possible.

I began studying alongside the speech therapists at the institution, observing how they achieved this feat. I watched as they used tactile aids to help produce sounds like “P,” “T,” and “M.” They would place the child’s hand in front of the mouth to feel the air when saying “P” or ask them to touch their cheek to perceive the vibration when saying “M.”

It seemed like a miracle to me, a revelation that there were other ways for these children to understand how to speak and listen, without the need to hear.

Every time I thought about it, I would say to myself: “How incredible is the human brain! It can learn to speak and understand even without hearing or using hearing aids.”

At the same time, I began to see the other side of the coin.

When I spoke closely with many of these young deaf adults, behind their stories of success, there was always an undercurrent of pain and sadness.

“Yes, I can speak, but they were very unfair to me. They forced me to speak,” some told me. They shared stories of other deaf individuals who were forbidden from using their hands to make signs or natural gestures, warned that doing so was “acting like monkeys,” with images of chimpanzees fixed on classroom walls as reminders.

“I never had the chance to play or have fun. After school, I had to attend a hearing school in the afternoon and then go to endless auditory and speech therapy sessions,” others said sadly.

Listening to these accounts deeply impacted me. I encountered stories filled with such intense pain that it was hard for me to imagine them.

These now-adults told me how their mothers became obsessed with teaching them to speak, how their teachers were determined that they pronounce words correctly, write, read lips. Behind every achievement, behind every word

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they managed to articulate, there was a shadow of bitterness that seemed to envelop everything.

I was moved by how these individuals had dedicated 10, 12, even 15 years of their lives to achieve what hearing people accomplish effortlessly: understanding and speaking oral language.

“I couldn’t enjoy myself because all my time was spent in therapy,” they lamented.

Their words echoed in my mind, revealing the joy, playtime, and childhood they had lost during that process.

In my empathy for their suffering, I couldn’t help but think: “Yes, they are right, but so are the mothers, the institutions, and the scientists who developed these methodologies.”

Each of these individuals refused to accept that a person, simply because they were born deaf, could not speak. They understood that the inability to speak was tantamount to denying them the possibility of inclusion and active participation in society. I understood their struggle, respected it, and began to commit to it as well.

However, something told me that the problem wasn't in the philosophy of oralism but in the methodologies and how they were applied.

These were methods that, in their eagerness to teach children to speak, robbed them of the ability to communicate freely. They made children feel ashamed of themselves by saying they were like "monkeys" if they used signs.

The idea of teaching them to speak wasn't wrong—it was the way it was done. It left a bitter and profound mark on their lives.

I thought: "What if oralism were done differently? An oralism that isn't painful but enjoyable, that allows children to enjoy the process, making it a natural part of their daily lives."

With this idea in mind, I immersed myself in my work in the maternal program of that institution, where I began working intensely with mothers who brought their babies. My goal was to teach them how to make the process of teaching oral language more playful, natural, and integrated into everyday activities.

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At the foundation where I started working as a psychologist, we focused on this new perspective to teach children through play. We organized sessions in a large room filled with toys scattered on the floor. Mothers sat with their children, and we showed them how to play with their kids while talking to them, always thinking about how to incorporate language naturally.

Over time, I explored what other methods existed worldwide for teaching children. That's when I discovered an institution in the United States called the John Tracy Clinic.

I loved their approach because they shared this idea of working extensively with mothers, teaching them how to interact with their children in everyday life. I noticed that, in the past, the methods were much harsher, but a new, more humane, and understanding vision was emerging. I liked this idea and incorporated it into my work.

Having studied Psychology and Special Education, I was captivated by the idea of incorporating new pedagogical elements into our work. That's why I completely immersed myself in this new

approach and began implementing play-based methods, always looking for different ways to teach.

As a psychologist, I was also interested in understanding the process families went through when a deaf baby joined their household. I realized that no family was truly prepared to receive such news.

I remember how mothers would arrive holding their babies—children barely one or two years old. Almost all the intake interviews I conducted were marked by tears. Mothers, especially, would explain why their child was deaf. Their stories often highlighted complications during pregnancy, such as rubella or preeclampsia, or early-life illnesses like otitis or meningitis.

They recounted how they began to notice the deafness and the drama of receiving the diagnosis after the necessary tests: “Your child is profoundly deaf and hears nothing.”

“Yes, I understand this is a very painful situation. But you know what? Here, we’re going to teach your children to speak, read, and write,” I would

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console them, offering a glimmer of hope after listening to their deeply sorrowful accounts.

With this, I tried to minimize the problem and provide them with some hope. And yes, the mothers would leave with renewed hope and begin attending the maternal program to learn how to work with their children.

Over time, both they and I realized that the task wasn't so easy.

Not all children managed to progress in oralism. Not all learned to read lips or recognize sounds.

With the advent of cochlear implants, children's hearing improved significantly, and auditory discrimination was achieved much more quickly. However, a significant question remained:

Why was the language spoken and written by deaf children, even after reaching 8 or 9 years old and undergoing responsible and rigorous work, still fragmented? Why was it full of words yet often lacked meaning?

Why couldn't they always form or write complete sentences, adhering to grammatical and syntactical rules?

Why did they write or say “la perro” instead of “el perro,” or “el niño está correr” instead of “el niño está corriendo”?

My questions went deeper:

“We're investing so much effort—the children, the teachers, the institution, the state that purchases the hearing aids and implants. These children have been here since they were two, three, or four years old, and by the time they're nine or ten, we send them into life without a complete mastery of language.

Why don't they achieve full command of Spanish? What's happening?”

These questions became a constant presence in my thoughts, a persistent concern I shared with my dedicated and brilliant colleagues—speech therapists and teachers alike. Together, we began exploring different approaches, searching for answers.

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We studied the methodologies from schools in Mexico, Argentina, and others with strong traditions in teaching deaf children.

I tried implementing the guidance and methodologies these experts recommended, but the results were not as expected.

The children spoke, read, and wrote, but their sentences were fragmented, completely ungrammatical. They didn't conjugate verbs or use pronouns, articles, prepositions, or conjunctions.

We felt lost, unable to understand what was going wrong.

At that time, the children attended the school for the deaf in the morning and went to a mainstream hearing school in the afternoon. However, when the teachers at the hearing schools evaluated the children, they encountered a significant challenge.

"This child doesn't speak well. How do I evaluate them if they can't write complete sentences?" the teachers asked in frustration.

I joined the Pro Deaf Foundation in August 1989, and for the first 15 years, I experienced intense, challenging, and deeply enriching moments. It was a time of constant searching until, in 2002, I came across information about a diploma course in Mexico on logogenia.

The course was to run from January to September of the following year. When I read the details, my heart raced.

“Wow! How wonderful it would be to attend,” I thought.

Given my circumstances, I didn’t think it was possible to pursue such a dream. I had three small children, had recently separated from their father, and was raising them on my own. The idea of living in Mexico for nine months seemed like an impossible fantasy—both financially and emotionally. My children were seven, six, and two years old.

“It’s a beautiful opportunity, but it’s not for me,” I told myself, resigned to reality.

At the end of the day, as I was about to leave the office to go home, my boss, Miriam, called me in.

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She mentioned that she had left some information on my desk and wanted to discuss it with me. I entered her office, and she looked at me with that gaze that I knew could change my destiny.

“What do you think about the proposal?” she asked.

“It’s amazing—this could change the lives of deaf people. This is what they need,” I replied, full of enthusiasm.

“What do you think about studying in Mexico?” she asked expectantly.

“It’s an incredibly wonderful idea to study in Mexico for nine months, but I can’t accept it,” I said honestly.

With a smile I still remember, Miriam explained that she had met with the board of directors. To my surprise, they had approved the idea of me going to study in Mexico. At that moment, I didn’t know whether to hug her or feel overwhelmed by the magnitude of the offer. It was so tempting, so perfect, yet so difficult to accept.

“We’ll pay for your trip, continue paying your salary for the nine months— because we know your children need it—cover your tuition, and take care of all expenses. All you need to do is go, study, and return to teach us,” Miriam said.

As I left her office, a whirlwind of emotions stirred within me.

“Dear God, why didn’t you give me this opportunity years ago? I could have gone and studied in peace, but now I can’t,” I thought during my inner dialogues.

Then, something inside me reminded me of the intellectual and professional passion I had, as well as the personal commitment I had made to deaf people. Mexico was a window of opportunity to dive deeper into their world, but this time, I believed I couldn’t go.

As I drove home, tears began to flow uncontrollably.

“What’s happening to me? Why do I feel this way?” I asked myself, puzzled.

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When I arrived home, my mother called to greet me. “Why are you crying?” she asked, concerned.

“Mom, I’m crying because they’re offering to send me to Mexico. They’ll pay for everything, continue paying my salary, and let me study something I’ve always wanted to pursue. But I can’t go—I don’t want to leave my children,” I replied.

“If life is putting this in your path, it’s because you deserve it. The children will be fine. You must go,” she said with the wisdom only mothers have.

“Could it really be possible?” I wondered after our conversation.

“Eli, are you going to Mexico?” one of my brothers asked me over the phone just five minutes later.

“What? No!” I replied firmly.

Then my other three brothers called.

“Eli, go. The kids will be fine. Go, because this will be so good for you,” they repeated.

“Well, let it be what God wills,” I said by the end of that day, after overcoming the doubts of someone going through a strong depressive phase and

carrying the enormous responsibility of raising three small children alone.

I recall that after completing my diploma in Mexico, I wrote an essay that began with these words: “I walked the streets of the city, worried and lost in my thoughts about the challenges I faced in my career and personal life. Suddenly, something unexpected caught my attention—a small piece of paper on the ground seemed to beg to be picked up. Without knowing why, I bent down and grabbed it. In clear letters, the paper read ‘Logogenia.’ That simple act marked the beginning of a profound change in my life. Today, as I complete my diploma in logogenia, I can’t help but reflect on how that little piece of paper altered the course of my destiny.”

When I started studying logogenia in Mexico, I did so with a firm purpose: to understand and resolve the challenges that deaf people face in learning language.

On the first day, I spoke with Francisco Peral Rabasa, the coordinator of the diploma program, and explained my need to complete the course in a shorter time due to my personal circumstances.

Fortunately, he allowed me to study both advanced and introductory modules simultaneously, enabling me to complete the nine-month program in just four months.

During my time in Mexico, I had the privilege of meeting Bruna Radelli, the creator of logogenia.

Her warmth and surprise upon meeting me—expecting an older, robust woman instead—made me feel immediately welcome. My passion and experience working with deaf individuals captured the attention of my peers and professors, who became interested in my stories and experiences.

I was honored when I received an unexpected proposal to join the International Logogenia Network. Bruna and other members valued my experience and invited me to participate in this project, which aimed to unite efforts across Mexico, Italy, and Colombia to promote logogenia throughout Latin America. I accepted enthusiastically, seeing this network as a unique opportunity to share and expand our knowledge.

One of the most surprising experiences occurred when Francisco Peral announced that in

Chihuahua, Mexico, there was a request for someone from the network to train their staff in logogenia. To my surprise, they proposed my name, despite the fact that I had only recently completed my training. Although I initially hesitated, given my commitments in Colombia, after speaking with my family and boss, I decided to accept the challenge.

The program in Chihuahua didn't move forward, but it opened an even greater door for me: becoming a logogenia trainer in Colombia.

Staying in Mexico to train as a logogenia instructor was a difficult yet crucial decision. My mission became clear: to bring logogenia to Colombia and offer the same diploma I had completed, certified by the National Institute of Anthropology and History of Mexico. This way, I could train others and pass on the knowledge I had so eagerly sought to learn.

When I finished my training in Mexico in June 2002, I returned to Colombia filled with hope and a clear purpose: to bring logogenia to all deaf children in my country.

Back at Pro Deaf Foundation, I shared everything I had learned with my colleagues, conducted the first diploma course, and proposed dedicating ourselves to research and training professionals in logogenia. My dream and invitation were for us to become a center of reference for all of Latin America.

Initially, the institution supported me enthusiastically. However, they later informed me that the entity's primary mission remained the oralization of deaf children, and therefore, they couldn't open such a large new front as logogenia. Despite this limitation, we began training people at the foundation, certified by the National Institute of Anthropology and History of Mexico. We held diploma courses for professionals in Medellín, where I lived, and organized intensive vacation courses to extend the training to various cities across the country.

My dedication went beyond training. I rigorously and systematically applied logogenia with six children of different ages and conditions, observing how, day by day, they achieved progress that reminded me of what I had seen in Mexico.

These achievements filled me with hope and confirmed the potential of logogenia to transform the lives of deaf people. At the same time, I taught my colleagues and monitored their work to ensure they correctly applied the methodology with the children at the institution.

Alongside these advancements, the desire to conduct formal research remained alive in my mind. I recalled a conversation with Bruna Radelli, the creator of logogenia, in which I shared my concerns and aspirations. I told her that I wanted to demonstrate, with concrete data and results, how logogenia could significantly improve the lives of deaf children—an objective she encouraged me to pursue.

Thus, for two more years, I worked at the institution applying logogenia and training others in this methodology. But the idea of conducting formal research and contributing to scientific knowledge continued to resonate with me.

I knew that for logogenia to have a lasting and widespread impact, it needed to be supported by solid research and evidence that could be replicated and validated by other professionals.

Logogenia not only transformed my perspective on teaching language to deaf people but also gave me a new mission in life.

Beyond training and daily practice, I understood the importance of sharing and expanding this knowledge so that more deaf children could benefit from an education that enables them to reach their full potential.

Over time, my vision began to take shape.

I managed to bring together a team of professionals committed to and passionate about logogenia, and together we began developing research projects to demonstrate the benefits of this methodology. The mission to bring logogenia to every corner of Colombia and Latin America became my guiding star, influencing every step and decision I made.

In one of the many conversations I had in Mexico with Bruna Radelli, I dared to ask her why she had implemented logogenia with children aged 8 to 18 and not with younger children. I told her that, in my opinion, it would be ideal for children to start logogenia at 5 or 6 years old so that by the

time they were 8 or 9, they could already read and write in Spanish and be ready for schooling.

Bruna looked at me with the mix of wisdom, kindness, and strength that characterized her and replied frankly that, while that was the ideal, she didn't have the patience to work with younger children. She preferred working with older children who already had a certain level of maturity and could pay more attention.

“Do it yourself—you're young,” Brunna encouraged me with a smile.

Her words resonated with me as a challenge I couldn't refuse. I promised her that I would conduct research to test the methodology with 5-year-old children.

Upon returning to Colombia, that promise became my mission. I dedicated the next two years to applying logogenia and training other professionals in its practice.

However, the idea of conducting formal research remained alive, a spark that refused to die out. It was then that I decided to contact the University of Antioquia and arranged a meeting with Dr.

Francisco Lopera Restrepo, leader of the Neuroscience Group. I invited him to observe my work with deaf children at the Pro Deaf Foundation.

Dr. Lopera, a world-renowned authority in Alzheimer's research—who in 2024 won the Potamkin Prize for his contributions—was fascinated by what he saw.

His love for language led him to develop a deep interest in logogenia. Both he and his wife, speech therapist Clara Mónica Uribe, enrolled in the diploma course. Although officially only his wife was registered, it was clear that Dr. Lopera actively participated in the classes and studies as well. This mutual commitment made him a crucial ally in my research.

Proposing a formal study on logogenia was no easy task. We submitted the proposal three times. The first two were firmly rejected by Colciencias, as the evaluators—advocates of bilingualism—disagreed with teaching reading and writing without using sign language. However, on the third attempt, the proposal was evaluated by different researchers and scientists and was finally approved.

This research became the first formal study on logogenia in Colombia, funded by state resources. It was conducted over two years with forty-eight children and demonstrated that logogenia, with the necessary adaptations to make it more playful and tailored to younger children's language abilities, is effective.

This project became the second formal study on logogenia worldwide, following the one conducted by Bruna Radelli at the National Institute of Anthropology and History in Mexico.



<https://www.youtube.com/watch?v=K8djzJpvG84>

The success of this research not only validated logogenia as an effective methodology for enabling deaf children to read and write but also opened doors for future studies and educational practices. It was a milestone in my career and a confirmation that passion, dedication, and collaboration can lead to significant achievements.

After completing the research and proving the effectiveness of logogenia for younger children, I faced a critical challenge: funding the method.

Logogenia, being an individualized approach, requires frequent and extended sessions, making it an expensive option. The question became evident: **Who would pay for logogenia?**

Before reaching this point, when the foundation where I worked decided not to shift its focus to logogenia and instead continued prioritizing oralization, I made a bold decision with the support of the Colegio de Logogenistas de México. I founded a new organization in my country, **Fundación Dime Colombia**, whose primary mission was to promote and implement logogenia. I left my former foundation and devoted all my efforts to this new purpose and mission in life.

With **Dime Colombia** established and backed by research proving the effectiveness of logogenia, my next challenge was to ensure that all deaf children in Colombia could access this methodology. Logogenia, requiring three to four individual sessions weekly for three years, presented a considerable financial burden.

I believed the solution should come from the country's educational system. Institutions for deaf children needed to hire logogenists to ensure inclusive and comprehensive education. However, I knew convincing institutions and the education system would be a long and complex process.

At the same time, I began working at another institution in my city that focused on teaching sign language rather than oralization. I managed to motivate this institution to adopt logogenia for deaf children. Then, I decided to propose an innovative legal action: **a tutela**.

We evaluated several children and convinced a mother to file a *tutela*— a legal mechanism in Colombia designed to guarantee fundamental rights. The petition requested that the health system approve logogenia as a specialized language therapy delivered by a speech therapist, ensuring the deaf child, who used sign language, could access Spanish through written language.

The *tutela* was filed in 2009. To our delight, we won.

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“If one child has won the right to logogenia in this country, by the principle of equality, all deaf children must also have access to it,” I told the mother in a heartfelt embrace.

This legal victory was a milestone. It not only validated the importance and necessity of logogenia but also set a legal precedent, opening the doors for more deaf children in Colombia to receive this treatment. It was a crucial step toward inclusion and equity in the education of the deaf.

The joy I felt upon winning the first tutela to have logogenia covered by Colombia’s health system was immense. I believed that, thanks to the principle of equality, all deaf children would gain access to this right.

With that hope, I began serving children through my foundation and hired logogenists to provide the service, funded by the government.

For one or two years, everything seemed to be going well until I encountered a Health Promotion Entity (EPS) that informed me they could not contract services with a foundation. The appropriate

mechanism was contracting with a **Healthcare Provider Institution (IPS)**.

Naively, I thought establishing an IPS in Colombia would be a straightforward process, taking no more than 15 days. However, I soon realized the complexity of the country's health system and the magnitude of the challenge ahead.

I decided to create an IPS with national coverage to ensure that any child in Colombia could access logogenia. Training logogenists nationwide and securing health system funding for their services became my new goal.

Together with psychologist José Torres Molina, I managed to establish a national IPS called **Dime Colombia IPS**, with approval from the Ministry of Health. We began by serving nearly 50 children monthly, providing three weekly logogenia sessions, all funded by the health system.

The children's progress was remarkable, and families were thrilled. We implemented a care model within educational institutions, allowing us to bring logogenia directly to schools, thereby facilitating children's access to the treatment.

Collaboration with educational institutions was fundamental to the initial success of this model.

The challenges were not long in coming.

The Health Promotion Entities (EPS) began delaying payments to Dime Colombia IPS, creating an increasingly unsustainable financial situation. Despite my efforts to maintain services for the children—paying logogenists out of my own pocket—the debt owed by the EPS to our IPS reached a critical point. I was ultimately forced to make the painful decision to suspend services and close the IPS.

This setback was devastating to my goal of bringing logogenia to all deaf children in Colombia. However, I knew the effort had not been in vain. Including logogenia in the National Health System left an important legacy. A code now exists in the health system, allowing deaf children to access logogenia, and various entities and foundations continue to provide this service.

Colombia has become the only country in the world where logogenia is officially supported by the national health system.

The closure of the IPS marked the end of one chapter but opened the door to new opportunities. The first was working with the education system.

Convincing educational authorities to hire professionals to work individually with each deaf child was no easy task. However, through perseverance and countless conversations with parents, teachers, and school principals, I managed to make progress in this direction.

I began traveling from Medellín to Bogotá to promote logogenia and explain its importance and benefits. Finally, Bogotá's Secretariat of Education agreed to hire 27 professionals for a diploma course in logogenia to work in the city's 10 schools for the deaf.

Training these logogenists in the capital was a crucial step. Through an intense awareness campaign, I engaged schools, principals, and families, showing how logogenia could transform the lives of deaf children. While the health system had already approved logogenia, it became clear that the education system could be an even more effective avenue for its implementation.

After training Bogotá's logogenists, I secured a contract with the Secretariat of Education to provide logogenia to deaf children in one of the city's schools. Additionally, I obtained a similar contract with the Secretariat of Education in Envigado, Antioquia, to offer logogenia to local deaf children.

During the implementation of logogenia in the education system, Bogotá's Secretariat of Education posed a challenge: **Why not try group-based logogenia?**

The individual methodology, while effective, was costly. This challenge motivated me to explore new ways to apply the principles of logogenia in group settings, using my expertise in psychopedagogy.

Thus, **logodactica** was born—a methodology based on the same principles as logogenia but adapted for group application.

I incorporated playful and pedagogical activities to be conducted in classrooms, specifically in Spanish language classes, aiming to teach the language effectively to deaf children. Instead of three or four individual sessions per week,

logodactica proposes one weekly logogenia session complemented by two logodactica sessions integrated into the regular school schedule.

The implementation of logodactica was successful from the start. Initially tested in Envigado, the methodology showed promising results. I trained professionals in the first logodactica diploma courses, and its application extended to Mexico, Chile, and other regions in Colombia. The results were positive, demonstrating that logodactica could effectively facilitate language acquisition in groups of deaf students.

This model not only reduced costs but also allowed greater inclusion of deaf children in regular educational environments. By working in groups, the children could interact and learn together, fostering an atmosphere of support and collaboration.

Now, my goal is to scientifically validate logodactica. I am planning research to demonstrate its effectiveness as a group methodology for facilitating Spanish acquisition in deaf children. This validation is essential to establish logodactica as a

recognized and supported tool in the educational field.

The implementation of logodactica and logogenia in Bogotá and other areas marked another milestone in my career and the development of inclusive methodologies for teaching Spanish to deaf children. However, a new opportunity soon arose, leading us to further expand and adapt these methods.

In Envigado, while working with deaf children, a group of municipal teachers presented us with an unexpected challenge. These educators had hearing students in their classrooms who, despite having no cognitive or other disabilities, faced significant difficulties in acquiring written language. These hearing children had spent one, two, or even three years unable to learn to read and write properly.

Municipal intervention specialists proposed applying logogenia to these hearing children. Over two years, we adapted logogenia's activities to take advantage of their ability to speak and listen. This led to the creation of a new methodology: **logoleo**.

Logoleo incorporates principles of logogenia and logodactica but is specifically designed to teach reading and writing to hearing children struggling with these skills.

The success of logoleo in Envigado was remarkable. The methodology proved effective not only for deaf children but also for hearing students facing difficulties in acquiring written language. This breakthrough opened other doors and drew the attention of professionals and educators from various Latin American countries.

We began training professionals in logoleo through diploma courses, sharing our experiences and knowledge with teachers from different regions. The acceptance and interest in this new methodology were immense, confirming the need for innovative and adaptive approaches in education.

The development of logoleo represents a significant step forward in the evolution of our educational methodologies. Not only have we successfully adapted effective principles to different contexts and needs, but we have also expanded

the reach of our techniques to benefit more children, regardless of their hearing abilities.

In the context of the ongoing contract with Envigado's Municipality to provide logogenia to deaf children, the arrival of the COVID-19 pandemic in 2020 posed an unprecedented challenge. We had been working in educational institutions, implementing both logodactica and logogenia, when health restrictions forced us to suspend the contract.

Fortunately, we already had a strong virtual platform in place, the result of a decade of experience offering virtual diploma courses to professionals across Latin America. Initially conducted in person, these courses had gradually transitioned to a virtual format, allowing participation from Mexico, Costa Rica, Peru, Ecuador, Colombia, Chile, Argentina, Spain, Uruguay, and other countries. This shift to virtual learning had strengthened our teaching capabilities and provided us with a robust infrastructure for remote training.

When the Municipality of Envigado informed us about the suspension of the contract due to the pandemic, I faced a new challenge. I knew

we couldn't allow the work with the children to be interrupted, so I proposed using our virtual platform to continue the educational process remotely.

I presented this proposal to the municipality, and to my relief, it was accepted. We began adapting our platform to offer **logogenia** and **logodactica** virtually, creating interactive activities and web applications that allowed children to continue their learning from home.

The implementation of logogenia and logodactica in a digital environment opened up new possibilities for educational methods and technological resources, keeping the educational process active during the pandemic. Once the health emergency passed and in-person sessions resumed, we integrated virtual resources with face-to-face activities, creating a hybrid approach that combined the best of both worlds.

The Arrival of Emmanuel and Isabella

During this time, two deaf children joined the Envigado program: Emmanuel, 11 years old, and Isabella, 7 years old.

These siblings, raised by a single mother, had a transformative impact on our work and my own purpose as an educator and scientist. Their arrival underscored the importance of logogenia and logodactica, reaffirming our commitment to inclusive education.

The evolution of my life's purpose in Colombia has been deeply tied to the development of logogenia, to the point where a story that began as science fiction became a tangible and transformative reality.

Some time ago, I created a fictional character named Eugenio, an 11-year-old deaf boy with a younger sister, also deaf, aged 7. In my stories, Eugenio lived with his parents, a younger sister, and his grandparents. I used narratives about Eugenio to teach logogenia to children. Never did I imagine that these fictional characters would come to life in the form of Emmanuel and his sister, Isabella.

Emmanuel and Isabella's Journey

Emmanuel, a profoundly deaf 11-year-old boy, and Isabella, aged 7, joined the logogenia program

in Envigado. Emmanuel, despite having a cochlear implant, had not progressed in oralization or sign language acquisition. Isabella, on the other hand, had made significant strides in her oralization process with her two cochlear implants.

When evaluating the siblings, one of the speech therapists determined that Isabella was suitable for the logogenia program due to her level of attention and motivation, while Emmanuel was not. He showed no communicative intent, visual contact, or interest in the proposed activities.

This evaluation left me deeply concerned, as I could not imagine telling their mother that we would accept only the younger child and exclude the older one.

I decided to work personally with Emmanuel to help him connect with written language and improve his communication skills. Using digital activities, web applications, games, and tools like Wordwall and Jamboard on tablets, computers, and smartphones, I captured Emmanuel's attention. He began to show great interest in reading and writing.

After six months of work, Emmanuel's progress was remarkable.

His mother reported that he was now constantly interested in reading and writing, asking about words and the names of objects, and showing greater communicative intent and expressiveness. Initial signs suggesting an autism spectrum condition had significantly diminished.

Lessons from Emmanuel and the Digital Evolution of Logogenia

Emmanuel's case led me to deeply reflect on the importance of integrating digital resources into the teaching process. Children today live in a digital world, and it is crucial to adapt our educational methodologies to this context. Technology can be a powerful tool to motivate and facilitate learning, especially for children with special needs.

This experience reinforced the undeniable truth that children are far more captivated by digital resources than traditional methods like pencil-and-paper activities or board games.

Despite our efforts and the support of many individuals, institutions, and entities who believe in logogenia, when assessing the first 20 years of Fundación Dime Colombia, I recognize that the number of deaf children who have benefited from logogenia remains relatively small compared to the vast number of deaf children in Colombia and around the world.

A Vision for the Future: The Role of Technology

Having proven the effectiveness of logogenia and its feasibility in a digital environment, the time has come to scale this methodology.

The current vision is to develop a **video game** based on logogenia, offering deaf children an accessible and engaging way to acquire written language.

This video game would not only reduce costs but also ensure that children spend significantly more time interacting with written language. In an interactive and playful environment, deaf children would learn Spanish without even realizing it. They would simply be playing while their brains naturally acquire the language.

This project represents a groundbreaking opportunity to achieve the ambitious goal of bringing logogenia to every deaf child in Colombia and the world. Technology provides a unique platform to integrate the methodologies of logogenia and logodactica into a format highly attractive to children. With the advancements in artificial intelligence, I am convinced that this initiative will achieve extraordinary results.

An educational video game could be the key to motivating deaf children to learn, keeping them engaged, and facilitating continuous learning.

The creation of this innovative tool has the potential not only to transform how written language is taught to deaf children but also to become a replicable model in other contexts and countries.

Imagine a future where any deaf child, regardless of geographic location, can access written language through a simple digital device.

Conclusion

My experience with Emmanuel and the digital adaptation of logogenia has reinforced my belief that technology is a powerful tool for educational

inclusion. Emmanuel's story is living proof of the positive impact that the proper use of technology can have on the education of children with special needs.

The integration of logogenia into the digital world and artificial intelligence represents a revolutionary opportunity for inclusive education. This project has the potential to change lives and create a more just and inclusive future for all deaf children. It aims to ensure that any deaf child can access written language, breaking down geographic and social barriers that sometimes limit access to quality education for the deaf.

With dedication, creativity, and the use of technology, we can make this vision a reality and ensure that no child is left behind on their path to acquiring their community's language and achieving inclusion.

Looking back, I see how every decision, every small act, has contributed to this journey. That paper I found on the ground was just the beginning. The true transformation came from dedication, study, and the constant desire to improve the lives of those who need it most.

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With logogenia, I hope to open new doors and offer new opportunities, demonstrating that, with the right methodology, everyone can reach their full potential.

This is my mission. I am more committed than ever to carrying it forward, ensuring that every deaf child, in any corner of the world, has the opportunity to learn, grow, thrive, and contribute to the development of the society to which they belong.

SPECIAL WORDS FOR YOU

To you, deaf child, teenager, or adult, I want to say that what I share in this first chapter is the result of my long journey into understanding your world. Every experience I lived brought me closer to what you feel, filled me with empathy for your condition, and gave me the strength to seek better options for deaf people in my country and, hopefully, around the world.

I have witnessed the immense dedication of your family, especially your mother, who, in many cases, has been your greatest support, helping you

overcome insecurities and providing opportunities. I have seen how your first teachers in preschool, then in school and high school, dedicated themselves to contributing to your development.

I have come to know the tireless work of professionals in public and private organizations who have committed to this cause, investing time, resources, and effort to study, research, and create processes that guarantee your rights.

Everything I have learned from your world, I have shared with hundreds of hearing people who, unknowingly, were unaware of the reality of those who do not hear—just as I was before beginning this path. I have shown them how you grow and develop, how you study, learn, and communicate, and the immense value that sign language holds for you. I have shared the emotions I have experienced witnessing your oralization process, the way you learn to speak and understand oral language.

I have seen the invisible challenges you face every day, challenges that leave deep marks on your life, your family, and the hearts of those of us who have accompanied you. I have met special people in your life: your interpreters, who are always by your side,

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putting themselves in your place to understand what you need and wish to express to the world.

This book is written to share the conclusions I have reached after so many years of experience. I know that, like any perspective, mine may have flaws, but I write with the firm conviction that the difficulties you have faced are not the result of anyone's injustice but rather the growing pains of science.

My greatest wish is that everything we learn from you translates into initiatives that provide what you deserve.

From the bottom of my heart, I hope that what was once unknown and unjust transforms into a more just and equitable world for you.

Chapter 2

THE ARRIVAL OF EMMANUEL

The arrival of a child always marks a before and after in a family's life. Emmanuel came into the world with the promise of joys and challenges, but also with a hidden secret, one that would not reveal itself until months after his birth. He was a beautiful boy, with bright, lively eyes. But there was something María didn't know, something that only time and a noise in the kitchen would uncover.

The day two pot lids crashed loudly to the floor, María felt a chill run down her spine. She looked at her son, expecting to see the surprise that any sudden noise evokes in a baby. But Emmanuel

remained unaffected, immersed in his own world, as if that noise had never existed. It was then that fear began to grow in María's heart—a silent, almost imperceptible fear that took root with every gesture, with every lack of response to her calls.

From that day on, María's life changed, although she didn't realize it immediately. Like any mother, she wanted to protect her child, to wrap him in love and words. But how do you wrap a child in words when they cannot hear them?

Emmanuel didn't react to the sound of her voice, didn't turn his head when she called from the next room. And with each passing day, the fear grew until it became a painful certainty: Emmanuel was deaf.

“Reality hit María hard, completely transforming her family's life.” Confusion is the first thing one feels in the face of such a realization. Everything had to change now. Everything revolved around how Emmanuel perceived the world. What had once been natural, like talking to each other from the kitchen or the hallway or laughing out loud at a comment, became an exercise in constant

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engagement, an effort to capture his attention, to look into his eyes and convey through gestures what his ears could not grasp.

In her confusion, María began to question whether she had done something wrong during her pregnancy.

“Could it have been those drinks I had one day while I was pregnant?” she reproached herself.

“Was it some dark thought that crossed my mind in moments of weakness?”

She sometimes felt guilty and desperately sought answers that never came. This is what many mothers or family members experience as part of the normal process of coming to terms with the arrival of a deaf child.

“My son cannot hear,” she repeated to herself over and over, and her pain grew deeper.

María refused to let torment defeat her. She knew she had to move forward, to find a way to communicate to Emmanuel the love she felt for him, to make him understand that, even though he couldn't hear her voice, he was her everything.

And so, she began the journey that would forever change their lives—a journey not without challenges but filled with small victories, with moments when a glance or a gesture could say more than a thousand words.

The diagnosis came like a blunt blow: Emmanuel had severe bilateral hearing loss.

With this revelation, María and her family's life took a complete turn.

Daily routines that once were simple now required extra effort. Since Emmanuel needed constant attention, María gradually abandoned her job, her dreams—everything that wasn't her son. Her relationship with her husband began to strain under the weight of this new reality.

For any mother, having a child is a challenge. But having a deaf child is like stepping into unknown territory, filled with uncertainty and fear.

María knew that the key to helping Emmanuel lay in communication. But how could she get a child who couldn't hear to understand the world around him?

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At first, she considered whether there was something magical that could solve everything: a medicine, a miracle, a prayer. But she soon realized that none of these was the solution.

She turned to therapies, hearing aids, medical consultations—anything that might give her son even the slightest chance at a life as close to “normal” as possible.

The process was exhausting. Going out with Emmanuel became a complex ordeal, as every comment from strangers about her son’s condition inflicted yet another wound on María.

“Is the child mute? He can’t talk? Poor thing!”

Society, with its unintentional cruelty, pushed her to isolate herself, to protect Emmanuel from the stares and words he didn’t understand but might one day comprehend.

Conflicts with Emmanuel’s father escalated. The time and energy María devoted to her son left little room for her partner, and emotional distance grew with each passing day.

Even though María had learned some sign language at the age of 12, she decided not to use it with Emmanuel, following the advice of specialists who told her that the best approach was to foster his learning of oral language. This approach, though well-intentioned, left Emmanuel in a kind of communicative limbo, where the effort to learn to speak deprived him of the opportunity to express himself naturally.

The path María and Emmanuel walked was arduous, filled with doubts and difficult decisions.

They endured days when everything seemed too much, when the mountain of obstacles felt insurmountable. At those moments, María reminded herself why she was fighting: for her son's future, for the hope that one day Emmanuel could live a full life, communicate with others, and be understood and loved just as he was.

In her search for answers, María became familiar with the meanings of the numbers and terms doctors used to describe her son's deafness.

She began to understand that the sounds she took for granted were, for Emmanuel, distant

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murmurs, almost imperceptible. A whisper, which for a person with normal hearing might measure around 20 decibels, was completely inaudible to Emmanuel.

Not even the sounds of human speech, typically ranging between 60 and 70 decibels, could reach Emmanuel due to his severe hearing loss.

Only the loudest noises, like the slam of a heavy door at 90 decibels or the deafening sound of an explosion, had any chance of reaching his ears.

María also learned that Emmanuel's hearing loss was classified as severe, with a hearing capacity around 87 decibels. This meant that while Emmanuel could perceive some intense noises, like a nearby scream or a loud bang, most everyday sounds—including soft music, television, and even the words spoken by her—were beyond his auditory reach.

Understanding this allowed María to visualize more clearly the kind of world her son lived in: a world where sound barely existed.

This redefined life for a couple or family accustomed to speaking from room to room. To ensure

Emmanuel understood what was happening and participated in family life, it became necessary to approach him, explain with gestures, and look him in the eye.

It was crucial to ensure that close, sometimes emphatic communication was not perceived as cold or aggressive.

This demanded tremendous energy, time, and above all, love, as every moment required them to put themselves in Emmanuel's shoes to convey the information he could not receive through his ears.

Many mothers decide to leave their jobs because they feel they must fully dedicate themselves to their child, which often leads to financial difficulties. Some couples and families even break apart, as life becomes completely shaped by the arrival of a child who requires evaluations, therapies, surgeries, and significantly more time and attention than any other child.

In families with other children, the situation becomes even more complex, as attention centers on the deaf child. The other siblings are often

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asked to support the child, make concessions, indulge them, and even accept an unspoken family agreement that the deaf child has and will continue to have certain benefits and privileges over their siblings.

They are given the toy when there is a dispute.

More time is devoted to assisting their self-care, as it seems that, because they cannot hear, they require more help bathing, dressing, eating, and performing daily life activities. This often leads to a significant physical dependency on the mother. They are taken to therapies and provided with special activities.

Without a language that can easily be used to reprimand them or explain why certain behaviors are unacceptable, the approach is either more permissive than with the other children or, alternatively, involves abrupt gestures or a light slap to stop inappropriate behavior. However, the child does not always interpret these actions as corrective but as rejection or aggression.

Communication with others and language are essential for personal development.

Through communication, affection is expressed. In the absence of fluent communication, due to the child's lack of understanding and use of the language spoken by their parents and siblings, affection is expressed through hugs, gestures, caresses, and physical care—actions that are rarely absent in a loving family.

Words, however, also play a vital role.

We often express affection by altering our tone or speed of speech, saying “I love you,” offering congratulations, highlighting achievements, telling others about something new the child has learned, or promising a trip to the park for ice cream over the weekend.

Through communication and language, limits are established, empathy is learned, and one gains the ability to understand and explain the reasons behind certain actions, ask for forgiveness, request permission, and recognize mistakes. Language is also crucial for emotional and personal development.

Having explanations for what frightens us provides personal security. Knowing our strengths

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and weaknesses and finding appropriate explanations for our successes and failures builds self-confidence. Understanding the reasons behind the actions of others and ourselves fosters empathy, solidarity, and self-regulation—all of which require a complete and not fragmented communication system.

When a child can tell their mother that they see a monster in their room when the light is off and that's why they don't want to sleep alone, the mother can explain that there's nothing to fear, invite the child to think differently, and provide tools to overcome the fear. When the child is told why, even though they want their sister's toy, they cannot have it because it belongs to her and she decides when to share it, they learn about limits and respect. When the child is told that their mother cannot spend time with them right now because she is helping their sibling with homework difficulties, they learn empathy.

According to Lawrence Kohlberg, moral development occurs throughout life in stages. People move from evaluating behavior based on its consequences to making moral decisions based on

rules, social approval, loyalty, relationships, and trust. Finally, they understand that laws and rules are important for individual rights and collective well-being.

This requires constructing concepts such as justice, equality, equity, and respect for human dignity throughout life, understanding them, and learning how to self-regulate and make life decisions and critical stances based on these principles.

Language is not only a vehicle for developing moral reasoning but also a catalyst that enables individuals to progress through the stages of moral development by facilitating critical analysis and negotiation of values and principles (Kohlberg, L., 1981).

A deaf child lacks sufficient oral language to explain to their mother something as complex as their fear of monsters in the room. Therefore, they won't receive the alternative explanation they need to overcome it. The deaf child will likely cry incessantly, seeking to avoid being left alone.

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The mother may interpret the situation as a natural feeling of vulnerability, which she will undoubtedly compensate for by allowing the child to sleep with her. Such a decision might upset her partner, who may view the deaf child as overly spoiled and manipulating to achieve their desire to sleep with the parents. For the child, this could generate feelings of insecurity and significant dependence.

The same child cannot be told about a weekend trip for ice cream, assured that there are no monsters in their room, explained the importance of helping their sibling with homework, or taught to wait patiently for their sister to lend them her toy.

As a result, the child is often overprotected unnecessarily. Other siblings who also need attention are neglected, creating the impression that only the deaf child deserves full attention and support. The sister might be asked to lend her toy simply because it is easier to explain the situation to her than to navigate a challenging interaction.

Language is essential from the earliest years, even from the first months of life. However, deaf children are denied this early opportunity. For them

to understand complete sentences and messages that provide security, establish limits, and foster the development of norms and moral principles, they must undergo long therapeutic processes that can last for years, preceded by consistent use of hearing aids or cochlear implants.

A child who is not implanted before the age of 2 may take until age 8, 9, 10, or beyond to understand and speak oral language.

And in the meantime, what happens?

In the meantime, it will be difficult to foster boundaries, empathy, self-confidence, self-regulation, and autonomy without language or a shared communication system.

But promoting oral language from an early age as a linguistic and communicative option is not the only alternative for deaf children. There is also the possibility of considering sign language as another recommended option.

In different spheres and realities from María and Emmanuel's experience, the arrival of a deaf child in the family is not always as it was for them.

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I recall one of the most impactful conversations I've ever had on this topic. It was with Daniela, a Chilean hearing woman dedicated to the education of deaf individuals and fluent in sign language. Daniela fell in love with a deaf man, and together they decided to start a beautiful family. Their first two children were born deaf, and they communicated with their babies entirely in sign language. Neither Daniela nor her husband desired their children to learn to speak. Their conviction was so strong that when they found out their third child was hearing, they felt saddened that he was not deaf like his siblings.

For this family, being deaf was a source of pride. Sign language was the language that united them as a community. Daniela, unlike María, Emmanuel's mother, did not wish for her children to speak and understand oral language as a way to "overcome" their deafness.

María's perspective on her son's hearing loss was that he was born with an auditory disability that needed to be addressed with hearing aids, therapies, and an oralization process. Daniela and her husband's perspective was that their children did

not need to overcome a condition of deafness but rather embrace themselves as deaf individuals with their own language and integrate into the world from that position.

María's view aligns with what is known as the clinical perspective of deafness.

Daniela's view aligns with the socio-anthropological perspective of deafness.

These are two historically opposing perspectives, which we will explore in depth in the next chapter.

It might initially seem, based on what is described in this second chapter, that the author of this book believes the ideal or recommended communication option for deaf individuals should be sign language and that the benefits of oralism—teaching deaf individuals to understand and speak the oral language of the community in which they live—are not acknowledged.

But that is not the case. After witnessing the immense benefits of a deaf person learning to speak and understand oral language, it would be absurd to dismiss the value of this option.

Rather, what I propose is that for deaf individuals, due to their unique condition of being unable to naturally and, above all, at an early age acquire the language of the community in which they are immersed— because of the time and effort required for oralization—it is essential to seek the earliest and best ways to achieve this oralization, ideally for everyone.

However, understanding the time this takes, it is necessary to meet and guarantee their early communication and linguistic needs in another way, specifically through sign language.

SPECIAL WORDS FOR YOU

Dear deaf child, teenager, or adult: In this chapter, I recount what happens when a deaf child arrives in a family.

I do so by telling the story of a real deaf boy, Emmanuel.

After hearing hundreds of stories like his, I have come to understand what families experience when they initially feel sadness and confusion

because they do not know the world of deaf people, their possibilities, capabilities, and the best way to be parents to a deaf child.

Here, I try to describe what a deaf child also feels during their early years: their needs, fears, and the limitations they face when unable to communicate with the people around them.

I hope that, as you read this chapter, you feel that, even though your life has been marked by challenges and not being able to hear from infancy has brought doubts, insecurities, and voids, you have never been alone. Beside you has always been your family, your parents, and your first teachers, who with love and dedication did everything they could, always thinking about the best for the deaf child who came into their lives.

Although your parents may have experienced moments of sadness and worry when learning of your condition, there was also unconditional love and immense strength to open paths full of opportunities for you.

You have always been recognized for your values, virtues, and strengths, and you have been loved,

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understood, and embraced in countless ways, just like any other child.

I hope that in this second chapter, I have raised awareness among hearing individuals so they understand the rights of deaf people and how, as hearing individuals, we can contribute to improving their quality of life.

Chapter 3

WHAT SHOULD I DO NOW THAT I KNOW MY CHILD IS DEAF?

After learning the story of María and Emmanuel, imagine you are the mother or father of a three-year-old child, full of life, laughter, and curiosity. Only now, 36 months later, do you realize that your child's lack of response to sounds, apathy in certain situations, and absence of babbling suggest more than just delayed language development or a quiet personality. This is often what parents of deaf children think during their early years, which is why they typically only seek a complete diagnosis regarding their child's language and hearing at the age of three.

During a medical visit, you receive the news that changes everything: your child has profound deafness.

Suddenly, your world shifts entirely, and you must make a decision that will affect your child's life forever.

“It’s crucial to fit your child with a cochlear implant or hearing aids as soon as possible,” the doctor says in a frank and firm tone, urging immediate action.

“Your child will need therapies to learn to speak, and you must help them at all times,” the doctor adds. “Speak to them face-to-face, slightly louder, so they can pick up the sounds of your language. But under no circumstances should you use signs. Avoid contact with people who use sign language. Enroll your child in a preschool with hearing children, where they are surrounded by oral language and always stimulated to understand and speak.”

Every word from the specialist seems difficult to accept. The doctor explains that sending your child to a deaf school is not an option because they belong in regular schooling, coupled with

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continuous therapies to integrate into the hearing world.

This means you will always need to assist your child in communicating with others. You will have to explain everything to them orally, using some natural gestures, and dedicate hours upon hours to help them understand a world that, in their silence, eludes them.

In preschool and later in school, you are warned that the road will not be easy. Teachers, although well-meaning, will tell you that your child should not be there, that they do not communicate well, that other children do not understand them, that they are teased, and that conflicts sometimes arise.

In addition to classes, there will be countless therapies. For every school assignment, you will need to act as their guide, as their level of Spanish—initially learned orally and in writing—will not be sufficient to understand everything their school requires.

Education in a mainstream school will be a constant challenge and will require curricular

accommodations—adjustments to the school program, evaluation methods, and learning activities to enable progress.

Then, another voice emerges, offering a different alternative. Someone tells you that your child is deaf, born this way, and does not need to become someone they are not. They will try to persuade you not to fit your child with cochlear implants or hearing aids and to accept them as they are.

“Your child belongs to another culture, the Deaf culture, and should feel proud of their condition,” these new voices insist. *“You and the whole family must learn sign language to communicate naturally and fluently with them. Enroll them in a preschool or school where they teach sign language from an early age, where they can be themselves, where their communication is not mediated by the imposition of oral language.”*

This choice will lead down a path where your child will communicate throughout their life in sign language and likely require interpreters in many environments and circumstances.

You will also be told that, because sign language is different from Spanish, it will be challenging for your child to acquire the written language.

“Do not insist that they speak. Instead, with a bilingual and bicultural education, they can learn to read and write Spanish as a second language, once they have acquired sign language.”

Later, you speak with other parents who have already traveled this difficult path. Some will tell you that, after years of effort in oralization, their 10- or 12-year-old children are only just completing their understanding of oral language and that, in the meantime, they have lived in a limbo, unable to fully understand what is happening around them—at home, school, or socially.

Other parents who chose sign language will tell you that the journey has been complicated. That their children, while communicating in sign language, feel marginalized, that their families and communities do not always support them, that they have isolated themselves or had to seek their identity within the Deaf community, distancing themselves from their family.

In the end, you will find yourself at this crossroads, with a heavy heart, filled with love and fear for your child's future. You know that the decision you make will change your life forever.

The choice is anything but easy.

Both options come with their share of sacrifice, pain, and effort.

Will you opt for sign language education, embracing your child's Deaf identity, or follow the path of oralism, striving for their integration into the hearing world despite the challenges?

The only certainty you will have is that, no matter the path chosen, your child needs to feel loved, accepted, and supported every step of the way. Because beyond any decision, the most important thing is for them to know with absolute certainty that they are perfect as they are and that their family will always be by their side, fighting for their development, happiness, and well-being.

What lies behind this dilemma?

Over the years, the understanding of deafness and the alternatives proposed for Deaf individuals

have evolved significantly. For a long time, perspectives on deafness were polarized between two main approaches: a clinical conception and a socio-anthropological conception of deafness (Ladd, P. 2003).

Clinical Conception of Deafness. From this perspective, Deaf individuals are considered to have a perceptual disability, specifically a hearing impairment. Deafness is seen as a limitation that must be overcome through healthcare interventions, such as therapies, surgeries, and medical procedures. The primary goal of the clinical conception is to help the Deaf person overcome their inability to hear as much as possible. This includes fitting hearing aids or cochlear implants, accompanied by therapies aimed at “learning to hear” with these devices (García-Caro Pérez, I. M. 2015).

Furthermore, emphasis is placed on oralization, a process aimed not only at improving hearing capacity but also at teaching the individual to speak and understand oral language. The objective of this approach is to bridge the gap between being Deaf and hearing, with the expectation that the

Deaf person, after the process, will be able to navigate the hearing world almost indistinguishably.

Underlying this conception is the philosophy that individuals with hearing impairments should be empowered to participate in the world in a way similar to those without such impairments (McLeod, S., & Madell, J. 2016).

Socio-Anthropological Conception of Deafness. On the other hand, the socio-anthropological conception does not consider a Deaf person as someone with a hearing disability but rather as someone with a different hearing condition. This approach holds that Deaf individuals do not need to “recover” their hearing but should live fully within their condition, with appropriate support from their environment (Lane, H. 1999).

From this perspective, a Deaf person does not require hearing aids, cochlear implants, or oral language skills to participate in society. Instead, the goal is for them to acquire a language of their own, sign language, enabling them to integrate into all aspects of their life—family, social, educational, academic, and professional.

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Rather than proposing oralization, this approach prioritizes providing the Deaf person with environmental support, which includes having their family learn sign language, ensuring interpreters are available in most settings and circumstances, and receiving an education delivered in sign language.

In this approach, Deaf individuals are considered part of a culture—the Deaf culture—which has its own language, sign language, and an identity that connects them with other Deaf individuals who share their condition (Padden, C., & Humphries, T. 1988).

Within Deaf culture, there is a strong advocacy for sign language to be recognized as the natural and official language of Deaf individuals in each country. This includes ensuring their rights by providing specialized education mediated by sign language, access to interpreters in various aspects of life, and mandating adjustments in city infrastructure and communities to allow Deaf people to participate on equal terms with hearing individuals.

From the socio-anthropological perspective of deafness, bilingualism has been proposed as an alternative opposing oralism. According to this bilingual approach, Deaf individuals should acquire sign language as their first language and then learn Spanish as a second language through reading and writing (Moreno, M., & Aliaga, E. 2015).

This means that, under the bilingual approach, it is not considered imperative for Deaf individuals to learn to speak. Their second language will be the spoken language of their immediate environment—Spanish, in this case—and it should be acquired in its written form.

From this standpoint, criticisms often arise against cochlear implants, hearing aids, and interventions aimed at teaching Deaf individuals to speak. These critiques are based on considerations of Deaf identity and linguistic and cultural rights.

In Deaf culture, many see cochlear implants and hearing aids as strategies to “correct” or “eliminate” deafness, as they do not perceive hearing loss as a disability but rather as a way of being in

the world. For them, being Deaf is a cultural and linguistic identity in its own right (García Mouton, P., & Becerra, J. 2017).

The proposal is to accept deafness as a natural difference experienced by many people within the spectrum of human diversity. Moreover, many in the Deaf community believe that parents should not make the decision to implant their child; this choice should be consented to by the Deaf individual themselves.

It is also argued that while cochlear implants can be highly useful in some cases, this is not true for all, and it cannot be said that implants alone guarantee speech acquisition or societal inclusion.

Regarding resistance to oralization therapies, it is noted that many Deaf individuals, despite undergoing long interventions and sacrificing experiences they could have enjoyed in childhood, ultimately failed to become oralized or achieved only partial success.

From this perspective, the bilingual proposal derived from the socio-cultural approach to deafness is crucial for Deaf children to grow up

with access to sign language in an environment that values and respects their Deaf identity.

Finally, as an evolution of the bilingual approach, which advocates for Deaf individuals to belong to their own culture and acquire sign language as their first language and their local spoken language in written form as a second, the Bi-Bi (bilingual-bicultural) movement emerged in the late 1990s (Rodríguez, A. M., & Fernández Viader, M. J. 2018).

This movement shares the principles of bilingualism but adds a new dimension: it considers that Deaf individuals belong not only to Deaf culture but also to the hearing culture in which they live.

Throughout history, these two approaches have largely been led and defended by hearing people, who, with good intentions, have sought the best for Deaf individuals. However, this has led to mixed results, with moments when Deaf individuals have experienced both losses and gains, depending on the perspective taken.

A Personal Experience with the 1996 Decree

I recall a particular experience during my time at the oralist institution where I worked for 18 years. This foundation enabled Deaf children to develop oral skills to a functional language level, allowing them to communicate with their environment, lip-read, speak, and attend regular schools.

In 1996, while working at this institution, a landmark decree was issued in Colombia. The decree recognized Colombian Sign Language as the official language of Deaf individuals in the country. This recognition sought to ensure that the Colombian government would invest in sign language interpreters and improve educational systems for children who used this language in their schools. Furthermore, Colombian Sign Language was recognized as a vital and highly important language for the Deaf community.

The 1996 decree brought unintended consequences due to misinterpretations that affected Deaf children receiving their education through oralism.

The educational institution dedicated to oralizing these children, of which I was a part, had several contracts with the state and private entities. However, following the decree, the institution faced a threatening situation.

The officials responsible for overseeing these contracts interpreted that sign language was the only officially recognized language for Deaf individuals in Colombia. They concluded that oralism was not permitted, which implied that the institution was operating outside the law.

As a result, they warned the institution that the contracts would be suspended, arguing that Colombia only allowed the education of Deaf individuals through sign language. This biased and partial interpretation of the decree created a great injustice, threatening to harm both the Deaf children and the institutions dedicated to their education through oralism.

Faced with this situation, it was necessary for the educational institution, along with Deaf individuals in the country who chose oralism, to file legal action. The purpose of this action was

to clarify the scope of the decree and ensure its correct interpretation.

The decree recognized sign language as the official language of Deaf individuals in Colombia, but this did not mean that their education should be limited exclusively to the use of this language. It was essential to make the distinction that the decree did not prohibit other educational modalities, such as oralism, which many Deaf individuals had chosen.

The legal action ultimately led to a new concept emphasizing that both Deaf individuals who use sign language and those who choose oralism have the same right to receive education aligned with their preferences and talents.

Clarifying the scope of the decree was essential to protect the diversity of educational options for Deaf individuals in Colombia, ensuring they could all continue developing according to their choices without facing discrimination or restrictions imposed by a narrow interpretation of the law.

After over 30 years of closely witnessing the realities of families welcoming a Deaf child, understanding the processes experienced in hundreds of cases, exploring various approaches and communication options, and analyzing the characteristics of Deaf education alongside the limitations and achievements of oralization and the bilingual proposal, my reflection on these two perspectives is that both the socio- anthropological and clinical approaches have valuable elements for Deaf individuals. However, their principles need to be reviewed through theories offering broader development perspectives for this population, as the outcomes of both stances are still not meeting the needs of Deaf individuals.

Deaf individuals, due to their condition, cannot naturally and early acquire the language of the hearing community they are immersed in. While oralization demands considerable effort, given its advantages and opportunities, it is crucial not to abandon attempts to achieve it. Instead, we must seek alternatives to guarantee this communication option as early as possible and in the best way, ensuring more people achieve it with less

effort and better results. Most importantly, this process must be non-traumatic for them.

The fact that oralization has been a long, difficult, and complex process with not entirely successful outcomes in all cases does not mean it should be discarded as an alternative for Deaf individuals. Undoubtedly, a Deaf person who can understand spoken language through lip reading and the support of hearing aids or cochlear implants has greater interaction and development opportunities in a hearing world than one who can only communicate through sign language.

On the other hand, it is worth acknowledging the bilingual approach's proposal to foster the acquisition of sign language as a natural language for Deaf individuals. Acquiring a language early is the only way to foster comprehensive development for any human being.

However, while bilingualism suggests acquiring sign language as a first language and later acquiring written Spanish as a second, most Deaf individuals educated under this approach, upon completing secondary education, are competent

in sign language but not in written Spanish. In other words, they cannot read or write.

“Despite the advances of the bilingual approach in the education of Deaf individuals, numerous pieces of evidence indicate that a high percentage of Deaf students do not achieve satisfactory levels of reading and writing in the spoken language of their environment. This situation highlights the need to review and improve pedagogical strategies to ensure effective learning” (Bustos Guadaño, 2017, p. 92).

Conclusions like this suggest the need to revise and improve methodologies used to teach written Spanish to Deaf students. This does not discredit the validity of sign language as a first language or the principles of bilingualism but rather highlights the requirement for a more effective and comprehensive approach to help Deaf students develop proficiency in both languages.

This reality is one of the most challenging and complex faced by the Deaf population. It affects not only those educated under the bilingual approach but also those educated under oralism.

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Although the reader might wonder why Deaf individuals fail to learn to read or write even after completing high school, I will leave this topic aside for now. Given its importance, I have dedicated an entire chapter to explaining the reasons behind this “illiteracy” among Deaf individuals that has persisted for centuries.

The oralization processes undoubtedly provide significant advantages for Deaf individuals. The fact that they are achieved only after arduous work and by the age of 10 or 12 does not mean they should be abandoned. However, it is essential and imperative to offer Deaf children an alternative that is natural to them, which they can acquire early and enables fluid, direct communication with their immediate environment: their own natural language, sign language.

Of course, parallel progress must be made in their oralization process or the acquisition of their surrounding spoken language.

Noam Chomsky’s theory of Generative Grammar suggests that humans are born with an innate language faculty, known as the “language acquisition device.” This faculty allows children to

naturally acquire one or more languages simultaneously if they are exposed to them appropriately and within the critical period (up to 10 years) (Chomsky, N. 1965).

Why, then, not consider that Deaf individuals could perfectly acquire both sign language and the language of their environment—Spanish, in our case—simultaneously?

On this subject, Fernández Viader, M. J. asserts: *“The bilingual-bicultural approach holds that, like any hearing child, Deaf children possess the innate ability to acquire two languages simultaneously, provided they are given appropriate and consistent exposure from an early age, leveraging their linguistic plasticity during the critical period.”* (Fernández Viader, 2013, p. 57).

If a Deaf child acquires sign language from their earliest years and, at the same time, their parents, siblings, and close individuals learn it, they can achieve cognitive, emotional, social, moral, and emotional development similar to what hearing people attain through spoken language.

Simultaneously, it will be essential for the child to receive all the stimulation and opportunities

necessary to acquire spoken language, as it provides advantages that sign language alone cannot offer. Sharing the language of the hearing community in which they are immersed will grant them invaluable opportunities for participation in a world where it still seems unthinkable for everyone to learn sign language to communicate directly and fluently with the Deaf individuals we might encounter.

Acquiring sign language naturally from an early age and developing spoken language competencies has occurred spontaneously in several cases I have closely observed. Deaf children born to Deaf parents receive stimulation to acquire sign language because their parents share it with them from infancy. At the same time, when these children are implanted at three or four years old, they undergo speech therapy that enables significant oral development before the age of ten.

- *I Am a Deaf Singer, Daniel Insuasty.*



<https://cutt.ly/BeTAFld>

At this age, they have a perfect command of sign language, a good level of oral language performance, and sufficient reading and writing skills to pursue basic education, especially when they have also received training in logogenia—a method aimed at achieving proficiency in the written language of the hearing community around them, a topic I will elaborate on later.

If I were to welcome a Deaf child into my life today, I would take the best elements of each approach to move beyond the epistemological divide between the clinical oralism perspective and the bilingual or bicultural perspective of the socio-anthropological view. I would choose

a rights- based perspective that transcends this dichotomy.

I would recognize that my Deaf child has the right to acquire sign language from the earliest possible age, along with the spoken language of their environment, and to develop competencies in reading and writing in that language. I would ensure my child was exposed to their natural language, sign language, from an early age. I would learn it myself and encourage my family to learn it as well.

Simultaneously, I would stimulate my child's oral language development by fitting them with hearing aids or cochlear implants and attending speech therapy sessions with them. I would help them understand that their condition is different from mine—that they are Deaf while those around them are hearing—but that this difference does not prevent us from living, enjoying, and thriving together.

I would give my child the opportunity to understand Deaf culture, its rights, opportunities, and strengths, as well as everything they cannot

directly experience through sounds of nature, voices, music, or the noise of a bustling street.

I would acknowledge their rights and duties in the same way I would for my other children, always making them understand that, as a Deaf individual, they will need certain supports that others do not. I would teach them to fulfill all their responsibilities, ensuring that being Deaf does not exempt them from taking on obligations. Above all, I would provide them with the necessary support to develop under equal conditions as their siblings.

Through this proposal, my invitation is to view the options available for Deaf individuals not through the lens of clinical versus socio- anthropological perspectives but from a rights-based approach.

In an ideal and just world for Deaf people, everyone should have the possibility and the right to acquire both languages: sign language from an early age and the spoken language of the hearing community in which they are immersed. For this to be feasible, both languages must be nurtured from the earliest age possible.

Every Deaf child, without exception, should have the free choice to decide their communication mode. While these decisions are made by parents during early childhood, it is vital that options are implemented promptly, as there is no time to lose.

Each Deaf child, depending on their potential and the support of their family and close networks, could maximize their oral language development.

(Estabrooks, W., MacIver-Lux, K., & Rhoades, E. A., 2016).

When they are old enough to decide for themselves, they will determine whether or not to use that language in daily life.

Simultaneously, and as soon as possible—ideally by the age of four or five—Deaf children should begin developing their comprehension and expression through written language. This ensures that even if they do not achieve oral proficiency or choose not to use oral language, they can still be bilingual, achieving proficiency in both sign language and written language.

Regarding Identity

The identity of Deaf individuals is significantly shaped by their inability to hear or perceive their surroundings as hearing people do. This condition inevitably creates emotions, sensations, feelings, and beliefs distinct from those experienced by hearing people concerning themselves, the world, the future, and others.

Being Deaf must be a unique life experience compared to that of individuals who perceive sounds from even before birth. This condition defines a way of being: *“Being Deaf in the world.”*

Nevertheless, it is essential to acknowledge that beyond being Deaf, an individual is also a man or woman, a member of a particular family, a part of a specific culture, and holds a unique position among their siblings. They may be introverted or extroverted, perceive themselves as good, attractive, and skilled—or not. Each Deaf person possesses a myriad of characteristics beyond their deafness that make them unique.

“From a cognitive-behavioral perspective, identity is constructed through a series of factors, including

cultural, gender, national, and family dynamics. These external influences integrate with internal cognitive schemas to shape self-perception” (Leary & Tangney, 2012, p. 145).

Therefore, fostering a positive self-concept as a Deaf individual is vital. It is valid to respect their Deaf identity by encouraging and even facilitating their connection with other Deaf individuals. Introducing them to outstanding Deaf individuals throughout history and humanity and enabling them to project themselves by identifying with these figures will be crucial.

Furthermore, it is important to provide all the tools necessary for them to build their personal identity—whether as a man, woman, or regarding their sexual identity—as well as their identity as Colombian, Chilean, Panamanian, or otherwise. This is because, in addition to being part of the “Deaf culture,” they also belong to the culture of the hearing community they are immersed in.

Over time, Deaf individuals will integrate their Deaf identity with other elements that define them, gradually building their own cognitive schemas.

On this subject, I recall an experience with Deaf students interacting with the linguistic model in the classroom. This individual—a young Deaf person—used sign language to promote its acquisition through direct interaction. They spoke about what it meant to be Deaf, their language, their rights as Deaf individuals, and the pride of belonging to the Deaf culture. Afterward, they shared the stories of several prominent Deaf figures. Finally, the students were asked which of these individuals they identified with or aspired to resemble.

In response, one of the girls in the group pointed to her hearing teacher, whom she greatly admired and loved. She said she wanted to be like her. The linguistic model insisted that she should aspire to resemble one of the Deaf role models presented, as part of embracing Deaf culture. When the girl maintained her answer, the linguistic model concluded that *“the girl still did not fully understand certain concepts of Deaf culture.”*

It is true that the concept of Deaf culture, of identifying as a Deaf person, of having a unique language, and of sharing many characteristics,

experiences, emotions, and feelings as a Deaf individual—understood only by another Deaf person—is completely valid. Equally valid is acknowledging the rights of Deaf people, including access to sign language, interpreters, and everything they need to participate in the world on equal terms. However, it is also true that, beyond being Deaf, a person is a whole individual who constructs a personal identity.

Each human being builds their personal identity through cognitive processes that shape their beliefs about who they are, who others are, how they project their future, and how they interact with their culture, specific community, and factors that influence their gender identity. These elements contribute to their self-perception and the way they decide to define themselves in the world. (*Beck, J. S., 2011*).

In recent years, the concept of bilingualism has evolved into biculturalism, recognizing that Deaf individuals belong both to Deaf culture and the “culture of the hearing people around them,” or the culture of their immediate environment, so to speak. However, perhaps it is better to think that

we all—Deaf and hearing alike—belong to a pluricultural world. In such a world, it is increasingly necessary to learn how to live, discover who we are, our role, our space, our rights, and the best options and decisions we have, while learning to coexist in diversity.

It is, therefore, important to teach Deaf children from a young age that they will be Deaf for life.

- That being Deaf is their condition, even if they use hearing aids or cochlear implants.
- That they will live according to the options they choose for themselves based on their condition.
- That they have rights and, of course, duties as the protagonists of their own stories.
- That they must take the best of themselves and others to maximize their potential.
- That connecting with other Deaf individuals will surely be a wonderful experience, offering shared points of identification, but that connecting with hearing individuals will also provide opportunities to learn

from and connect with people who have different auditory conditions and diverse characteristics.

On Sign Languages It is essential to understand, first, that sign languages are *ágraphas*—they have no written form—and second, that there is no single, universal sign language. Like spoken languages, sign languages vary from country to country and even among regions within the same country. For instance, there is no “Spanish sign language” or “English sign language.” Instead, there are specific sign languages for each country or region: Colombian Sign Language (LSC), Argentine Sign Language (LSA), Costa Rican Sign Language (LSCR), among many others. (*Massone, M. I., 2003*).

Each of these sign languages is a complete linguistic entity, with its own grammar, vocabulary, and unique forms of expression. This means that a user of Colombian Sign Language may not automatically understand Argentine Sign Language, just as a Spanish speaker does not automatically understand Italian.

This fact highlights the richness and diversity of sign languages globally while also posing challenges for communication between Deaf communities in different countries. The diversity of sign languages also has significant implications for education, accessibility, and the linguistic rights of Deaf individuals.

Similarly, when providing sign language interpretation services, it is essential to consider which sign languages are used by the Deaf individuals being served. For instance, if Deaf attendees from various nationalities are present at an event conducted in spoken language, interpreters proficient in their respective sign languages must also be present.

Sign Language as Cultural Identity Sign language is an integral part of Deaf cultural identity, and its *ágraph* nature and diversity are crucial aspects that should be understood and respected. These characteristics emphasize the importance of promoting and protecting sign languages—not only as tools for communication but also as expressions of the rich cultural heritage of Deaf communities worldwide. However, this also

highlights the importance of ensuring that Deaf individuals acquire the spoken and written language of their surrounding community, such as Spanish in Spanish-speaking countries, to have a common linguistic framework used across multiple nations.

A Personal Reflection

Although I have been closely involved in the lives of many Deaf individuals and their families, and this world holds a special attraction for me, I believe it would be ideal for all humans to have the faculty of hearing from birth. Experiencing life as a hearing or Deaf individual offers vastly different perspectives.

For this to become a reality, science would need to discover ways to prevent all circumstances leading to deafness. While science has not yet reached this point—and it is challenging to imagine it ever will—cochlear implants currently enable Deaf infants diagnosed with hearing loss at birth or in their first months of life to develop auditory, linguistic, and communicative abilities comparable to those of hearing infants.

SPECIAL WORDS FOR YOU

This chapter narrates what parents of Deaf children face when they receive the news of their child's deafness. They consult health professionals who guide them in one direction, suggesting hearing aids, cochlear implants, and oralization. They meet other professionals who offer different advice, emphasizing sign language, schools for Deaf children, and the Deaf community to which their child belongs. These parents often feel confused, unsure of whose guidance to follow.

To you—child, adolescent, young adult, or adult Deaf individual currently undergoing or having undergone oralization—I want to express my deep admiration. Achieving the ability to speak, read lips, and understand language without fully hearing it is an extraordinary accomplishment requiring immense effort, determination, and capability. Your achievements are not only admirable but profoundly inspiring.

To those acquiring or having acquired sign language as your natural language, I want to say how wonderful it is to have a language you can acquire naturally through vision, just as hearing

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individuals acquire their language through hearing. You should feel proud of having a language that is uniquely yours, and I sincerely hope your loved ones also learn it to foster closer and more direct communication with you. You have the right to this.

To everyone—oralized and non-oralized, sign language users and those who have not yet learned it—I want to remind you that you are unique individuals who belong to two worlds: the Deaf world and the hearing world. Acquiring both your natural language and the language of the hearing community around you is invaluable.

Being able to understand and speak the oral language—or even just to read and write it—opens doors, connects worlds, and offers you opportunities that enrich your life and provide you with significant advantages.

You are and will always be Deaf or hearing-impaired, and you are not alone. Like you, there are many other Deaf children, adolescents, young adults, and adults worldwide. Interacting with them will be a rewarding and enriching experience

for your growth, and it will fill you with pride in your identity and achievements.

At the same time, you are part of a hearing community, and building connections, sharing experiences, and understanding them will be equally important.

Finally, I invite you to envision a new approach—a bridge between clinical and socio-anthropological views of deafness. Imagine a perspective that respects the rights of inclusion without sacrificing diversity, offering all possible options rather than choosing one over the other. Could this vision pave the way for a more inclusive and equitable world for you?

Chapter 4

WHERE WILL EMMANUEL GO TO SCHOOL?

At the age of four, Emmanuel's first day of school was filled with emotions. Carrying his lunchbox and holding his mother's hand, he wore the uniform of a hearing kindergarten, just as the professionals had recommended. Upon arriving, he found himself in an environment where the other children already had a good grasp of spoken language. The teacher, accustomed to communicating with her students naturally, gave instructions effortlessly, even when speaking from a distance or with her back turned.

When children are young, they often play without needing to interact through language. Each child focuses on their own toys, occasionally trying to share them with others, but typically not using language to communicate. They play almost in isolation, yet in the company of others. Occasionally, they communicate to confront a peer who has taken their toy or to ask the teacher for help with the restroom or opening their lunchbox. Emmanuel played with the other children in the same way they played with each other.

Gradually, however, Emmanuel's behavior began to draw more and more attention from the teacher. He was an introverted child, not very communicative or expressive. He did not follow the verbal instructions the teacher gave and tended to isolate himself.

“Let’s put away all the materials, go to the bathroom, wash our hands, and then have lunch,” the teacher would instruct the children simply, and they would respond enthusiastically and calmly. Everyone except Emmanuel, who could not understand the message.

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He would merely watch what the others were doing, gather toys as best as he could, and then follow the other children, not really knowing where they were going. Other times, he would remain in the classroom, afraid of what might happen, unable to comprehend what was going on or what the teacher had said.

Such situations inevitably create a profound sense of insecurity and confusion in a Deaf child. Emmanuel began to feel different, as though he didn't fit in, while watching the other children smile and joyfully say,

"Yay, it's time for lunch!" Without understanding their words or gestures, he felt increasingly isolated, lost in a sea of misunderstanding.

The teacher, who had never had the experience of teaching a Deaf child in her class, did not know how to communicate with him. As often happens, people unfamiliar with sign language assume they cannot communicate with a Deaf person, forgetting that natural gestures can serve as a universal bridge—similar to how one might communicate with a child who doesn't speak Spanish, perhaps one from the United States, China, or Japan.

In such situations, the teacher might have attempted to communicate with gestures, but with Emmanuel, she simply did not know how.

“Since I don’t know sign language, it’s hard for me to communicate with him,” is a common sentiment among those who feel inhibited in the presence of a Deaf child. Despite her best efforts, the teacher became increasingly concerned about Emmanuel’s behavior.

“Look, Emmanuel isolates himself; he doesn’t understand; he seems sad and sometimes struggles to relate to the other children,” the teacher reported to his mother. *“He expresses himself through crying when something doesn’t go his way.”*

These situations became more frequent, and Emmanuel’s mother, anxious, sought guidance from the speech therapist.

The therapist tried to guide the teacher, recommending that she speak to Emmanuel face-to-face, do so as naturally as possible, and support her communication with gestures. However, despite these efforts, Emmanuel’s life began to fill with sadness and insecurity, which soon affected

his mother as well. It is not easy for a mother to hear that her young child isn't behaving like the other children or that something is wrong.

That first year in kindergarten was extremely challenging for Emmanuel. The professionals, including the speech therapist, reassured his mother: *"You have to give him time; he'll improve."*

Meanwhile, therapy sessions continued, and the possibility of fitting him with hearing aids was explored, which brought some comfort. But as the months passed, Emmanuel's aversion to kindergarten grew. Despite everything, he completed that stage and moved on to a regular school, where the experience proved even more traumatic.

At the preschool level, just before entering primary school, children are older, expectations are higher, the teacher's instructions become more complex, and the demanding process of learning to read and write begins.

For a child who cannot hear anything, who is introverted, insecure, and has had difficult experiences in kindergarten, these new demands

become an emotionally devastating challenge. Emmanuel, with all his particularities, was no exception. Rather than being welcomed by his peers, his behaviors—rooted in misunderstanding and loneliness— isolated him further, leaving him without support.

Finally, at the age of 8, after several years of struggling to get Emmanuel to focus on lip-reading, produce sounds with tactile aids, and hoping that hearing aids might work a miracle, his mother, following the advice of the speech therapist, made a painful but necessary decision: Emmanuel was probably not destined to become oralized. He needed to attend a school for Deaf children and learn sign language.

Emmanuel's situation, which I encountered recently, reminded me of hundreds of cases I witnessed during my time as a psychologist at an oralist institution for Deaf children. The complexity of these situations was immense, both for the children and their mothers, who placed all their hopes in us to help their children learn to speak.

At the institution, the children spent their mornings in specialized group sessions with teachers

and in individual therapy sessions with speech therapists. Additionally, there was an audiology service to adjust their hearing aids and cochlear implants. In the afternoons, they attended regular education alongside hearing children.

The process we carried out was intensive: a language therapy program combining group work with individual sessions, always hoping the children would become oralized.

However, not all Deaf children have the potential to achieve oralization, as it depends on several factors.

“The ability of Deaf children to develop speech varies significantly and is influenced by multiple factors, such as the degree of hearing loss, early detection, timely intervention, proper use of hearing aids or cochlear implants, and family support. Children who receive early and consistent intervention have a better prognosis for successful oralization.” (Sainz García, 2016, p. 112).

Throughout my experience with Deaf children undergoing oralization processes, I have observed notable differences among them.

The first fundamentally decisive factor in the oralization process is sound perception and how that linguistic information is processed.

I have encountered children who, in addition to having hearing loss, struggle to adequately capture and process the sounds they perceive. Amplifying the sound is just one part of the process. The crucial element is ensuring that, once the sound reaches the cerebral cortex, it is processed and interpreted properly.

However, some Deaf children, in addition to their hearing loss, face difficulties at the cortical level in processing auditory information. (*Alegría, J., & Peralta, J. A., 2014*).

Other children, after receiving cochlear implants or hearing aids, react with rejection. For them, the sound means nothing; it is merely noise—disruptive and bothersome. Consequently, they begin to reject the use of the hearing aid or implant. (Díaz Rodríguez, P., 2015). Without this pathway to support the oralization process, children fail to progress as expected. They do not recognize sounds, and the hopes of their mothers and the professional team are dashed.

The second critical factor is family support. The absence of consistent and appropriate family support can significantly hinder the progress of Deaf children. Without proper guidance at home, advancement becomes much slower and more challenging.

Thirdly, the child's own motivation is a decisive factor. There are cases where, despite every effort, some Deaf children simply do not feel motivated to speak or understand spoken language. Oralization is not for everyone, and some children, after trying, fail to connect with this communication modality.

On many occasions, I had the painful task of informing a mother that her child was not progressing as we had hoped and that it would be best for the child to attend a school for Deaf children, where they could learn sign language.

Each time I had to deliver this news, the mothers would usually break down in tears. It was as if they were reliving the painful moment of learning that their child was Deaf. Except now, after all the efforts of the institution, the child, and the

family, we had not achieved what everyone had hoped for: oralization.

Some mothers became angry with me. They would say I was being unfair, that I wasn't giving them one more chance, that their child would mature, that they didn't want their child to attend a Deaf school or learn sign language. They felt that their child didn't belong to that world and needed to advance in the hearing world.

Some mothers even disregarded the recommendation and refrained from enrolling their child in a school for Deaf children, where they would receive education through sign language. Instead, they continued to send them to regular schools for hearing children, without any support from the oralist institution, where they had been receiving group and individual therapy since the age of 3 or 4.

What I describe here pertains to a model of care for Deaf children in which all were served under an oralist approach. This model included proper fitting of hearing aids, constant monitoring of children's responses to these devices, individual therapy, and group work aimed at teaching all

Deaf children to speak. Although this approach focused exclusively on oralization, it was tailored specifically for Deaf children.

This model of care was inspired by methodologies from Mexico and Argentina over 20 years ago. Around the year 2000, this perspective evolved to suggest that Deaf children should attend school alongside hearing children. This shift introduced the concept of school integration, ending the era of exclusive educational institutions for children with any kind of disability.

This change broke the paradigm of specialized institutions solely for children with disabilities, paving the way for an inclusion model where all educational institutions were expected to accommodate all children, regardless of their disabilities.

How is Deaf education approached under the inclusion model in Colombia?

Some Deaf children, who have been fitted with hearing aids or cochlear implants and receive speech therapy, attend regular educational centers. Typically, in these schools, there are no

other Deaf children; there may be only one or two Deaf students in each institution. These children, following an oralization model, attend school as if they were hearing children, relying on hearing aids, cochlear implants, and lip reading.

On the other hand, children who use sign language attend schools with a mixed model. In these schools, both hearing and Deaf children are enrolled, but in primary education, Deaf children are placed in specialized classrooms. In other words, there is a specific classroom for Deaf students, while hearing students are placed in other classrooms within the same institution. (*Ceballos, M. I., & González, L., 2019*).

This means that, for example, during recess, all students—hearing and Deaf—interact together, but the Deaf children attend a classroom designed specifically for them.

The Deaf classroom group may be divided by grade level, depending on the number of Deaf students in the institution: one group for first grade, another for second, and so on. However, if there are few Deaf students, all grades may be

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combined in a single classroom, accommodating children from first to fifth grade.

These groups are taught by a hearing teacher, who usually has some proficiency in sign language, and is accompanied by a Deaf individual known as a linguistic model.

The linguistic model is a Deaf person whose first and primary language is sign language. The goal is for Deaf children in primary education to have constant contact with this linguistic model, naturally acquiring sign language through daily interaction with them.

The teacher teaches subjects such as science, social studies, and mathematics through sign language.

After completing primary education, students transition to high school, and the support model changes. Since these are schools for hearing students, Deaf students integrate with their hearing peers across different grades—sixth, seventh, eighth, and so on. They attend classes with a hearing teacher who teaches subjects in spoken Spanish, just like any regular school. Alongside

the teacher, there is a sign language interpreter who interprets the content of subjects such as geography, history, mathematics, and others.

It is assumed that, after completing primary school, Deaf students have acquired competency in sign language, enabling them to follow lessons through interpreted content.

This model has been one of the most defended approaches in Colombia and Latin America in general, carrying significant implications.

In Colombia, the proposal for Deaf education is outlined in the document *Guidelines for the Implementation of Bilingual-Bicultural Offerings for Students with Hearing Disabilities*. (INSOR, 2020).

The primary guideline emphasizes that all Deaf children in primary school must learn sign language. Families are trained, linguistic models are hired, and children are taught all subjects through this language. Additionally, a specific methodology is applied to teach them Spanish as a second language.

The bilingual approach operates under the philosophy that Deaf children should acquire sign language as their first language and Spanish as their second. For this reason, during primary school, there is less emphasis on teaching children Spanish because it is believed they must first master sign language. The premise of this bilingual model is to prioritize sign language initially and then introduce written language as a secondary medium.

The outcome, in many cases, is that children enter high school without knowing how to read or write. At best, they become competent in sign language.

In primary education, the essential focus is on acquiring sign language. Students are encouraged to develop an identity as Deaf individuals, an identity primarily defined through their command of sign language as their native language.

Upon reaching high school, Deaf students face monumental challenges: the majority lack basic literacy skills.

Tackling high school from grades six through ten without these fundamental abilities is extremely difficult. Classrooms integrate hearing adolescents, who have been learning to speak, read, and write from an early age, alongside Deaf students who, in most cases, have only acquired communication skills through sign language. It becomes the responsibility of teachers and faculty to implement what are known as curricular adjustments. (*Peralta López, E., 2018*).

What does this entail?

Curricular adjustments involve modifying the curriculum designed for hearing students to make it accessible to Deaf students. This includes altering objectives—for instance, selecting goals that will not be required for Deaf students in each subject but are necessary for their hearing peers. Adjustments to teaching methodologies are also needed to help Deaf students understand the content.

In general classrooms, it is common for teachers to write on the board while speaking. However, for Deaf students, alternative activities must be designed, such as using videos, hands-on

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experimentation, models, drawings, illustrations, and graphics. These strategies allow Deaf students to grasp the same content as their hearing peers but through visual and practical methods.

Additionally, evaluation methods for Deaf students must also be adapted. Starting in sixth grade, hearing students are typically assessed through written tests, where teachers either dictate questions or provide a printed sheet of questions to evaluate students' understanding of objectives in subjects like History, Social Studies, and Natural Sciences.

However, since Deaf students have not developed reading and writing skills, their assessments must be adapted. Instead of presenting a written test, a sign language interpreter reads the questions aloud, translates them into sign language, and the students respond through sign language.

These curricular adjustments continue throughout high school while Deaf students attend regular schools alongside hearing peers, accompanied by a sign language interpreter.

Social Dynamics

Social interactions in this environment can be beautiful. Many hearing students show curiosity and enthusiasm for learning sign language and form friendships with their Deaf classmates. While there are exceptions, Deaf youth tend to cluster together and participate in both formal and informal activities, sometimes apart from hearing students. Nonetheless, they share the same classroom, fulfilling the inclusion philosophy's goal: avoiding segregation into specialized schools or classrooms exclusively for Deaf students.

End of High School Challenges

By the time Deaf students reach their final year of secondary education, they receive their diplomas. However, most graduate without having achieved literacy. The methodologies employed throughout primary and secondary education have failed to instill these crucial skills, a reality that has persisted for years.

As Valle Salas (2017) states: *“Many Deaf students complete high school without achieving an adequate*

level of reading comprehension or written expression. This is partly due to ineffective curricular adjustments, insufficient teacher training in sign language, and a lack of adapted resources, perpetuating a significant gap in developing these basic competencies.” (Valle Salas, 2017, p. 136).

This situation has led some to believe that Deaf students simply cannot learn to read or write or acquire Spanish as a functional language. For these individuals, sign language becomes their primary tool for communication, while written language remains inaccessible.

State Examinations

At the end of high school, Deaf students face the challenge of taking State examinations. These tests, primarily designed for hearing students, assess knowledge acquired across various subjects during their education. However, because Deaf students have not effectively learned to read or write, these examinations also require adaptations.

How are these exams adapted?

- 1. Eliminating certain questions** deemed unsuitable for Deaf students based on criteria established by experts.
- 2. Using interpreters:** Since Deaf students lack literacy skills, they take their exams with the assistance of an interpreter. The interpreter reads the questions and possible answers aloud, translates them into sign language, and the student selects the correct answer.

Historically, results for Deaf students on these exams have been significantly lower than those of their hearing peers.

Achievements in Bilingual Education

One notable accomplishment of bilingual education for Deaf students, facilitated through sign language, is the development of higher-level thinking. Students have been exposed to subjects such as science, arts, and physical education through sign language.

In literature classes, for example, Deaf students do not read books directly as their hearing peers do. Instead, they observe an interpreter translating the book's content.

Persistent Literacy Challenges

Many Deaf students complete primary school with some proficiency in sign language. However, some fail to master even this first language by the time they finish secondary school. This often occurs because families do not enroll their Deaf children in educational programs designed for them from the outset. Instead, these children are placed in regular schools with hearing peers and are only transferred to Deaf education programs by third or fourth grade, once their families realize they cannot progress in regular settings.

Late Integration

Children who enter Deaf schools in second, third, fourth, or fifth grade often do so without any knowledge of Spanish or sign language. These are 9-, 10-, or 11-year-olds who lack fluency in both their national language and sign language.

A Heartbreaking Reality

This situation is heartbreaking. These Deaf children have spent their lives essentially disconnected, facing all the implications of such isolation.

Unlike hearing children, who reinforce classroom learning through reading and writing, Deaf children lack this opportunity. They cannot consolidate their knowledge through textbooks and written exercises.

In smaller cities or remote areas, educational conditions for Deaf students are far from ideal. There are no specialized classrooms, linguistic models, or sign language interpreters, and teachers lack training in sign language or bilingual education strategies for Deaf students.

As a result, Deaf children attend schools without access to sign language instruction. Instead, they rely on natural gestures, which do not constitute a formal language.

These students do not experience schooling through sign language or interpreters. Instead, they sit in classrooms watching teachers speak to

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hearing students, conveying concepts and processes that they cannot understand.

Deaf students spend their days watching teachers move their lips without comprehension. They remain in the classroom, wasting time, feeling disconnected, and realizing they are not learning anything.

This reality is profoundly unjust and emotionally overwhelming for anyone who has witnessed these challenges firsthand.

-“You know what? I understand, I understand that pain. I completely understand what you’re feeling. But now, the time for tears is over. Let’s dry those tears and focus on working and contributing to happiness,” I used to tell those anguished mothers in consultation.

This is the attitude I have always tried to convey to families. Despite the deep initial pain that may come with having a deaf child, one must not dwell on suffering. Instead, the goal should be to work toward overcoming the difficulties.

Continuing Emmanuel’s story, he began, under the guidance of doctors and speech therapists,

attending regular school with hearing children starting from preschool.

Later, he entered the first grade at a school for hearing children at the age of 8.

Upon completing that experience, the decision was made to discontinue Emmanuel's oralization process. The conclusion was that he needed to attend a school for deaf children who use sign language.

He was required to learn it, and it was recommended that his family speak to him exclusively in that language at home.

Emmanuel entered a school for deaf children at the age of 9, unable to speak, unable to use sign language, and in a state where one might think that, after nine years of near-complete isolation, the only valid and complete communication he had received was from his mother— through gestures, natural signs, caresses, and smiles. Nevertheless, he had one critical asset: the bond with his mother.

Even so, Emmanuel was a child who had been isolated for so long that he began to exhibit

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traits resembling those of a child with autism, according to his speech therapist. This caused significant concern for his mother, leading her to believe that Emmanuel, in addition to being deaf, might have learning difficulties, some level of cognitive disability, or even autistic traits.

Considering all this, my reflection focuses on acknowledging that public policies have not always resulted in fair measures for deaf people.

As a minority, it seems that countries do not always prioritize them as they should. Resources for linguistic models, sign language interpreters, and adapting institutions with technological resources to enable deaf children to learn through visual, not auditory, means remain limited.

From this perspective, I believe that states must fully commit to providing quality education for deaf children from their earliest years.

Deaf children should have access to preschools where they can begin attending as early as two or three years old to learn sign language from teachers who master it, accompanied by an appropriate

linguistic model. Additionally, all their families should be trained in sign language.

Their first games, their initial knowledge—everything should be learned through that, their first language. Furthermore, in these institutions, which should serve children from ages two or three until eight, there should also be strong stimulation of auditory and oral language skills.

Part of the school day should also be dedicated to teaching Spanish, much like a foreign language class, always naturally encouraging lip reading, auditory recognition, and reading and writing starting at four or five years old.

If deaf children had the opportunity to receive this type of education between the ages of two and eight, by that age, we would have children proficient in sign language, with significant oral skills—if not all—and initial reading and writing competencies (equivalent to those of a hearing second-grader).

At eight years old, we could integrate deaf children into society and regular schooling in conditions

where they could learn on equal footing with other hearing children.

These would be deaf children who are proficient in sign language, oral language users, and able to read and write, ready to join a second-grade primary class on equal terms. They would have sign language interpreters in their classrooms because, with just hearing aids, they likely wouldn't capture everything the teacher says. Sign language interpreters would provide greater autonomy, helping them only as necessary.

They might also have access to technological resources, such as FM devices connected to their hearing aids or cochlear implants, enabling them to listen more clearly to their teachers while filtering out external sounds that could interfere with their auditory perception.

Text-to-speech translators could also be used to convert the teacher's voice into written language. All the information they miss because hearing aids and cochlear implants don't provide full hearing could be accessed through this means. While the teacher speaks, the child could look at or read on a computer what the teacher is saying.

This would create entirely different, ideal conditions that enhance all the capabilities that deaf children are capable of developing.

This would be a more just educational model for deaf children, which I will explore further in a later chapter.

SPECIAL WORDS FOR YOU

By recounting what happened with Emmanuel when he first arrived at preschool and the experiences he had during his early school years, I share observations about the schooling experiences of deaf individuals.

Of course, they haven't been easy experiences. Even though teachers may have felt lost at times, unsure of how exactly to support you in the classroom, I imagine they were always deeply valued by you and your family. Their effort, though imperfect, was a gesture of care and commitment that left an indelible mark on your life.

I want to tell you that thanks to the evolution of inclusive education and the efforts of all those

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involved, we dream of a future where deaf children can successfully complete their schooling.

Institutions like Colombia's INSOR (National Institute for the Deaf) and others in each country that guide the education of deaf people continue to work hard to guarantee the rights of deaf people to a dignified and high-quality education based on inclusion and respect for diversity. Thanks to their approach, which does not limit itself to a single perspective—be it socio-anthropological or clinical—but instead offers families the freedom to choose what they consider best for their children, your life and the lives of many others are and will be better. Their research efforts and the incorporation of the latest theoretical contributions have strengthened the educational proposals for you and other deaf children.

I hope the reflections contained in this book contribute to strengthening education for deaf people in our country and throughout Latin America.

From everything I've experienced, I have imagined an educational model for you and dream of implementing it to test its effectiveness.

This model envisions deaf boys and girls enrolling at age three in a preschool within a hearing institution.

I dream that in this preschool, they would receive the education they deserve, stimulating the acquisition of sign language, oral language, and written language from an early age for everyone.

Chapter 5

THE ARRIVAL OF HIS SISTER ISABELLA... ALSO DEAF

When María was taking Emmanuel to preschool, she received the news of a new pregnancy. Isabella was growing in her womb, and the first thing her mother thought upon learning this was an unsettling question: “What if my daughter is also deaf?”

This possibility filled her with anguish because her experience with Emmanuel had not been easy. Over the months, she dismissed this worry, but unlike her first pregnancy, she sought medical attention as soon as possible to have her baby undergo an audiological evaluation.

Her fear was confirmed by a clinical diagnosis: Isabella, María's second child, was also deaf, like Emmanuel.

At that moment, María felt the weight of the situation intensify. Her thoughts were filled with fears and worries, and her first reaction was: "This is going to be so difficult!"

She was also going through a separation from the father of her children, which made everything even more complicated.

Isabella was diagnosed with hearing loss at a much earlier age than Emmanuel, at just six months old. A cochlear implant was immediately recommended, but due to issues with the healthcare system and the fact that Isabella and Emmanuel's father was unemployed and lacked medical insurance in Colombia, the implant was delayed until Isabella was nearly two years old.

The first cochlear implants in Colombia were performed in the late 1990s (Arango, J. C. 2020). At that time, an initial study was conducted. After diagnosing a child with hearing loss, hearing aids were fitted to assess their response, and when the

child reached two or three years old, the possibility of a cochlear implant was considered.

With advances in implant technology and greater knowledge about these processes, it is now recommended that deaf children receive cochlear implants as early as the first six months of life. It is possible to implant a child at such a young age, providing families with personalized guidance through speech therapy to help parents understand how to manage the implant and stimulate hearing, auditory perception, and oral language development in their children.

Thus, a child implanted at six months, twelve months, or a year and a half can develop auditory and language skills very similarly to a hearing child.

I vividly remember a beautiful experience with the father of a deaf girl, whom I had the opportunity to accompany when her cochlear implant was “activated.”

Very excited, the father told me that his daughter’s cochlear implant had been approved by the healthcare system. Later, he shared that the

surgery had been performed, and eventually, he informed me that the implant would be activated.

The activation of a cochlear implant is a wonderful event for deaf children and their families. It is a significant milestone, a welcome to the world of sound. It's an impactful event, with children and parents reacting in diverse ways.

This father, although he had received information about what to expect from the cochlear implant, was completely hopeful, to the point of believing that when the implant was turned on, his daughter's hearing loss would be entirely resolved as if by magic.

We attended that "celebration," and when the cochlear implant was turned on, the girl opened her eyes with an expression of surprise because it was the first time in her life that she had heard a sound.

"Now, my love, tell me what your mommy's name is," the father whispered into his daughter's ear, revealing his heart full of hope.

"My mommy's name is Marta." These were the miraculous words the father longed to hear.

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To him, the cochlear implant was as if his three-year-old daughter were being granted all the language and hearing she had not had or developed during those years.

This scene evoked a special feeling in me—a mix of tenderness, sadness, and frustration—because I realized we had not fully conveyed to the father the reality of what the cochlear implant entailed.

It is crucial to understand that this advanced technological device is designed to replace the hair cells of the inner ear that have been lost due to disease, ototoxic drugs, or other causes and are responsible for hearing loss.

When hearing individuals perceive sound, it is captured by the outer ear, which gathers sound waves. These waves travel to the inner ear, where the cochlea converts them into electrical impulses that travel to the brain for processing.

The cochlear implant consists of electrodes surgically inserted into the cochlea.

These electrodes replace the function of the dead hair cells in the cochlea, enabling sound to be processed and transmitted to the brain.

In our inner ear, the cochlea contains approximately 20,000 hair cells. While a cochlear implant, with its 12 to 22 electrodes, cannot replicate the exact function of all these cells, it is designed to stimulate different regions of the cochlea so that the brain can interpret a wide range of sound frequencies.

The result is a perception of sound that, although not identical to normal hearing, allows users to understand speech significantly and perceive environmental sounds through auditory therapy.

The implant offers a solution for severe hearing loss, enabling deaf individuals to perceive and process sounds by directly stimulating the auditory nerve. It is particularly recommended for children born deaf, who can receive an implant starting at six months of age, allowing them to capture sounds through an auditory process similar to that of hearing individuals.

It is essential to understand that fitting a cochlear implant does not result in an immediate process where a deaf child can instantly hear and comprehend everything perceived through this device, contrary to the magical expectation of

that father. From the moment a cochlear implant is deemed viable to its proper use, an important process unfolds (Durango, L. F., & Martínez, A. 2019).

The process begins with surgery to install the implant. Two to four weeks after surgery, the implant is activated. During this first session, the audiologist connects the sound processor to the implant and adjusts the initial parameters so the user can start perceiving sounds.

Next comes the mapping of the implant, which involves programming the sound processor. This process is highly personalized and tailored to the specific auditory needs of each person.

Subsequently, through speech therapy, the brain is trained to learn how to interpret the new sounds received through the implant. Continuous adjustments are made during this process to improve the quality of sound perception and achieve better responses to therapy.

Cochlear implants can significantly enhance the ability to understand speech and perceive sounds in individuals with profound hearing loss. They

are particularly beneficial for children born deaf and adults who lose their hearing after acquiring language.

It is crucial to highlight that results vary from person to person. Moreover, the implant does not restore normal hearing; rather, it provides a new way of perceiving sound, offering individuals an opportunity to reconnect with the world in a completely different way.

Throughout my life in this field, I have had the opportunity to witness absolutely wonderful experiences with children who were implanted at a very young age, around six months old, and who, by the time they turned five, displayed linguistic behavior similar to that of a hearing child.

In contrast, I have also seen cases of children who were implanted at three, four, or five years old, with the hope that they would hear perfectly, but who ultimately did not achieve an adequate linguistic performance.

Cochlear implants enable the perception of a wide range of speech sounds. Through the therapies accompanying these implants, children begin to

distinguish environmental and language sounds. They gradually discriminate and understand words and sentences and eventually use language in everyday contexts.

It is important to understand that cochlear implants do not completely replace natural hearing. As such, they do not always allow the child to perceive all elements that make up sentences, which hearing individuals capture effortlessly.

Small grammatical elements within sentences—such as verb endings and functional words like *and*, *or*, *with*, *of*, *the*—are often too subtle to be perceived through cochlear implants.

For instance, a child with a cochlear implant might hear the following sentences as:

- “Give me the bottle cap.”
- “Give me the cap and the bottle.”

However, their auditory perception may only allow them to grasp:

- “Give (...) cap (...) bottle.”

The subtle distinction between the preposition *of* and the conjunction

and is practically imperceptible to them. Another example:

- “John left with Maria.”

What the child might perceive:

- “John left (...) Maria.” Or with the sentence:
- “The boy is walking.” What they may perceive:
- “The boy is walk(...)ing.”

We infer these gaps from their oral productions and can assume that the way they speak reflects how they hear.

When speaking, deaf children who use cochlear implants often omit such elements, saying:

- “The boy is walk,” when they mean, “The boy is walking,” or
- “The glass is table,” instead of, “The glass is on the table.”

In conclusion, despite the high quality of cochlear implants and the excellent auditory rehabilitation these children receive, certain elements remain inaudible. These elements include the small words that connect sentences and many word endings or suffixes that convey grammatical information, such as gender rules or verb conjugations.

The result is that, while oralization processes facilitated by cochlear implants or high-quality hearing aids can significantly improve auditory ability, they sometimes do not result in entirely satisfactory oral performance, as their spoken language often lacks grammatical correctness.

“Despite advancements in auditory-verbal therapy, many deaf children with cochlear implants face persistent difficulties in the grammatical production of oral language. Their oral productions are often incomplete and do not always align with normative Spanish, reflecting limitations in the acquisition of complex syntactic structures, likely due to limited auditory exposure and challenges in internalizing grammatical rules.” (Suárez & Hernández, 2018, p. 154).

Recommendations for children in this situation include the regular use of cochlear implants,

attending regular education alongside hearing peers, and undergoing oral rehabilitation therapies employing the auditory-verbal method.

The auditory-verbal method is a rehabilitation approach for deaf children that promotes the constant use of hearing to develop speech skills. The intervention involves the active participation of parents, who are trained to create a permanent auditory learning environment through everyday activities (Estabrooks, W., MacIver-Lux, K., & Rhoades, E. A., 2016).

This method is based on the belief that, with appropriate technology and a rich auditory environment, children with hearing loss can develop oral language skills similar to their hearing peers.

Isabella's case provides an excellent model of intervention.

Isabella began attending preschool with hearing peers shortly after turning two years old. By then, she already had a cochlear implant and had undergone speech therapy. Thanks to this, her experience was markedly different from her brother Emmanuel's.

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As previously mentioned, Emmanuel entered preschool without hearing aids, without a cochlear implant, and without any therapeutic intervention to develop his language skills.

Children with implants, like Isabella, exhibit a strong communicative intent. They express themselves using an oral language that, while incomplete, allows for moderately functional communication during their early years in preschool. They perceive auditory language, and although they cannot yet understand everything their teacher and classmates say, they always interact through oral language.

However, when deaf children with cochlear implants begin primary education, the differences between them and hearing children become more apparent, especially as they start learning to read and write.

In most educational institutions, reading and writing are taught through a phonetic-phonological method, which relies on analyzing the sounds of language.

Children are taught that the letter *M* combined with *A* is pronounced *MA*, and that *P* with *A* is pronounced *PA*, associating letters with sounds.

For a deaf child, however, the sounds *M* or *P* are often unclear or imperceptible.

The methodologies used in regular classrooms to teach reading and writing are unsuitable for deaf children. This is where their greatest challenge begins: learning to read and write using methods that do not cater to their needs.

“The acquisition of written language by deaf children should not be mediated through the same methods and techniques used to teach hearing children. A pertinent and different methodology is required, preferably simple, emulating the natural simplicity involved in language acquisition for hearing children, albeit through a different means.” (Radelli, 2011, p. 13).

Deaf children implanted after two years of age, who have undergone speech therapy and a successful oralization process, typically enter first grade at around seven years old.

By this age, their hearing peers have developed typical linguistic skills for their age, allowing

them to understand and use all elements of their language—nouns, adjectives, verbs, and so on. These hearing children also understand the syntactic rules of their language, such as gender, number, and verb tenses, as well as functional elements like articles, prepositions, and conjunctions (*the, of, with, and*).

In summary, a seven-year-old hearing child is linguistically competent.

When a deaf child begins first grade and encounters reading and writing methods designed for hearing children—focused on associating sounds with their corresponding letters—they face enormous difficulties.

This creates significant challenges, further explored in subsequent sections.

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A child with a cochlear implant or hearing aids who has received speech therapy and attended

preschool typically enters first grade around the age of seven.

The hearing peers of such a child already have linguistic development typical for their age, and their competence in Spanish allows them to understand and use all elements of the language: nouns, adjectives, verbs, and more. Additionally, a seven-year-old child understands the syntactic rules of the language, such as gender, number, and verb tenses.

They also properly use all functional elements of the language, such as articles, prepositions, and conjunctions like *the*, *with*, *without*, *of*.

In summary, a seven-year-old hearing child is linguistically competent.

When a deaf child enters first grade and begins learning to read and write using methods that are not tailored to their specific characteristics—methods that focus on recognizing sounds and associating them with written symbols—they face enormous challenges.

The struggle begins because the child's linguistic age is not equivalent to that of their

first- or second-grade peers, and they have not yet completed the process of acquiring their oral language.

A deaf child implanted after the age of two, who has received speech therapy and undergone a successful oralization process, typically has oral proficiency at age seven equivalent to that of a three- or four-year-old hearing child. However, their oral language production exhibits many ungrammatical sentences.

When speaking, they omit numerous elements and do not use articles, prepositions, pronouns, or rules of gender, number, word order, or agreement between subject and verb tense.

For example, they might say sentences like:

- *“Teacher, I go bathroom; kids play and eat snack.”*

Through oral language, they communicate, and the teacher can more or less understand what they mean. However, without completing the process of acquiring oral language and learning to read using methods designed for hearing children—which often focus on associating sounds

they cannot fully hear with their corresponding letters—the process becomes extremely complex.

They might say and write “*la carro*” instead of “*el carro*” or “*el carros*” instead of “*los carros*” because, although they have developed substantial knowledge of the language, they have not adequately acquired its syntactic rules.

For example, to say “*The boy ate the soup*,” they might say:

- “*Boy eat soup*” (omitting the past tense verb conjugation).

They do not understand or use functional elements of the language, such as prepositions, conjunctions, articles, or pronouns (*with, without, of, in, and, or, the, my, your*).

The mother often becomes a permanent teacher, supporting the child’s entire educational process: helping with homework, reading with them, and ensuring they don’t fall behind. Meanwhile, the audiologist and speech therapist focus primarily on auditory and oral stimulation, ensuring the child perceives and articulates sounds accurately.

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However, they rarely focus on reading and writing skills.

By the end of first grade, other children progress to second grade and begin reading more complex texts. However, the deaf child still has not acquired this skill. The gap becomes significant, and the child begins to feel insecure, believing they cannot succeed.

During evaluations, they do not understand the questions, cannot write complete answers, and struggle to construct sentences when prompted.

The child moves through the rest of primary school with significant difficulties, requiring substantial parental support, and continues to exhibit oral language that is not fully functional.

Upon entering secondary school, these challenges become even more pronounced.

It is akin to a 12-year-old Spanish-speaking child being transferred to a school in France, where their peers read and write fluently in French, speak the language proficiently, but they can only understand a few words and phrases, communicate

in a limited way, and do not comprehend written French.

Their academic performance becomes extremely challenging, their social interactions grow more complicated, and the family faces the difficult decision of persevering despite all odds, determined for the child to complete their education, regardless of the difficulties.

Primary and secondary school teachers who have a deaf child in their regular classrooms must also make adjustments or accommodations for the student. These adjustments involve selecting specific curriculum objectives that the child will not be required to meet, modifying evaluation strategies—since the child cannot perfectly read or write, they cannot be assessed through written or oral exams—and changing the criteria for promoting the child from one grade to the next.

The final outcome is often deaf children who complete secondary school with language skills that do not correspond to their age. They have not fully learned to read and write, do not fully understand their academic content, lack sufficient writing proficiency, and have struggled significantly in

all subjects. Despite being promoted from one grade to another, they graduate without adequate preparation for higher education.

This outcome is significantly influenced by the type of educational institution the child has attended, the institution's level of openness to including children with disabilities, the teachers' training, the time available for making curricular adaptations, and the creation of what in Colombia is called the *PIAR* (*Plan Individualizado de Ajustes Razonables*), a plan designed to ensure children with any type of disability can be included in regular schooling (Arnáiz, M. Á., & Ruiz, M., 2019).

With the guidelines provided by education ministries for the educational opportunities for deaf students—which are quite similar across Latin America—each child and young person's journey develops differently.

It all depends on how much support the child has received from their family and how they have responded to their cochlear implants, hearing aids, and rehabilitation process. However, in general, deaf children who begin their auditory and oral habilitation process at the age of four or five,

receiving their implant at that age, typically do not achieve linguistic or academic performance comparable to that of hearing children, except in rare cases.

At the time of writing this book, Isabella is an eight-year-old girl. She has significant communication skills in both sign language and oral language. Since her brother is acquiring sign language and her mother communicates with him using it, Isabella is also in the process of learning it.

She frequently uses her cochlear implant and receives consistent therapy.

Her mother is fully committed to her education.

Additionally, since the age of seven, Isabella has been learning to read and write using the logogenia method, a methodology specifically designed for deaf individuals rather than the conventional methods created for hearing people.

Logogenia also helps Isabella complete her oral language acquisition process, as it allows her to perceive through reading the small elements she cannot grasp auditorily. This enables her to

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understand functional elements, use them, comprehend the syntactic rules of the language, and progressively incorporate them into her speech and writing.

We trust that Isabella's future will be different.

We are learning from her story, which unfolds in a natural context: having a deaf brother with whom she communicates in sign language and a mother who also uses sign language to communicate with both Emmanuel and her in many instances.

Isabella knows and understands that both she and her brother are deaf. She can perfectly distinguish when to use sign language, in what contexts, how to speak to Emmanuel, and when to use oral language. Currently, Isabella is attending a regular school in a classroom with hearing peers in the second grade.

SPECIAL WORDS FOR YOU

Emmanuel is a deaf child who began his journey with the adaptation of hearing aids and later a cochlear implant at the age of five. He attended a

preschool and then a school for hearing children and received speech therapy to learn how to speak and understand oral language.

At the age of nine, his mother decided to enroll him in a school for deaf children, giving him the opportunity to start learning sign language at that age.

When Emmanuel turned four, his mother became pregnant again, and his sister Isabella, who is also deaf, was born.

Isabella received her cochlear implant at the age of two and began her oralization process differently. She learns sign language with her brother, is learning to speak through her therapies and cochlear implants, and has been learning to read and write in Spanish correctly using the logogenia method since she was seven years old.

Isabella is successfully undergoing an oralization process that also allows her to acquire sign language.

Oral language and sign language are not incompatible; they can coexist within the same family and within the same deaf individual.

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As I discuss Isabella's oralization process in this chapter, I want to address you—whether you are a child, teenager, or adult who has undergone oralization.

To you, I want to say that I have witnessed every step you have taken since you were a baby. I have seen how you began to learn to read lips, recognize environmental sounds, identify each one, and eventually produce sounds, words, and sentences. Being part of this process has been one of the most beautiful gifts life has given me. Seeing your face light up when, with the adaptation of hearing aids or cochlear implants, you experience a new perception of the world has been truly moving.

I have been amazed by your progress. I know your efforts have been immense, but the ability to speak and understand oral language has opened so many doors for you that it has all been worth it.

I want to tell you that, although historically oralization processes have not always resulted in complete understanding and speaking abilities, this was not due to inadequate intervention but rather to the limitations of scientific knowledge at the time. With advancements in hearing aids and

cochlear implants, as well as the incorporation of logogenia into oralization processes, achievements will be increasingly complete and satisfying, as you will also learn to read and write correctly.

If you enjoy using hearing aids or cochlear implants, and if you like speaking, reading, and writing, that does not mean learning sign language is any less valuable. On the contrary, learning sign language will allow you to expand your connection with the world, become bilingual, and build special bonds with other deaf individuals.

Through you, I want to thank the wonderful group of teachers and speech therapists from the oralist institution where I worked for years.

Thanks to them, I learned so much about how to support deaf children like you on their journey to oralization.

I also want to acknowledge cochlear implant companies for putting technological advancements at the service of deaf individuals, especially children. Their commitment to improving these devices every day fills your life, and the lives of those seeking new opportunities for you, with hope.

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If you have a cochlear implant, you may remember the professionals who were part of your journey: surgeons, audiologists, speech therapists, and language therapists who adapted the device to your needs to achieve the best possible performance. You probably feel deep gratitude toward them, especially the speech therapists, whom I encourage to learn about logogenia and complemented oral logogenia. This proposal does not seek to replace auditory and oral therapies but rather to complement them to achieve complete and grammatical oral language.

To your family, I want to say that although I used to recommend avoiding education in sign language, I now know that learning it is not a disadvantage but a benefit. Allowing you to acquire sign language, even while learning to speak, will make you stronger.

Being bilingual is not just an option; it is a necessity due to the characteristics of your condition.

Chapter 6

WHAT HAPPENS? WHY HAVEN'T DEAF PEOPLE LEARNED TO READ AND WRITE?

“Deaf people now have telephones”

This headline, published in a Colombian newspaper on June 12, 2004, represented a significant breakthrough for the deaf community. The initiative, led by Empresas Públicas de Medellín (EPM) in collaboration with the Ministry of Communications, aimed to address the communication barrier faced by deaf individuals who were unable to use public telephones installed throughout the city. At a time when cell phones were just beginning to gain traction and lacked the ability

to send text messages, this proposal emerged as an innovative and necessary alternative for deaf people in Medellín

The official plan involved installing 20 relay centers, each equipped with a special keyboard connected to a telephone switchboard. The concept was simple: a deaf person could approach one of these keyboards, type a message addressed to their mother, sibling, friend, or hearing acquaintance, and an operator would read the message and convey it verbally to the intended recipient.

At first glance, this proposal demonstrated commendable sensitivity toward the reality of deaf or hearing-impaired individuals.

However, despite its good intentions, the program exhibited a glaring oversight from the outset: it failed to consider the level of written language competence of the system's users. The harsh reality is that many deaf individuals struggle to read and write correctly in the historical vocal language of their community—in our case, Spanish. Their texts are often unintelligible or lack precision. During the program's

implementation, messages such as the following were encountered:

“Quedar colegio, tarde, amigo, no tarea. No entender, ayudar, amiga.”

This text, written by a deaf individual with a relatively advanced level of written language competence, could be interpreted in various ways:

1. “I’ll stay at school late with my friend because I don’t understand the homework, and my other friend will help me.”
2. “I’ll stay late at school because my friend doesn’t understand the homework, and my other friend will help him.”
3. “I’ll stay late at school with my friend because she doesn’t understand the homework, and my other friend will help her.”
4. “I’ll stay late at school with my friend because I don’t understand the homework, and my other friend will help me.”

For those with a more limited linguistic competence, the message might have been written

in an even less comprehensible manner. A clear example of this situation would be a message like:

“Colegio no llegar, tarea.”

Even for many deaf individuals who have completed their high school education, their messages might look like this:

“Mamá, no casa, colegio, tarea.”

In these cases, the person on the other end of the keyboard transmitting the message might choose to say, “They’re staying late at school doing homework.” Although this interpretation might be correct, it does not accurately reflect the original message the deaf individual intended to convey.

Once the program began, another news report revealed that within six months, about 2,500 calls were recorded across the 20 phones installed, averaging 25 calls per day—roughly one call per day per phone. Installing a phone for a deaf person to use just once a day, along with hiring an operator for each of these 20 phones, seemed an unjustified investment that did not address the real need.

Eventually, the program was evaluated. According to the project director, Teresita López, it was concluded that “the biggest challenges of the system lie in the time it takes to receive a response because the operator was on the other side of the keyboard waiting for a long time for the deaf person to type their message. Since sign language is difficult to translate into Spanish, deaf people write words in a disorganized manner and often omit many elements of a sentence. This frequently renders the message incomprehensible.”

Furthermore, the fact that the system averaged just one contact per day over six months indicated that deaf individuals could not use it effectively, as they struggled to adequately convey information via the keyboard.

Over time, a solution was proposed: equipping the phones with cameras so that deaf individuals could communicate with the operator using sign language rather than typing.

This would require not just a regular operator but a sign language interpreter who could receive the message in sign language and then relay it verbally to the intended recipients.

That was an initiative 20 years ago. But today, in 2024, with the availability of mobile phones, such devices are no longer necessary.

Why?

Because now deaf individuals can communicate directly with whomever they want using sign language via mobile phone cameras, as long as their interlocutors are also proficient in this language. Additionally, relay programs staffed by interpreters facilitate communication with deaf individuals.

Does this mean we should give up on deaf individuals communicating in Spanish or any other historical vocal language through a keyboard and instead always rely on sign language interpreters to mediate their communication?

Absolutely not.

The goal here is to find a way for them to develop linguistic competence in the historical vocal language of their community—Spanish, in our case—through written language, enabling them to read and write just as literate hearing individuals do.

The means to achieve this has already been discovered: a methodology called **logogenia**, which will be the focus of the next chapter.

For now, let us focus on understanding why deaf individuals have not yet developed proficiency in Spanish and why, despite graduating from high school, they end up unable to read and write properly, leading to a concerning level of marginalization. As Patricia Charris, the mother of a deaf teenager, once aptly expressed:

“Deaf people are more marginalized by their illiteracy than by their deafness”.

The document *“Generalidades sobre la oferta de educación bilingüe bicultural para población con discapacidad auditiva”* (Generalities on the Bilingual and Bicultural Education Offer for the Hearing-Impaired Population) by the Instituto Nacional para Sordos (INSOR) in Colombia, states that educational opportunities for deaf individuals should be bilingual and bicultural (INSOR, 2017).

In bilingual education, deaf individuals must acquire sign language as their first language (L1) and the written form of the surrounding language

as their second language (L2). In the context of bilingual and bicultural education for deaf students in Colombia, as well as in most Spanish-speaking countries, all subjects are taught in sign language.

In the Spanish language subject, methodologies are implemented to “teach Spanish.” The teaching of this second language (Spanish as L2) is based on the idea that it should be acquired through mediation by the first language (L1), sign language.

Some of the activities involve translating between sign language and Spanish to help students gradually understand and use the elements of this new language. A common example is writing a sentence on the board, such as:

- “Vamos a la casa de María” (We are going to María’s house). And then translating it into sign language: **Sign for María / Sign for House / Sign for Going.**

It is crucial to analyze several aspects of this scenario:

First, it is important to highlight that the syntax, or word order, in sign language differs from the

syntax used in Spanish. In sign language, “María” is mentioned first, followed by “house,” and then “going.”

Second, in the translation from Spanish to sign language, certain grammatical elements such as articles, prepositions, conjunctions, and pronouns are not included. For example, words like **a** (to), **la** (the), **y** (and), and **de** (of) have no direct, literal translation in sign language.

“The use of sign language to teach Spanish encounters barriers such as the lack of a direct correspondence between the grammatical structures of both languages. Deaf students may struggle to understand abstract grammatical concepts in Spanish that have no direct equivalents in sign language, leading to persistent confusion and errors” (Martínez & Pujol, 2017, p. 98).

For this reason, although deaf students can learn and use the vocabulary of the language, they face significant challenges with grammar, showing weaknesses in understanding and using rules related to gender, number, and verb conjugation agreement (Massone et al., 2005).

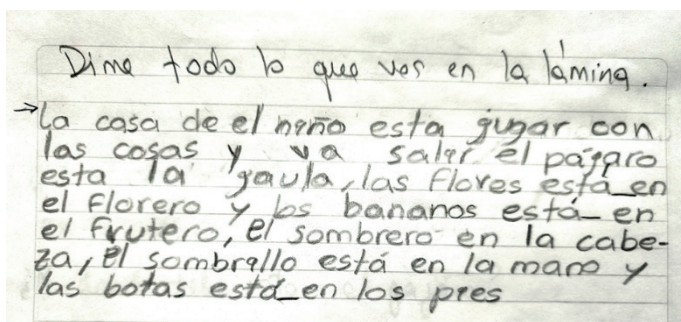
On the other hand, in oralism contexts, efforts have also been made to promote reading and writing among deaf children. While they receive oralization therapies that enable functional and effective oral communication, their written language exhibits elements that indicate they have not internalized all components of the language. Consequently, they neither fully understand the written language nor write adequately.

For example, when an 11-year-old profoundly deaf girl, a cochlear implant user undergoing oralization and enrolled in seventh grade, was asked to write a description of an illustration, she wrote:



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The girl clearly understands the situation, has an idea of how to make a description, and includes relevant elements from the illustration. She incorporates vocabulary related to the scene: house, bird, cage, flowers, vase, bananas, etc.

However, in her description, she uses phrases like “La casa del niño está jugar con las cosas y va salir” instead of saying, “El niño está en la casa, estaba jugando con sus juguetes y va a salir” (“The boy is in the house, he was playing with his toys, and he’s going out”).

When conjugating the verb in “las flores está en el florero” (“the flowers is in the vase”) and “los bananos está en el frutero” (“the bananas is in the fruit bowl”), she substitutes “están” (are) with “está” (is).

In the sentence “el sombrero está en la mano” (“the umbrella is in the hand”), the correct phrasing would be “El niño tiene una sombrilla en la mano” (“The boy has an umbrella in his hand”).

Similarly, instead of writing “el sombrero en la cabeza” (“the hat on the head”), she could say, “tiene un sombrero en la cabeza” (“he has a hat on his head”).

This girl wrote exactly as she spoke.

This level of performance, both orally and in writing, is functional in terms of communication because she successfully conveys the idea and its details. However, for an 11-year-old deaf child in the sixth grade, this level is insufficient when faced with academic texts in geography, history, science, etc.

Without fully mastering Spanish—understanding the meaning and use of content elements, functional elements, and the rules of gender, number, and verb tense agreement—she will encounter significant difficulties not only in her academic performance but also in communicating with her hearing peers.

Why has a girl who has undergone a good rehabilitation process with cochlear implants and therapies since she was six years old, and who is now 11, failed to achieve the necessary proficiency in Spanish?

As mentioned in the previous chapter, the reason lies in the fact that deaf children with cochlear implants fitted after the age of two are unable to auditorily perceive all the elements of sentences. They often miss functional elements such as articles, prepositions, conjunctions, and pronouns. Additionally, they do not always catch word endings or suffixes that indicate gender, number, or verb tenses.

For example, a deaf child with their implant might hear:

“El perro está come(n)”.

Instead of:

“El perro está comiendo” (“The dog is eating”). Or they might hear:

“Vamos a la finca de Juan (jm) María”.

Instead of:

“Vamos a la finca de Juan y María” (“We are going to Juan and María’s farm”).

Alternatively, they might interpret what they hear differently:

“Vamos a la finca de Juan con María” (“We are going to Juan’s farm with María”).

This means they fail to perceive important elements that are essential for grammatical knowledge of the language. Consequently, their oral and written productions often display various grammatical errors, demonstrating that, generally, they have neither inferred nor fully understood these rules, let alone applied them correctly.

Both through the sign language option and the proposal to acquire spoken language, the achieved outcomes can be described as communicative competence concerning the language of their environment but not as linguistic competence (Radelli, 1994a).

“Anyone capable of making themselves understood in a given language, simply because they have learned its vocabulary and a limited set of phrases and sentences,

certainly possesses communicative competence in that language, but not linguistic competence.” (Radelli, 2000, p. 22).

Having linguistic competence in a language implies much more than simply being able to communicate. It entails a comprehensive understanding of its grammatical rules, structures, and nuances.

Difficulties in reading and writing the language correctly should not merely be viewed as issues of literacy but rather as a reflection of the lack of full knowledge of that language by deaf individuals, whether they use sign language or spoken language.

The lack of competence in this language results in a kind of illiteracy, as it cannot truly be said that they know how to read and write.

This “illiteracy” among deaf youths and adults becomes a barrier that prevents them from accessing a world of communication, knowledge, information, development, and opportunities. For a deaf person, not having linguistic competence in the historical-vocal language of their

community, and not knowing how to read and write in that language, leads to profound marginalization and limitation.

From a bilingual perspective, it is proposed that the L2 (second language)—in this case, Spanish—be acquired through the L1 (sign language). However, from a Chomskyan perspective, a language is not acquired through another language but rather through direct contact with it (Chomsky, N., 1965).

According to this theoretical stance, the grammatical rules of a language are not acquired through teaching, translation, or explanation but are inferred through use and by contrasting the different forms of elements within sentences: singular and plural, masculine and feminine, past and present, etc. (Fernández Botero, 2004; Radelli, 2001, 2000).

When a hearing infant acquires a language, neither their mother nor anyone else in their environment explains when to use a feminine or masculine article, a singular or plural one, or how to conjugate verbs in past or future tense. Nor does the mother use another language as a

mediator to facilitate the acquisition of the child's mother tongue. The child is simply spoken to, and through exposure to the language, they infer the meanings of content elements such as nouns, adjectives, verbs, and adverbs.

They internalize the meaning and proper usage of the language's functional elements and infer the underlying rules, understand them, and apply them. All of this occurs naturally through contact with the language being acquired, without using another language to mediate the process.

Contrary to what bilingualism suggests, from this theoretical perspective, it is possible to facilitate the acquisition of written Spanish (or any other historical-vocal language), not as a second language but as a first language, which can be acquired without the mediation of another system, solely through exposure to its written form (Fernández Botero, 2004; Radelli, 2000).

It is based on these and other principles that Italian linguist Bruna Radelli proposed logogenia more than 30 years ago within the framework of research conducted by the National Institute of

Anthropology and History of Mexico (Radelli, B., 2001).

Although we will delve into the method of logogenia in the following section, it is enough to say for now that, while historically deaf individuals have not acquired full linguistic competence in the oral language of their community—and therefore do not read or write correctly—this does not mean they are incapable of doing so.

Regardless of whether they acquire sign language or spoken language, having limitations in accessing written language places them at a profound disadvantage compared to hearing individuals, which is entirely unjust.

Logogenia has been successfully applied to hundreds of deaf children and adolescents in Latin America (Rey Castillo, M. & Fernández Botero, E.L., 2023), and it has also been introduced in Italy and Spain.

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<https://bit.ly/ExperienciasSignificativas2023>

Its implementation in deaf children aged 5 to 8 was evaluated through a scientific research project, with the results published in a scientific journal. You can access the full study through the following link:

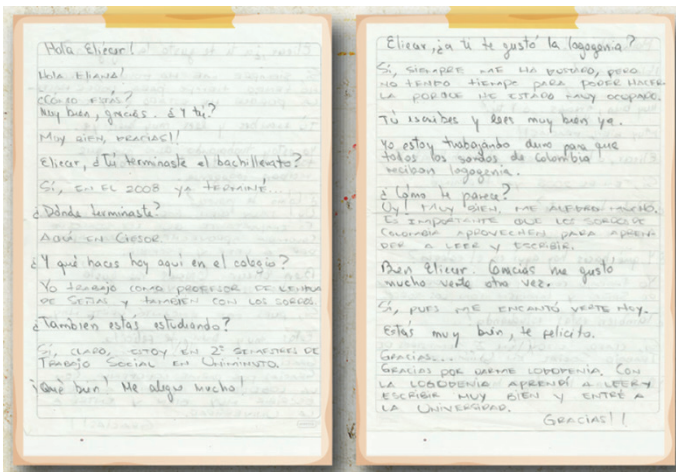
<https://revistaselectronicas.ujaen.es/index.php/viai/article/view/5546>

(Or access it with the following QR code).



Logogeny has been implemented in hundreds of cases, some of them subsidized by the Colombian healthcare system through Dime Colombia IPS.

This is the example of Eliécer Jurado. He is a young deaf individual and a user of sign language. He received logogeny from the age of 10 for three and a half years. He successfully completed high school at the Francisco Luis Hernández Betancur School in Medellín, which offers a bilingual modality for deaf students, and later enrolled in university.



Testimony written by Eliécer, illustrating the quality of his writing: (Transcription of the dialogue with Eliécer).

-Eliána: Hello, Eliécer.

-Eliécer: HELLO ELIANA. HOW ARE YOU?

-Eliána: Very well, thank you. And you?

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-Eliécer: VERY WELL, THANK YOU.

-Eliana: *Eliécer, did you finish high school?*

-Eliécer: YES, I FINISHED IN 2008.

-Eliana: *Where did you graduate?*

-Eliécer: HERE AT CIESOR.

-Eliana: *And what are you doing here at the school today?*

-Eliécer: I WORK AS A SIGN LANGUAGE TEACHER AND ALSO WITH DEAF STUDENTS.

-Eliana: *Are you also studying?*

-Eliécer: YES, OF COURSE, I'M IN THE 2ND SEMESTER OF SOCIAL WORK AT UNIMINUTO.

-Eliana: *That's great! I'm very happy for you! Eliécer, did you enjoy logogeny?*

-Eliécer: YES, I'VE ALWAYS LIKED IT, BUT I DON'T HAVE TIME FOR IT BECAUSE I'VE BEEN VERY BUSY.

-Eliana: *You write and read very well now. I'm working hard to ensure that all deaf people in Colombia receive logogeny. What do you think?*

-Eliécer: WOW! VERY GOOD. I'M VERY HAPPY. IT'S IMPORTANT THAT THE DEAF IN COLOMBIA TAKE ADVANTAGE TO LEARN TO READ AND WRITE.

-Eliana: Great, Eliécer. Thank you. I really enjoyed seeing you again.

-Eliécer: YES, I LOVED SEEING YOU TODAY.

-Eliana: You're doing great; congratulations.

-Eliécer: THANK YOU... THANK YOU FOR GIVING ME LOGOGENY. WITH LOGOGENY, I LEARNED TO READ AND WRITE VERY WELL AND ENROLLED IN UNIVERSITY. THANK YOU!!

Walter Vélez, who was Eliécer Jurado's Philosophy teacher and also taught other deaf students at the Francisco Luis Hernández Betancur School, states that those who received logogeny or were undergoing it demonstrate a higher level of abstraction than those who did not.



<https://youtu.be/FCxyvPRqKjU>

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Santiago González is a young oralized deaf boy who began logogeny at the age of 9, facing significant challenges in speaking, reading, and writing. His oral and written productions were largely ungrammatical and, in many cases, unintelligible. He was in the third grade of elementary school and struggled academically due to his lack of linguistic competence in oral and written Spanish. He underwent logogeny for four years and overcame his difficulties with both oral and written language.

Testimony of Adriana Bermúdez, Santiago's mother:

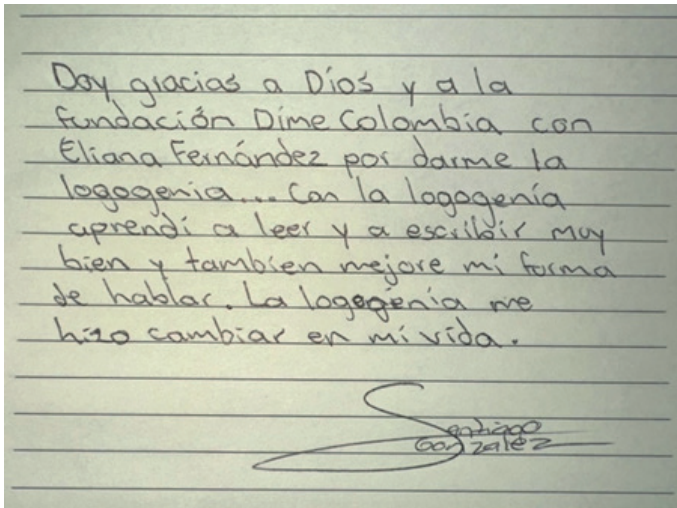


<https://youtu.be/BkZ3mSXAglw>

Video Testimony of Santiago González:



<https://youtu.be/UjfNZjTmJPk>



| This is an example of how Santiago González currently writes (2024).

Logogenia has also been contracted for 16 consecutive years by the Municipality of Envigado, near Medellín, Colombia. Its results have been successful, making it a pioneering program in logogenia and logodactica worldwide, a fact that I will address further in my book.

The fact that logogenia does not use sign language (L1) to teach the second language (L2) does not mean it is against bilingualism or the natural language of deaf people.

Although logogenia is based on a theoretical model of linguistics that some linguists from other schools of thought do not share, and even though it is not yet widely known in all the countries and cities where deaf people live, this does not mean that logogenia is a utopia for them.

On the contrary, logogenia exists. Logogenia has been tested.

And most importantly, **it works!**

As long as there is no better alternative for what it was created for, I will continue, and we will continue, sharing its story with the world and researching ways to bring it to every corner of our countries where there are deaf children.

SPECIAL WORDS FOR YOU

Dear young or adult deaf person who has undergone a long process of trying to acquire reading and writing skills, I want to tell you that you may have often asked yourself why it is so difficult to understand what you read. You manage to grasp some words like house, car, chair, man, woman,

sad, happy, love, but it is hard for you to understand words like:

/ saddened / sadly / sadness or / in love / fall out of love /, or the meaning of words like in / of / with / without / by, etc. Because of this, when reading some sentences, you cannot fully understand their meaning.

Some sentences may seem to say the same thing, are similar, but differ in small details. For example:

-Jump the chair

-Jump off the chair

-Jump with the chair

-Jump on the chair

-Jump to the chair

When reading these sentences, you likely only understand the words jump and chair, but not the other elements that are there; you cannot comprehend or differentiate them.

You do not understand them because, if you are in the process of learning to speak and understand the oral language, those elements may not be

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fully audible to you. And if you are learning Spanish through sign language, you may not understand those elements because they might not have a clear translation in sign language, and therefore, you do not grasp their meaning.

Similarly, you might find it hard to differentiate between:

-The boy is running

-The boy is going to run

Or between:

-Go to the door on the right. and the difference with:

-Go to the right of the door.

To understand these sentences and many more, it is necessary to grasp some language rules that no one can explain to you.

For years, those of us who have been interested in your education have wondered what the best way is for you to learn to read and write properly in your language.

Many answers to this question have been proposed. One of them, and one of the most recent, is the method of logogenia, created by an Italian linguist named Bruna Radelli.

Personally, I had the fortune to learn about logogenia 22 years ago during a diploma program in Mexico. There, I discovered not just a methodology but also the answer to all my questions about why neither oralized deaf people nor users of sign language could learn to read and write as expected. It is the answer that I now, through my diploma programs, offer to those who also seek an alternative to improve their work.

Logogenia provides deaf people, both sign language users and oral language users, with the ability to read and write correctly in their language. In logogenia, there is hope—one that has already been applied and proven successful.

Therefore, to those who approach deafness from a socio- anthropological or clinical perspective, I propose that they consider logogenia as a method that complements existing proposals for this population. Both bilingualism and oralism will be enriched with the incorporation of logogenia.

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To you, the child receiving or about to receive logogenia, I want to tell you that although we do not use sign language or oral language in the sessions, this does not mean that we ignore or reject them. From the theoretical perspective that underpins the method, we are promoting the acquisition of written language directly, without the mediation of another language.

We will always respect your oral language and your sign language, seeking for you to read and write correctly, as you deserve and need.

Chapter 7

ACQUIRING A LANGUAGE VS. LEARNING IT

I want to begin this chapter with a family anecdote that occurred a few years ago. Two of my nieces, Lucía, 8, and Amalia, 11, moved to the United States with their parents. Neither of them had any knowledge of English. Coincidentally, during the same two years, my 22-year-old daughter also moved to that country with the goal of learning English. Unlike her cousins, she had taken courses in Colombia and had some proficiency in the language but wanted to perfect it through total immersion.

The three of them spent two years in the United States and then returned to Colombia. I was very curious to see the level of proficiency each of them had achieved in this new language.

Lucía, who was 10 years old after this immersion, spoke English perfectly. She understood it deeply, spoke it fluently, knew idiomatic expressions, and mastered it with a native accent. She had managed to study two years of school in the United States with excellent performance.

Amalia, who moved there at age 11, had developed a good level of English, but not to the extent of her younger sister. She exhibited some grammatical errors and did not speak with a native English accent.

Camila, who at 22 already had a solid foundation in English from Colombia, showed the lowest performance among the three, although she also made considerable progress.

This anecdote is very interesting because it helps us understand the difference between the processes of acquiring and learning a language.

Lucía acquired English during those two years, taking advantage of being within the critical period for language acquisition. Amalia was at the end of her critical period, which is probably why she was able to acquire much of the language but not completely. Camila, on the other hand, strengthened her learning process in the language through immersion.

When a baby is born hearing, two fundamental conditions allow them to acquire a language.

First, they have a human brain equipped with what Noam Chomsky calls a linguistic faculty for language. This brain, with its linguistic faculty, provides the ability to acquire any language to which the baby is exposed.

The natural exposure required to acquire this or any language depends on one fundamental condition: hearing the language. This means receiving the necessary linguistic input to activate their linguistic faculty. This linguistic input is auditory and captured through the sense of hearing.

This means that if a baby is born hearing and also possesses a linguistic faculty for acquiring

language, all they need is simply to hear the language of their environment.

The baby doesn't make any conscious effort to acquire the language— they simply listen, and their brain's language apparatus activates the acquisition process. After some time of auditory exposure to the language, the child understands it and can then speak and communicate through it.

Chomsky's research has revealed surprising findings, such as the claim that humans can acquire several languages simultaneously during the first 7 to 9 years of life, the so-called critical period, if adequately exposed to them.

“Thanks to the innate linguistic faculty, humans have the ability to acquire multiple languages in the early years of life, during the so-called critical period. If a child is adequately and consistently exposed to different languages, they can develop them simultaneously without one interfering with the acquisition of the other, maximizing the cognitive plasticity of this stage.” (Crain & Lillo-Martin, 1999, p. 45).

This demonstrates the immense capacity of humans, who are endowed with a linguistic faculty dependent on specific areas of the brain that process this type of information. This is absolutely astonishing, especially when we consider that acquiring a language does not require any conscious effort or human will. In other words, we acquire language naturally as long as we are exposed to it, without any effort.

Acquiring a language is possible under three conditions:

1. Having a linguistic faculty: This means possessing a brain system that processes language information and functions correctly. The brain areas responsible for language must be healthy, without damage or injury, to process language information adequately.
2. Being exposed to the language through hearing: This involves hearing the linguistic messages from the environment, which a baby begins to do from birth. The auditory linguistic information is the “linguistic input” that, when it reaches the brain’s

language apparatus, triggers the language acquisition process. A baby in their crib, with a brain ready for this and normal hearing to listen to the language, acquires it effortlessly simply by hearing it.

3. Exposure within the critical period for language: The critical period is the time during life when exposure to language alone suffices for involuntary and effortless development. After the critical period, language is no longer acquired through mere exposure and requires a voluntary learning process.

Chomsky initially defined the critical period as between ages 1 and 5. However, later research has extended this range, suggesting that the capacity to acquire a language naturally extends to puberty, around 12 years of age (Lenneberg, E. H., 1967).

When we attempt to acquire or learn a language after age 10 or 12, we no longer do so naturally, effortlessly, and unconsciously. Instead, we face a voluntary, conscious, and effortful learning process, which is what all humans experience

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when trying to acquire a second language after that age.

What happens to deaf children who cannot hear the language?

Deaf children are born with a linguistic faculty, but it is not activated because they do not receive the “linguistic input,” meaning they do not hear the oral language of their environment.

For this reason, deaf children have two options: one is to acquire sign language, a visuo-gestural language they can perceive not through hearing but visually. They acquire the language not by listening but by seeing it used by people around them and interacting with them.

The other option is exposure to oral language through hearing aids or cochlear implants, enabling them to access auditory linguistic stimuli to activate the process of language acquisition as hearing individuals do.

This raises the question: Which language should a deaf person acquire?

This has been the dilemma posed for years by the socio-anthropological and clinical perspectives on deafness.

When asked in an interview published in his book *The Architecture of Language* which language a deaf child should acquire, Chomsky offered a response that should guide our proposals for this population.

“Q: Sign language or verbal language? Which is the better option in the context of deficits in the articulatory-perceptual interface, particularly for children with hearing impairments?”

NC: It will depend on the circumstances. If my neighbors had a deaf child and asked me for advice, I would first say that I am not particularly qualified to advise them on what is best for the child; second, I would tell them they need to carefully evaluate the advice of people trained and experienced in that field, while acknowledging that even such people have a very limited understanding of such complex and intricate issues. And if they still wanted my advice, I would suggest that the child be introduced to both sign language and verbal language in as natural an environment as

possible.” Chomsky, N., *The Architecture of Language*, p. 57.

Both languages!

How to Foster the Acquisition of Oral Language?

For a deaf person to acquire a language, they must be exposed to it naturally and to *all the elements that constitute that language*. This includes vocabulary as well as functional elements—small components that connect words (articles, prepositions, pronouns, and conjunctions)—within complete sentences that allow them to infer the language’s rules.

Through oralization processes, deaf children have traditionally not achieved full exposure to oral language. For this reason, in many cases, they do not attain linguistic competence in the language but only communicative competence. This means they understand and use many elements of the language but do not properly grasp the rules or connectors.

Sign language users, on the other hand, can achieve linguistic competence in that language because they are exposed to it visually, enabling

them to understand its vocabulary and rules. However, when it comes to acquiring the language of their hearing environment—in our case, Spanish—through reading and writing, they have not demonstrated success. This is because they have not been given the opportunity to acquire it through exposure but rather through a learning process mediated by sign language.

Based on the premise that language is acquired through exposure, an Italian linguist, Bruna Radelli, over 30 years ago, developed a methodology called *logogenia* to enable deaf individuals to acquire linguistic competence in a language through exposure to written language.

She posits that oralization processes should continue as they are currently practiced, as they develop many elements of oral language. Similarly, she believes that those who promote the acquisition of sign language for deaf children should continue their work. Her proposal is that both oralism and bilingualism proponents implement the *logogenia* method as a complement to both approaches, aiming to achieve linguistic competence through exposure to written language.

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The ultimate result is that deaf children will be able to read and write like any hearing child of their age.

As an introduction to the next chapter, which presents logogenia, Colombian scientist Francisco Lopera Restrepo, director of Neuroscience at the University of Antioquia, provides the neurological foundation for this methodology.



<https://youtu.be/kUf913bHNWM>

SPECIAL WORDS FOR YOU

To you, deaf child, teenager, and adult, I want to tell you that logogenia, the method created to enable people to acquire Spanish through written language, was built upon the principles of a theory called generative grammar by Noam Chomsky, as well as neuroscience. Logogenia proposes that deaf individuals continue receiving education to acquire sign language and oral language according to their

preferences, and as a complement to each alternative, also receive logogenia.

The method does not oppose sign language or oralism; instead, it complements them.

In this chapter of the book, neuroscientist Francisco Lopera, director of the research group at the University of Antioquia, explains how deaf individuals can acquire the language of their hearing community through exposure to written language, thanks to having a brain equipped to achieve this.

Chapter 8

LOGOGENIA, BEAUTIFUL AND POWERFUL. BUT ONLY FOR A FEW?

Twenty years ago, during a trip to Mexico, I discovered something that filled me with hope: a method called *logogenia*, designed to teach deaf people to read and write correctly—or so I understood upon learning about it for the first time.

I studied its foundations, learned how to implement it, and found not only an alternative methodological approach but also a completely new perspective on human language in general and the language of deaf people in particular.

I felt I had found the missing piece in the educational intervention for this deeply underserved

community. I returned to my country with my heart full of hope, firmly believing I was about to transform the lives of many deaf individuals.

With that conviction, I visited every deaf institution I could, asking for a chance to share what I had learned. I imagined the amazed faces of the deaf children, their bright, eager eyes, and the reactions of others who, like me, would see this method as the opportunity to overcome the barriers that had denied them access to a world they had been excluded from until then. I was sure everyone would immediately want to start receiving *logogenia* lessons.

But reality hit me hard.

When I spoke about what I had brought from Mexico to classrooms of deaf students, I saw them sitting in front of me, looking at me without the enthusiasm I had anticipated. I explained, with all the passion I felt, that I had brought a method that would enable them to read books, write correctly, go to university, study, and succeed. They responded disinterestedly, “It’s boring. Spanish is too hard. I don’t want to. Why university? I don’t want to study; it’s too difficult.”

Each word struck a blow to my hopes, but I refused to give up.

I then turned to their families, who received the news with tears in their eyes and hope in their hearts. For them, this method was salvation. After years of frustration, seeing their children attend primary and secondary school without learning to read or write, they felt that, at last, something could change their children's futures.

I began implementing the method with a few children in sessions funded by Colombia's health-care system. These children started making more significant progress in acquiring the language through written code than their peers who did not receive the same instruction.

A few years later, when teachers, families, and the deaf students themselves who benefited from *logogenia* recognized its achievements, I found that upon entering the playground or walking around the institution, nearly all the children approached me—not just a few anymore—saying: “Please call my mom and tell her because I want to take classes with you. I want to learn to read. I want to learn to write. I want you to teach me

logogenia.” It was as if time had transformed their earlier indifference into a deep and urgent desire.

What had changed in those 15 years?

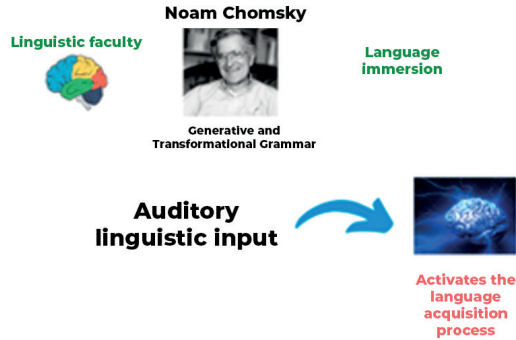
It’s simple: Deaf individuals no longer felt the need to read and write to study or earn a university degree. But today, the world is different. Reading and writing have become an imperative necessity—not only to access education but to participate in modern life, connect with the world through social media and the internet, establish social relationships, and access knowledge that once seemed out of reach. Now, with *logogenia*, all of this seemed possible.

But what is *logogenia*?

Logogenia is a method created by the Italian linguist Bruna Radelli. It is based on a theory about how we learn language and aims to help deaf children learn to write the spoken language of their environment correctly—in our case, Spanish.

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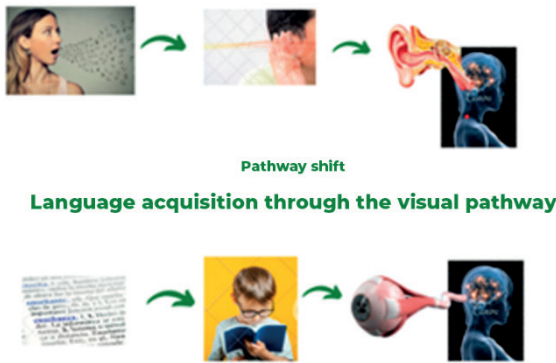
Chomsky's theory of language posits that humans are born with a linguistic faculty, and thanks to this, we can acquire any language, as long as we are immersed in that language through auditory linguistic input that activates the language acquisition process.



With logogenia, Bruna Radelli proposes a shift in how deaf children are exposed to language. They

possess the linguistic faculty but cannot process auditory linguistic input.

In this case, logogenia facilitates their exposure to linguistic input not through hearing but through visual means, via exposure to written language. (Radelli, B., 2000)



This method aims to facilitate the acquisition of the language spoken in their environment through exposure to written language, using visual channels instead of auditory ones.

In Logogenia, deaf individuals are not taught to read and write. Instead, they are exposed to the language through its written form so that they acquire the language via reading and writing. Although the ultimate result is that they can read

and write like any hearing peer of their age (children aged 6 to 12), it is not strictly a method for teaching reading and writing to deaf individuals.

Essentially, Logogenia is based on the idea that a human being can acquire a language as long as they have the linguistic faculty and are adequately exposed to the language during the critical period of linguistic development.

For a deaf child who does not use hearing aids or cochlear implants, it is possible to acquire competence in sign language as their first language if exposed properly. And if at the age of 5, they receive Logogenia, they can acquire linguistic competence in written language— Spanish, in our case—through exposure to the written code.

On the other hand, a deaf child undergoing oralization, who has received a cochlear implant or hearing aid, can benefit from Logogenia as a complement to their oral therapies. This allows them to capture the subtle elements of the language that they cannot fully grasp auditorily and complete their language acquisition process, developing linguistic competence.

Logogenia facilitates a language acquisition process as it does not rely on explicit explanations of grammatical and syntactic rules or use another language to mediate this process. As Radelli puts it, Logogenia is designed “to foster the ability to understand and produce an infinite number of sentences in the language to which one is exposed, and to recognize which sentences belong to that language (i.e., are grammatically correct in that language) and which do not.” (Radelli, 2000, p.4).

How, then, is Logogenia conducted? How is a Logogenia process initiated?

When a hearing baby is born, they are constantly exposed to linguistic information. The mother speaks to the baby, saying, “Hello, my baby! You look so cute! I’m going to take off your clothes because I’m going to bathe you.”

Then she takes the baby to the bath and says, “Look at the water! It feels so nice and warm! Look at the little ducky! Quack, quack, quack! That’s the little ducky.”

The baby hears everything the mother says and, at the same time, observes what is happening

around them. When the mother says, “Oh, Daddy’s here!” the child looks at the door and sees a man with a beard, a round belly, glasses, and a smile. They begin to associate that this is “Daddy.”

Later, the grandfather arrives, with different physical characteristics, and is called “Grandpa.” The hearing child, as they acquire a language, associates what they hear (linguistic input) with what they see, thereby understanding the meaning of words.

In this way, they understand words like “water,” “Daddy,” and “Grandpa,” as well as sentences like “I’m going to bathe you,” and “The water feels so nice.” But beyond that, the baby begins to grasp two fundamental elements:

1. The syntactic rules of the language: When we acquire a language, we not only learn vocabulary but also its structure. The structure consists of vocabulary and the rules that dictate how words combine in that language.

These rules include the order of words in sentences, which is called syntactic knowledge of the language. In Spanish, for example, the order is

first the noun and then the adjective, as in “Este es un carro rojo” (“This is a red car”). However, in English, the syntax is different: first the adjective and then the noun, as in “This is a red car.” This syntactic knowledge is essential for understanding and achieving proficiency in a language.

When the mother says, “Oh, what a cute baby! That’s Daddy, this is the water, I’ll get your bottle,” the child understands the meaning but also notices that some words are sometimes accompanied by “el,” other times “la,” and occasionally “los” or “las,” and that adjectives like “rojo” and “roja” change depending on the noun they describe.

2. The grammatical elements that connect words:

In the case of Spanish, these elements include articles, prepositions, conjunctions, and pronouns.

All these elements form part of what is called implicit grammatical knowledge of the language. This knowledge is acquired because the child is exposed to the language, not because anyone explains its rules to them.

A hearing child acquiring a language is not told or taught the meaning of the words “en,” “de,” “la,”

or “las.” Through exposure to the language, they come to understand their meanings and learn how to use these elements.

They are not taught when to use plural or singular forms, feminine or masculine, or how to conjugate verbs in past or present tenses.

As the baby grows, they begin to understand more complex actions and concepts. For example, when the mother says, “The teddy bear is going to fall, it’s going to fall,” and then says, “It fell, the teddy bear fell,” the child begins to differentiate between something that will happen (future) and something that already happened (past).

It is truly marvelous how humans acquire this knowledge effortlessly, unconsciously, but this is how we internalize the structures and rules of a language.

The process of language acquisition is absolutely fascinating. Humans are capable of doing it simply by having a linguistic faculty and being exposed to the language, whether through hearing or visual exposure to written language.

We acquire a language when we:

- Learn its vocabulary, understanding the meaning of elements like nouns, adjectives, verbs, and adverbs.
- Understand and use functional elements such as articles, prepositions, conjunctions, auxiliaries, and pronouns.
- Internalize its grammatical and syntactic rules and apply them correctly.

Until we understand these elements and use them adequately, we have not truly acquired a language.

When Bruna Radelli realized that deaf children needed to acquire Spanish, Italian, or any other language of their environment through a different pathway than auditory exposure, and when she saw that deaf children using cochlear implants or hearing aids were exposed to the language in an incomplete way because they could not fully grasp it, she understood that the teaching and learning processes for Spanish—designed for hearing children—were insufficient. (Radelli, B., 1994 b)

This realization led her to develop a new methodology known as Logogenia.

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How are Logogenia sessions conducted? How is a Logogenia process initiated?

Observing an initial session of Logogenia is a fascinating experience.



In a first session, a professional—usually an educator or speech therapist trained in Logogenia—is seated next to the deaf child, who knows nothing about written language. The child cannot read or write at all. In front of them, there are small cards with words and some objects.



The Logogenist constructs a sentence using the elements in front of them. For example, they form the sentence “toca él lápiz” and point to each word in the sentence.



Then, instruct the child to do the same—that is, to point to each of the little signs.

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Then, the Logogenist demonstrates how to do it: they point to “Toca él lápiz” and then perform the action of touching the pencil.



Then, the Logogenist asks the child to do the same. The child imitates the action, touching the three little signs and then the pencil, without fully understanding what the exercise is about.



Then, the Logogenist replaces the card “lápiz” with “borrador” and forms the sentence “Toca el borrador”. By swapping “lápiz” for “borrador”, the Logogenist repeats the process: they point to the three cards and now touch the eraser. Then, they ask the child to repeat the action.

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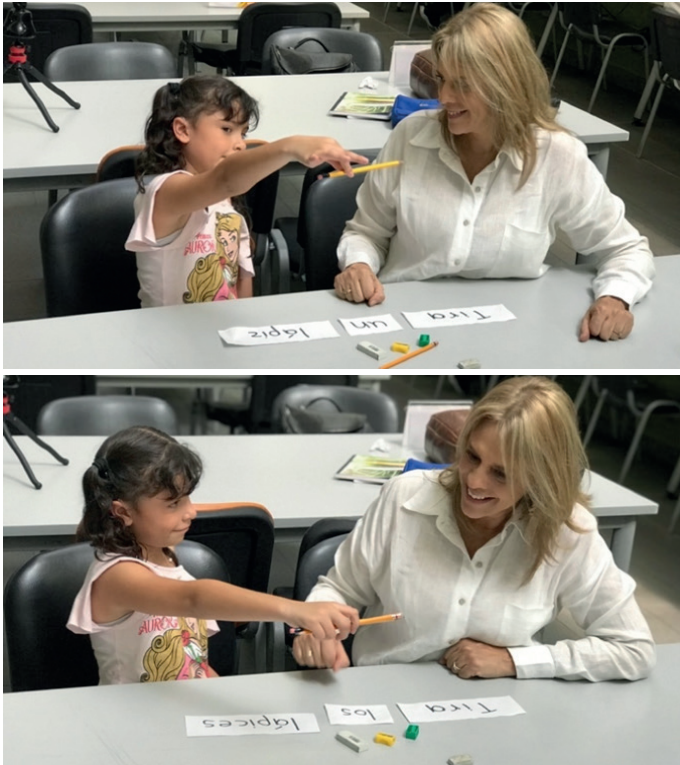
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*Then, objects like a ruler, sharpener, etc., are added, and finally, the verb *toca* is replaced with *tira* and later with other verbs, creating various sentences by combining the cards.*

In this initial stage, the Logogenist is exposing the child to written language through simple commands expressed with the cards. The primary goal is for the child to understand:

First, that these cards convey information. Second, that the cards refer to actions and the objects on the table. Third, that changing the last card, the one with the noun, demonstrates that the word represents different objects, and changing the first card, the one with the verb, shows that this word relates to an action.



Later, the Logogenist will include singular and plural articles and place multiple objects on the table to create sentences like “Tira un lápiz” and then “Tira los lápices”, thereby exposing the child to how singular and plural forms are constructed in the language.

Naturally, additional objects like a ruler will be introduced, allowing the creation of sentences such as “Toca la regla”, showing the child that in the sentence “Toca el lápiz”, the article “el” changes to “la” when forming the sentence “Toca la regla”. This demonstrates

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that not only does the card for the object change, but also the article adjusts accordingly.

In implementing Logogenia, neither sign language nor spoken language is used. The children are exposed to the language exclusively through written language. The method operates on the principle that, by changing the mode of exposure to language—not auditory but visual via written language—the child is introduced to its structure and rules.

This is just an example of an introductory session in logogenia, where the logogenist exposes the deaf child to the language through its written code and introduces them to its elements and rules.

No one explicitly explains these rules. The child's intuitive understanding of how Spanish (in this case) works develops naturally through their contact with written language, without the need for hearing.

This inaugural session is beautiful because it shows how the child infers meanings and rules through such a simple activity—something only a human being with linguistic faculty can do.

If we subjected a well-trained chimpanzee to the same activity, the best outcome would be the ability to associate the meanings of individual words like **rule**, **pencil**, **eraser** with their respective objects, and words like **touch**, **throw**, **move** with their corresponding actions. While the chimpanzee might grasp these associations, it would never comprehend complete sentences, much less infer rules of gender, number, etc. This would remain true even after a thousand sessions of logogenia, as chimpanzees lack the ability to infer rules. Unlike humans, they don't possess a Broca's area in their brains, which enables us to acquire the syntax and grammar of language.

I must confess that during my training in the diploma course, while I found these initial sessions charming, they also left me somewhat disenchanted. I doubted that, through simple cards, basic sentences, and concrete objects, a deaf child could eventually understand concepts like **fast**, **strong**, **tired**, or **angry**, or words like **besides**, **but**, **before**, **after**, and even abstract concepts like **sadness** or **beauty** to write texts.

My doubts didn't last long. I quickly realized that in logogenia, the cards are merely a starting point—a way to connect the child with the language. Later, other activities would come into play, like writing sentences in a notebook. These are called **minimal pairs** in logogenia, which are pairs of sentences demonstrating linguistic oppositions and conveying different meanings.

In logogenia, children are introduced to nine types of syntactic oppositions through nine types of minimal pairs.

By exposing the child to these sentences, the logogenist enables them to infer opposite meanings, understanding not only the meaning of content elements like verbs, adjectives, and nouns but also the functional elements within sentences.

Logogenia “floods” the child's brain with syntax by presenting various language rules through written sentences for the child to infer and later use correctly. Syntax is prioritized without neglecting the language's vocabulary or lexicon.

After approximately six months of work—three or four individual weekly logogenia sessions with

a deaf child, initially focusing on comprehension of sentence meanings, words, rules, and functional elements—the process transitions to a phase where the child begins to write.

This phase starts with exposure to simple questions such as **“What color is it?”**, **“What is there?”**, **“How many are there?”**, **“Where is it?”**, **“Who is it?”**, etc., through a highly specific methodology taught in logogenia training programs.

Through this work, the logogenist guides the child not only to understand these questions and sentences but also to write grammatically correct sentences with proper gender, number, and verb tense agreement.

The child begins to infer rules, write increasingly complex sentences, and discern when a sentence is grammatical and when it is not.

Witnessing how children hypothesize about how a language works reminds me of a lovely experience with a deaf child I worked with years ago.

While teaching commands to demonstrate how the gender and number agreement rule works, I presented sentences like:

- **Toca la casa roja**
- **Toca la mesa roja**
- **Dame el carro rojo**
- **Dame el lápiz rojo**

The child stared at the words **casa** and **mesa**, pointing out the /a/ at the end of **casa** and **roja**, and then did the same with the /o/ in **carro** and **rojo**.

Then, with a gesture of understanding, they indicated, **“I got it!”**

The child took the pencil and decided to be the teacher while I became the student. They wrote:

Dibuja el pantalon rojon

In that moment, I felt immense joy. This showed me that when they read and understood the sentences, they were not engaging in mere memorization or mechanical association; they were inferring rules.

However, their hypothesis about gender and number agreement linked the ending letter of the noun and adjective: “If the last letter of the noun

is /a/, the adjective's last letter should be too. If **pantalón** ends in **ón**, then **rojo** should now be **rojon**."

But the rule doesn't work that way.

The rule states that the agreement lies between the article, the noun, and the adjective, explaining why we use feminine or masculine articles, nouns, and adjectives. Agreement is not tied to the last letter of words but rather to whether the noun is presented in its feminine or masculine form, something indicated by the accompanying article.

I marked their production with an asterisk (*), denoting ungrammaticality, and after the necessary work, the child eventually wrote:

- **Dibuja el pantalon rojon** (*incorrect*)
- **Dibuja el pantalón rojo** (*correct*)

This is one of the wonders of being a logogenist: witnessing the logogenization processes of many children, observing in slow motion what happens—or rather, what their brain does—when acquiring a language.

Following minimal pairs and questions, the process transitions to stimulating activities like descriptions, riddles, storytelling, and spontaneous dialogues. These exercises enable discussions not only about present objects like an eraser, pencil, or ruler but also about abstract concepts such as **love**, the meaning of **to love**, and what one might say to a friend regarding a relationship.

Logogenia proposes implementing its methodology starting at age five, dedicating three to four years to individual sessions held three to four times per week.

The results of logogenia have been absolutely remarkable and awe-inspiring—not only in children with cochlear implants, where this method complements verbal therapies (as logogenia does not replace verbal therapies), but also in children who use sign language. These children, who often had not developed comprehension or use of written language beyond a very basic vocabulary, achieved extraordinary outcomes.

Deaf children, who neither speak nor understand spoken language, can now communicate

perfectly through fluent, grammatical, and fully comprehensible written language.

This achievement, unattainable for centuries, has been made possible by logogenia—a truly ingenious invention created by a linguist who one day imagined that written language could be the key to overcoming the barriers to natural language acquisition for deaf individuals.

Duality Towards Logogenia

The deaf community has experienced a dual perspective towards logogenia.

On the one hand, they recognize the method's effectiveness and observe that deaf individuals exposed to logogenia acquire elements of written language that they otherwise typically have not demonstrated.

However, they resist accepting a method that does not use sign language to facilitate this process, as they consider written language to be a second language for them, which must be acquired through the first language. This has been the central argument for why some sectors of the deaf community have rejected logogenia as a tool

for acquiring Spanish. It is likely that, in some way, by not using sign language, they perceive that a fundamental aspect of the deaf community's identity is being undermined.

In the realm of oralists, however, logogenia has been very favorably received, especially because it has been implemented with deaf children who have undergone oralization processes during their early years of life but had limited comprehension of both oral and written language. These children, when exposed to logogenia, began to significantly improve their comprehension and the grammar of their written—and even oral—productions. Consequently, logogenia has been well-received in the field of oralization as a valuable complement.

The fact that we do not use oral language in sessions has generated some resistance among certain families. These families, who have devoted much of their time to fostering speech in their deaf children, feel uncomfortable with a therapy that neither speaks to the children nor allows them to speak during the sessions.

In response to this situation, and given that logogenia is considered to contribute to the oralization process, experiences from Fundación Dime Colombia, led by Eliana Fernández, alongside its speech therapists, particularly Ángela Jaramillo—an expert in the oralization of deaf children—led to the creation of a complementary approach to the logogenia method, called “complementary oral logogenia.”

This method involves using logogenia with children undergoing oralization, dedicating the first part of the session to working in complete silence, so the children grasp all elements through written language using logogenia strategies. In the latter part of the session, syntactic and grammatical elements solidified through written language are also worked on orally. This way, children integrate these syntactic and grammatical elements acquired through logogenia into their oral productions, enabling them to speak using proper grammar and better understand oral language.

SPECIAL WORDS FOR YOU

Logogenia is a method created more than 30 years ago.

This method proposes that deaf individuals acquire language through writing so that they can understand what they read and write correctly.

The method is implemented individually over three years, with three weekly individual sessions. These sessions are conducted by someone specifically trained in logogenia.

In the sessions, the logogenist initially presents the deaf child with sentences formed with cards; these sentences are commands that the child must execute initially through imitation.

At first, very simple sentences are presented for the child to understand. Later, longer and more complex sentences are introduced, and eventually, the cards are replaced by a notebook.

In logogenia, neither sign language nor oral language is used; this does not mean that logogenia opposes their use. The goal is for written language to be used exclusively during the sessions, allowing

the deaf person to concentrate and “connect” directly with reading and writing.

After the child has understood many elements, work begins on writing correctly. Later stages include working with stories, descriptions, web applications, and various resources.

Logogenia has already enabled many deaf children, adolescents, and young adults to read and write correctly.

Therefore, to you, a deaf person who has benefited from logogenia, I want to tell you that you are fortunate. Not only have you advanced in your understanding and skills, but your logogenist has also learned and deeply enjoyed your process through you.

And to you, a deaf person who has not yet experienced logogenia, I want you to know that this method will give you the ability to understand what you read and write correctly—not just to study more successfully but also to communicate effectively.

Logogenia will open the doors to the vast world of the internet and social media, allowing you to

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participate more actively and meaningfully in life and its opportunities. Additionally, you will be able to enjoy literature and perhaps one day become a writer.

In short, logogenia will allow you to read the world and write your own story.

Chapter 9

LOGOGENIA, LOGODACTICS, AND THEIR RESULTS IN THE PIONEERING MUNICIPALITY OF ENVIGADO

After many years of discovering logogenia, implementing it in Colombia with numerous children, adolescents, and young adults, and training hundreds of logogenists, not only in Colombia but throughout Latin America through virtual diplomas offered by the Fundación Dime Colombia, I had the opportunity to integrate it into education through contracts with the education departments of Envigado, Medellín, and Bogotá.

However, one element always raised uncertainty: although logogenia is highly efficient and effective

in enabling deaf individuals to read and write like their hearing peers, its individualized nature, the time it requires, and the fact that it is such a specialized resource make it costly. This has limited its reach, giving the impression that it is a methodology designed only for a select few.

Initially, logogenia was conceived in Mexico for deaf children aged 8 to 17. When it was created, it was intended for this age group, and the first experiences were with this demographic. Upon bringing it to Colombia and witnessing all the benefits of logogenia, I asked myself, why not start earlier, from age 5?

With that motivation, I proposed a research project to implement the methodology with children aged 5 to 8, in collaboration with the Neuroscience Research Group at the University of Antioquia, and with the support of the National Institute of Anthropology and History in Mexico, through its then-director of Linguistics, Francisco Barriga Puente.

The research was conducted with boys and girls in Bogotá and Medellín from various institutions, using experimental and control groups, all

sign language users. The results were conclusive: children who received logogenia demonstrated a clear activation of linguistic competence. That is, they comprehended, expressed, and used content elements, functional elements, and syntactic and grammatical rules of Spanish. In contrast, children who did not receive logogenia only showed limited acquisition of content elements.

From this experience, logogenia began to be applied more playfully, through games, diverse activities, and family involvement. This evolution led to the creation of “complementary oral logogenia,” a variant for deaf children who use oral language and are undergoing oralization. In this version, the end of each session includes special stimulation of oral syntax and grammar. This way, children not only learn to read and write but also incorporate these elements into their speech, constructing grammatically correct sentences.

Later, within the educational context where logogenia and complementary oral logogenia were implemented with children from the age of 5, the suggestion arose to create a group methodology.

From this need, **logodactics** was born, a didactic proposal for the Spanish language subject.

Logodactics retains the same principles as logogenia but is implemented in two weekly sessions within the Spanish language subject for primary school children, complemented by a weekly individualized logogenia session. In addition to the principles of logogenia, logodactics incorporates elements of learning through play, meaningful learning, and teaching integrated into thematic units.

For logodactics, we created stories featuring two characters, Eugenio and Eugenia, deaf siblings aged 11 and 7, respectively, members of a family consisting of their father, mother, another baby sister, and other characters like grandparents and pets. Through these stories, which revolve around their family, we work in groups with the children to help them understand, at the level of written language, all the elements of the language.

The stories are designed to reflect contexts relevant and meaningful to children aged 1 to 10.

- The first thematic unit is called **“Me, My House, and My Family.”**
- The second is **“My School, My Teachers, and My Friends.”**
- Then comes **“The Things I Have,”** which covers important items for a child, from their clothes and toys to the food and treats they consume and the items in their room.
- The unit **“The Things I Do”** relates to all daily activities, from the daily routine to weekend activities.
- Another unit is **“When I Was Little,”** and finally, **“When I Grow Up.”**

Logodactics works with elements of logogenia in group settings. It uses these six thematic units to facilitate language acquisition through exposure to written language and to promote the comprehension and use of content and grammatical elements.

In logodactics, we not only work on everything related to linguistic competence in written Spanish but also address textual competence,

sociocultural competence, and pragmatic competence. (Fernández Botero, 2016)

This means we guide children to understand that, within their environment, both sign language and written language are significant. We work with them to use both languages appropriately and functionally in different contexts.

In the classroom context where we implement logodactics, there are moments when we use sign language or oral language and others when we expose children to written language without mediation by sign language, according to our methodological proposal.

Logodactics also exposes children to various types of texts that facilitate the acquisition of linguistic competence. Initially, these are very simple texts, such as descriptive and narrative ones, but later, literary, informational, and other genres are introduced.

The inclusion of logodactics expanded the scope of children who benefit from the logogenia methodology. However, logogenia continues to be implemented in the Municipality of Envigado,

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where Fundación Dime Colombia has worked for 16 years. Initially, only logogenia was conducted, but it is now combined with logodactics.

During the pandemic, we faced the harsh reality of being unable to establish direct contact with the children as we used to. From this situation, and leveraging our experience in virtual training and managing digital platforms, we began working with children using these resources, web applications, and online platforms, implementing logogenia through technology.



In 2023, two siblings, Emmanuel and Isabella, joined the Enviado program.

He, profoundly deaf and a user of sign language, seldom used the cochlear implant he had.

She, seven years old, with two cochlear implants since the age of

two, exhibited strong oral linguistic performance for her age, thanks to the oral language therapies she received.

When evaluating them for admission into the program, we encountered a very sad reality. The speech therapist who assessed them concluded in her report that Isabella was a suitable candidate for the program, with a very favorable prognosis. However, for Emmanuel, the diagnosis was different: the report indicated that he was still in the process of acquiring the first elements of sign language. Emmanuel was a child who barely communicated, avoided eye contact, showed little interest in the activities proposed during the evaluation, and was not motivated toward reading and writing. Additionally, some of his behaviors suggested traits of the autism spectrum.

Faced with the possibility of accepting Isabella into the program but not Emmanuel, I put myself in the mother's place and decided that I could not tell her we would accept her daughter but not her son.

I chose to work personally with Emmanuel through technology, but in a personalized and

individualized way, similar to how in-person logogenia sessions are conducted. In this case, however, we utilized virtual logogenia resources. By combining traditional logogenia procedures with technological elements, I observed a quick response to the invitation to learn to read and write.

After just over a year of work, reports from Emmanuel's teacher at the bilingual school for deaf children he attends highlighted significant changes: Emmanuel communicates, establishes eye contact, shows interest in classroom activities, and attempts to read and write. His transformation has been remarkable since starting the logogenia program.

Maria, his mother, shares that Emmanuel is constantly asking for the names of the things around him and wants to write them down. During logogenia sessions, he brings pieces of paper on which he has written dates, months of the year, and days of the week. He is eager to learn how to write the hours and the names of objects he likes the most. In the sessions, Emmanuel is highly participative, active, and motivated, unwilling to

stop at any point. Emmanuel is in the initial stages of logogenization, progressing very successfully.

The Municipality of Envigado, located 10 kilometers from Medellín, Colombia, has embraced the logogenia and logodactics programs from the Fundación Dime Colombia for 16 years.

More than 100 deaf children have participated in the program and completed their process. Many of them are now successful professionals who not only master reading and writing in Spanish but also in English.

We deeply thank the Municipality of Envigado for these years of allowing us to bring logogenia and logodactics to their deaf children and adolescents. This book is, in part, a recognition of their great support and trust in what we do.

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Lenis Zapata Yepes, a professional from the Municipality of Envigado's Department of Education, has supported our process of implementing logogenia and logodactics for 10 of the 16 years we have been leading this program in the area.

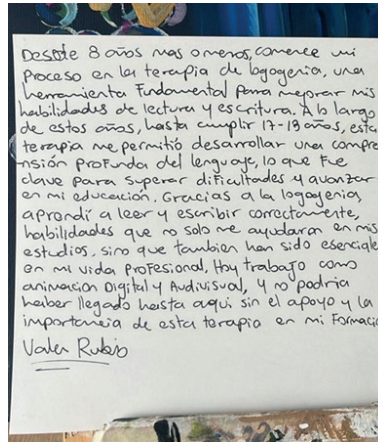


<https://youtu.be/BAic4VEbDCc>

Within the Envigado program, we worked with Valentina Rubio, who, as of September 2024, was 26 years old. Born deaf, with profound hearing loss in one ear and severe loss in the other, she received a cochlear implant at the age of 16. Her initial oralization process took place at the Pro Débiles Auditivos foundation, where she developed communicative competence in oral language. She joined the Envigado logogenia program at the age of 8 and there developed linguistic competence in Spanish through written language. Today, Valentina works as a digital animation professional for a multinational company. She also reads English fluently, and her immediate plan is to move to England to perfect her English and work there.



<https://youtu.be/IU3mhbZ-UoI>



Handwritten Note by Valentina with Its Corresponding Transcription.

Since I was about 8 years old, I started my process in logogenia therapy, a fundamental tool to improve my reading and writing skills. Over the years, until I was 17-18 years old, this therapy allowed me to develop a deep understanding of language, which was key to overcoming difficulties and advancing in my education.

Thanks to logogenia, I learned to read and write correctly, skills that not only helped me in my studies but have also been essential in my professional life.

Today, I work in digital and audiovisual animation, and I could not have gotten this far without the support and importance of this therapy in my development.

Valen Rubio

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Zulma López is Valentina Rubio's mother, and she talks about her daughter's process.



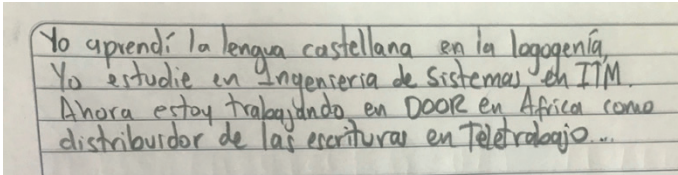
<https://youtu.be/4WoMNTIfXvc>

Julián Noguera is a profoundly deaf young man, a cochlear implant user, and a participant in the logogenia program in the municipality of Envigado through the Fundación Dime Colombia. He now speaks Spanish, uses sign language, works at the organization Door in Africa, and has also learned Kenyan Sign Language there. He reads and writes in English to connect with people from all over the world.



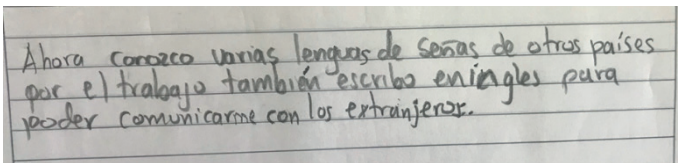
https://youtu.be/iilj_-6uTT0

Handwritten text by Julián Noguera, with its corresponding transcription.



I learned Spanish through logogenia. I studied Systems Engineering at ITM.

Now I am working at DOOR in Africa as a distributor of scriptures via telework.



Now I know several sign languages from other countries. For work, I also write in English to communicate with foreigners.

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Andrés Felipe Mariaca, a young deaf man and cochlear implant user. When he started the program, he had no competence in oral or written language. Alongside logogenia, he has received oral language therapy and follow-up for the use of his cochlear implant. He completed his high school education and, at 24 years old, still receives logogenia to strengthen his understanding and use of written language, says his mother, Gladis García.



<https://youtu.be/iCXsFx3J6YY>

Andrés Felipe thanks the Municipality of Envigado and Dime Colombia for everything he has learned through logogenia.



<https://youtu.be/cbBX66JGflw>

All these achievements have been possible thanks to the logogenists of our foundation, Dime Colombia, especially Miryam Cano and Angela Jaramillo, who have been with us from the beginning of the program with great professionalism, dedication, and affection for the children they have cared for.

The accomplishments of the children in their oral and written language are not solely due to logogenia or the work of Dime Colombia. They are also the result of their oralization processes, undertaken in institutions like the Pro Débiles Auditivos foundation, and the efforts of speech therapy professionals within the country's health system.

What logogenia has done is enable them to read and write grammatically and to transfer their knowledge of language rules into their oral productions—when that is their communication modality—to achieve linguistic competence both orally and in writing.

This entire process of logogenizing deaf children, implementing logodactics and logogenia with digital elements, the experiences with Emmanuel,

and the challenges of expanding logogenia to reach more deaf children due to its costs, has led me to a firm conviction: This wonderful tool that I discovered in Mexico and that has transformed the lives of many deaf individuals deserves to be scaled globally.

I am entirely convinced of its theoretical, neurobiological, linguistic, and methodological foundations. I believe that all deaf children worldwide should have the opportunity to acquire Spanish, or any historical vocal language, through written language—whether they are users of sign language or oral language.

For this reason, I have set out to create a technological tool that combines video games and artificial intelligence, enabling deaf children, starting at age 5, to interact with characters like Emmanuel and Isabella, who have replaced Eugenio and Eugenia in my logodactic stories.

The settings will be engaging and will allow children to follow instructions, answer questions, participate in dialogues, and perform activities. These activities, enriched with artificial intelligence, will bring characters to life, such as a

mother correcting the child when they respond incorrectly or ungrammatically.

I am filled with excitement and am convinced that this will be the tool that allows all deaf people to acquire language through reading and writing. Moreover, I firmly believe that this project is both feasible and necessary.

A little over a year ago, in February 2023, I met with Dr. Francisco Lopera Restrepo, director of Neurosciences at the University of Antioquia, and shared my initiative with him. I explained that although logogenia has been very successful, I am concerned that this method does not reach the majority of deaf children. In the world, there are 70 million deaf people, and despite my 20 years of work with my foundation, I have reached only a small fraction of them.

When I shared my idea of building a video game, Dr. Francisco Lopera was excited and suggested I present the project to the full neuroscience group. I did so, and the response was unanimous: Let's do it.

Later, he invited me to present the same initiative to Dr. Joseph Arboleda, a Harvard physician who

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has researched Alzheimer's alongside Dr. Lopera. Upon learning about the project, this esteemed researcher was also filled with enthusiasm and conviction that, through technology, we could bring logogenia to all the deaf children in the world.

Subsequently, Dr. Rodrigo Arboleda, who has led global projects such as "One Laptop per Child," joined the mission to scale logogenia globally. Through Rodrigo, I established contact with Elkin Echeverri, a serial entrepreneur and director of Medellín's first Science, Technology, and Innovation Plan at Ruta N. He also decided to join this wonderful initiative, contributing ways to incorporate artificial intelligence into it.



<https://youtu.be/b2d3XonmzfQ>

This innovative resource for deaf individuals worldwide will be built on solid principles of logogenia, the neuroscience of language, technology, and artificial intelligence.

In September 2024, the video game completed its prototype development phase. It is a beautiful project that we know will be highly motivating for children.

It has been developed by Alejandro Acosta, a 30-year-old systems engineer, who at the age of 16 told me: “Mom, do you need a video game for your deaf children? I can make it.” At that age, without having begun his professional training, he created the first video game we included as an annex in our initial research project—a simple yet charming game that allowed children to play logogenia on their computers.

Today, Alejandro has made significant progress in his education and has turned my initial idea of the video game into a prototype that will guide the development of the definitive technological tool. This tool will enable deaf children around the world to read and write as they deserve and as it should be.

Our focus today is on this creation, supported by the initiative to establish a new organization called **READ&WRITE**, composed of this group of

prestigious scientists. While children play, their brains will acquire the language.

With the support of our **Logogenia and Logodáctica Network in Latin America and Spain**, our achievements will reach all the places they need to reach.

SPECIAL WORDS FOR YOU

To you, deaf child, adolescent, or young adult who has received logogenia in the Envigado program or who is currently part of it, I want to tell you that you are fortunate. For about three years, you have had the opportunity to access logogenia free of charge, thanks to the commitment of the Municipality, which has made this effort for you.

I want to thank you for allowing us to learn so much from your unique way of being, from how you learn, how you acquire language, and the joy you reflect every time you make progress. It is a privilege to see you excited as you overcome each challenge and discover that you can do better each time.

I know you feel deep affection and gratitude for the logogenists who have accompanied you with such dedication in every session and have stood by your side in your school journey, supporting and encouraging you every step of the way.

My greatest wish is for many more deaf children to have the opportunity to receive logogenia as a right, so that everyone can develop their full potential.

In this journey of working with deaf individuals and exploring ways to enable them to acquire written language, I have developed, based on the logogenia method, a new methodology called logodáctica.

Logodáctica is a method similar to logogenia but is applied in groups rather than individually, and it is designed to be implemented in the Spanish language subject.

In logodáctica, we sometimes use sign language or oral language, but not to translate those languages into written language.

In logodáctica, we work with stories I have created, featuring two deaf children as protagonists. These deaf characters have a way of life, a house, a family, a school, and they engage in various activities.

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Deaf children in their Spanish language class get to know these characters and learn to read and write through their stories. Through board games, videos, readings, and digital games, they acquire written language using logodáctica, which is complemented by individual logogenia sessions.

I hope to train many Spanish language teachers in the logodáctica method, as well as in logogenia, so it can be implemented in many educational institutions with deaf students.

Now, I have a new purpose: to create a video game that enables deaf individuals, especially children, to acquire written language while playing and ultimately be able to read and write correctly.

This will be my greatest achievement!

Chapter 10

A NEW LIFE FOR EMMANUEL AND ISABELLA: BREAKING A PARADIGM

Currently, Isabella and her brother are part of the Envigado program, which includes two individual logogenia sessions and one group logodactics class per week, attended by deaf children from various institutions in this municipality.

Over the years, I have observed the progress and challenges faced by the children and young people in the program. Although they have experienced interesting processes and received individual logogenia, I often reflect on the difficulties many of them have endured.

It is painful to see children as young as 10, 12, or 14 years old arrive at logogenia sessions in the late afternoon—3, 4, or 5 p.m.—with tired faces and yawns. Yet, they greet me with a smile and write:

“This is awesome. I love logogenia; I like ChatGPT.”

Yes, ChatGPT, because I have been exploring the benefits and possibilities of using this tool to support logogenia, and it has been a delightful and surprising experience.

I look at these children with great affection and respond enthusiastically, recognizing the beauty of our work. However, I often think to myself:

“I know you’re very tired; your face tells me you need rest. But let’s keep going.”

With some cases, where both oralization and logogenia started late—at ages 8 or 9—I feel a deep concern. These children, despite attending regular schools or bilingual institutions, have not yet developed written language skills corresponding to their educational level.

They will need more time to reach these competencies, advancing through school while still

lacking tools that children who acquire linguistic competence in written language during the second grade naturally develop.

A Call for a New Approach

The future for deaf children should be better. I believe that the approach to their education needs a complete overhaul.

1. Early Intervention

Education for deaf children should begin at the earliest age possible—preferably at 3 or 4 years old. Early intervention fosters socialization, linguistic development, identity formation, and cognitive growth while respecting the unique needs of deaf children.

2. Acquisition of Both Sign and Spoken Languages

Deaf children should have access to sign language and spoken language acquisition in a natural environment with significant family involvement.

3. A Rights-Based Perspective

Moving beyond the socio-anthropological and clinical perspectives on deafness, a new model should embrace a rights-based framework that ensures inclusivity and equity.

4. Preparation for Regular Schooling

The goal should be to integrate deaf children into regular schools, enabling them to complete their education and pursue higher education on an equal footing. Developing full reading and writing competencies is crucial for achieving this.

5. Support Systems

Educational institutions should provide interpreters, linguistic models, and teachers proficient in sign language. Additionally, children should have access to hearing aids or cochlear implants and appropriate interventions to develop oral language skills.

6. Written Language Acquisition

Programs like logogenia, which have proven successful, should be introduced as early as 4 or

5 years old to ensure children acquire written language competencies by the age of 8.

Early Education Model

Children typically receive a diagnosis of deafness around the age of 3. They should immediately enter preschools for deaf children within inclusive educational institutions.

Two Levels:

- **Level 1 (3–5 years):** Focus on sign language acquisition with linguistic models and teachers proficient in sign language.
- **Level 2 (6–8 years):** Emphasis on developing competencies in written and spoken language, alongside sign language.

By the age of 8, these children will be ready to join regular second-grade classrooms, equipped with skills in sign language, written language, and possibly oral language, depending on their unique circumstances and family support.

This approach ensures readiness for inclusion in regular education settings, with competencies

in multiple languages acquired through direct exposure.

I propose a pilot project to explore the combined use of logogenia and logodactics in partnership with the Neurosciences Group at the University of Antioquia and the Dime Colombia Foundation. This research will track how deaf children acquire sign language, spoken language, and written language between the ages of 3 and 8.

This bilingual, bicultural model aims to integrate the best elements of oralism and bilingualism, fostering the simultaneous acquisition of multiple languages, just as children in bilingual households naturally do.

As stated by Dr. Francisco Lopera in his video, we look forward to making this vision a reality through collaborative efforts.



<https://youtu.be/CFGit98ToiI>

I want to emphasize that my conviction in the principles of logogenia, in the processes of linguistic acquisition according to Chomskyan

theory, and in what I have observed over more than 20 years regarding the acquisition of written language in deaf children, leads me to firmly believe in the feasibility of this initiative.

My proposal incorporates a robust involvement of families, the implementation of logodactics, and the use of a groundbreaking technological advancement that, by the time of this book's publication, is already under development.

We will offer a video game for deaf children aged 5 to 10, which, grounded in the principles of logogenia and logodactics, the neuroscience of language, and artificial intelligence, will inspire children to play enthusiastically while their brains acquire language.

SPECIAL WORDS FOR YOU

To you, young deaf boy or girl in your early years, I want to say that I hold the deepest hope that, after reading this book, many people involved in deaf education and many others who until now knew nothing about this world will come to see it as a matter of justice to provide a world where the

range of opportunities and possibilities expands ever more for you.

In this chapter, I have presented two projects that I aim to carry out:

The first is the construction of a video game to help deaf children between the ages of 5 and 10 learn to read and write while playing.

The second is a research project to test a new educational proposal for deaf children aged 3 to 8. In this study, an educational model will be implemented where deaf children of these ages will join classrooms within schools for hearing students.

In these classrooms, only deaf children will carry out daily educational activities, divided into two groups: one group for children aged 3, 4, and 5, and another for children aged 6, 7, and 8.

Initially, the children will have a hearing teacher proficient in sign language, accompanied by a linguistic model. They will perform all typical pre-school activities, communicating entirely in sign language.

Additionally, at different times, activities will be designed to encourage deaf children to understand

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and use spoken language through hearing aids or cochlear implants. All of this will be done with the support of expert speech therapists and audiologists, who will monitor the proper use of these auditory aids.

In these early years, sign language will be encouraged, but oral language will also receive attention.

In the subsequent group for children aged 6, 7, and 8, the acquisition of sign language and oral language will continue. However, the main goal will be for them to acquire reading and writing skills.

Between the ages of 3 and 8, these children will follow the same educational guidelines as their hearing peers, as established by the regular education system, including the necessary adjustments for the deaf population.

By the age of 8, these children will have mastered sign language, some will have achieved good oral language development, and all will be proficient in reading and writing, ready to join classrooms with hearing children.

I hope to make these two projects a reality and to continue learning from them: the video game, to

facilitate written language acquisition for deaf children aged 5 to 10, and the implementation of a pilot experience within a public or private institution for hearing students willing to embrace a new approach to educating deaf children.

Then, all the complexity and difficulty you have faced until now, dear deaf individuals, will be a thing of the past.

I hope that the world, which I find unfair to you because it fails to guarantee your rights—particularly those related to your communication and linguistic needs—becomes a world full of possibilities for you.

And I hope this change doesn't take too long.

FINAL REFLECTION

Throughout this book, I have shared stories that reveal the sorrows, injustices, and, at times, the dramatic moments that mark the lives of deaf people. However, I cannot help but marvel at the inner strength they possess, their unbreakable resilience, their self-love, and their deep affection for others.

Despite the barriers they face, deaf individuals have built their lives with admirable courage.

They have forged friendships that have lasted since childhood, experienced love in all its forms, and found happiness both in partnerships and solitude.

They have dedicated themselves to various professions, arts, trades, and sports, and many have excelled at local, national, and even global levels, demonstrating that their determination knows no bounds.

They live fully, filled with dreams and aspirations, and continue to grow every day, even when they have not had full access to sign language, spoken language, reading, or writing.

My call is for reflection. Imagine a world where all the communication alternatives to which they are entitled were fully available to them. A world where their lives, already full of meaning, could be made easier and more prosperous.

A world where they could participate and contribute more fully to their communities and to the world as a whole. Because, in the end, what this book reminds us of is that inclusion and accessibility are not just matters of justice but of humanity.

Each of us has the power to make a difference, to open doors, and to build bridges so that deaf

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individuals not only exist but thrive and leave an indelible mark on this world.

ACKNOWLEDGMENTS

To the deaf people of the world, who face the sad reality of being unable to enjoy many experiences to which they are also entitled. To their families, who are closest to them, understand what it means to be deaf, and tirelessly strive to ensure their loved ones have access to what others obtain naturally simply by being able to hear.

To my children, Alejandro, Camila, and Laura, who have been close to my journey in the constant search for resources and solutions to empower deaf individuals, sometimes facing limitations and absences they have learned to value positively.

To my mother, Consuelo, who made me believe it was possible, even in the face of what seemed impossible, to travel to Mexico to discover the

world of logogenia, thereby changing my life and the lives of deaf people.

To my dear father, César, who always encouraged me, by his example, to pursue education and contribute to building a fairer world.

To my brothers, Mauricio, Javier, Germán, and Camilo, for always celebrating my dedication to seeking a better life for deaf children.

To the father of my children, who cared for them during my time in Mexico.

To Dr. Francisco Lopera, for believing in me from the beginning, for embracing my great desire and dream of written language for deaf people.

To Germán Jiménez Morales, for falling in love with my project and taking my hand to write this book.

To Miriam Zuluaga Uribe, who saw in me someone capable of learning something new for deaf individuals and made it possible.

To Bruna Radelli, for her wonderful invention and legacy for humanity and for deaf people.

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To Francisco Peral Rabasa, for his invaluable support during my training process, for always being present in this journey and purpose of mine to this day, and for still being here. To Ángeles Mendoza San Salvador, who also supported my training process, valued what was built, and was an important part of it; and to Claudia Gutiérrez and María Eugenia Pérez, my logogenia teachers in Mexico. Similarly, to Francisco Barriga Puente, former director of linguistics at INAH, for his professional guidance, noble and selfless support, and for his participation and contributions to our first research project.

To the ICAL Institute and the Francisco Luis Hernández school, through Vicky Olmos, Patricia Ferreira, and Sonia López, for always supporting the development of logogenia projects and opening their institutions to Dime Colombia.

To the countless individuals who have crossed paths with deaf people and Dime Colombia throughout my life, contributing to my ability to learn, contribute, and grow in this endeavor.

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An Unknown and Unjust World... But Not for Much Longer

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