MAL-NUTRITION

Maternal Health Science and the Reproduction of Harm

EMILY YATES-DOERR

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Mal-Nutrition

FIGURE 1. In 2009, people in the Guatemalan community where Claudia Gómez González was born and raised tossed water balloons to one another while waiting for their turn to be seen at a pop-up health clinic. A doctor visited the community for a few hours every week or two, arriving in a clean white pickup truck from the state capital with bags of nutrient supplements to deliver to the community. Photo by author.

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Emily Yates-Doerr

UNIVERSITY OF CALIFORNIA PRESS

University of California Press
Oakland, California

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Suggested citation: Yates-Doerr, E. Mal-Nutrition: *Maternal Health Science and the Reproduction of Harm*. Oakland: University of California Press, 2025. DOI: https://doi.org/10.1525/luminos.209

Library of Congress Cataloging-in-Publication Data

Names: Yates-Doerr, Emily, 1978– author.
Title: Mal-nutrition : maternal health science and the reproduction of harm / Emily Yates-Doerr.
Description: Oakland, California : University of California Press, [2024] | Includes bibliographical references and index.
Identifiers: LCCN 2024012659 (print) | LCCN 2024012660 (ebook) | ISBN 9780520404427 (paperback) | ISBN 9780520404434 (ebook)
Subjects: LCSH: Maternal health services—Political aspects—Guatemala. | Pregnancy—Nutritional aspects.
Classification: LCC RG963.G8 Y38 2024 (print) | LCC RG963.G8 (ebook) | DDC 362.19820097281—dc23/eng/20240703

LC record available at https://lccn.loc.gov/2024012659
LC ebook record available at https://lccn.loc.gov/2024012660

34 33 32 31 30 29 28 27 26 25
10 9 8 7 6 5 4 3 2 1

CONTENTS

Content Warning *vii*
Acknowledgments *ix*

Prologue *1*
Introduction: Fetal Development as Global Development *12*
1. Reproducing Cruelty *36*
2. Bio-logics of Poverty *55*
3. Proxy *80*
4. Circles of In/Equality *106*
5. Gender Violence and the Violence of Gender *131*
6. Window of Opportunity *153*
7. Historias of Co-Laboration *175*

Conclusion: Break and Revolution *200*

Appendix: Timeline of Key Dates *213*
Notes *215*
References *219*
Index *241*

CONTENT WARNING

Several chapters in the book mention extreme violence, including murder, rape, and forced pregnancy. Chapter 6 discusses miscarriage and stillbirth.

ACKNOWLEDGMENTS

Studying the field of nutrition science has taught me to look first at funding sources, and this is where I begin my acknowledgments. I am grateful to have lived for the better part of a decade in the Netherlands, whose taxpayers' commitment to the social sciences is reflected in generous support for federally funded anthropological research. The ethnography this book draws on was made possible by a three-year Veni research grant from the Dutch Science Foundation (NWO grant #016,158,020). Time for writing was supported by the European Research Council (Starting grant #759,414) and a Wenner-Gren Foundation Hunt Fellowship. The European Research Council's dedication to making academic scholarship publicly accessible has allowed me to publish this book as open access and to translate it into Spanish.

The book would not have been written without financial support, but it would also not have been written without the care of people who helped me envision the project and carried me through it. I was six months' pregnant when I interviewed for the grant that would fund this research, and I learned of receiving it just days before my second son was born. Most of the fieldwork took place during a time in my life when I was nursing, my children were small, and travel with—or without—them was difficult. I am deeply indebted to the friendship that helped me endure (and even sometimes enjoy) this time of my life of Rebeca Ibañez Martín, Rebecca Sakoun, Florian Gottke, Sarah Bergman, Emilia Sanabria, Else Vogel, Sebastian Abrahamsson, Filippo Bertoni, Tjitske Holtrop, Anna Mann, Anna Harris, Frederieke Vriends, Freek Van Bremen, and, of course, Mercedes Duff.

My colleagues at the University of Amsterdam offered me camaraderie and endless intellectual inspiration. This book would not have been written without

the academic and personal wisdom of Annemarie Mol, who generously shared her care (in theory and practice) with me during a phase in my life when it mattered most. I am also indebted to Anita Hardon, Kristine Krause, Jeannette Pols, Trudie Gerrets, Rene Gerrits, Eileen Moyer, Bregje de Kok, Tina Harris, Branwyn Poleykett, Cristobal Bonelli, Amade M'Charek, Oscar Verkaaik, Malini Sur, Hasan Ashraf, Jeltsje Stobbe, Wakana Suzuki, Tanja Ahlin, Lisette Jong, Ildikó Plájás, Willemijn Krebbekx, Gideon Lasco, and Justine Laurent. Abril Saldaña's friendship and consistently wise counsel during my final year in Amsterdam kept me going. I was lucky to be in the company of Shivani Kaul, Kim Sigmund, and Andie Thompson on the Future Health project, and their thinking over the past five years has helped shape my own. Hanna Horváth provided vital support, and administrative care from Janus Oomen, Danny Van der Pol, and Muriel Kiesel made it all possible.

I grew up moving regularly between southeast Alaska and Seattle, Washington. Although I relished the twenty years I spent living outside the Pacific Northwest, returning was a joyous homecoming. I am grateful that my colleagues at Oregon State facilitated a significant amount of time away so I could finish this book. My gratitude goes to Susan Bernardin, Joan Gross, Missy Cheyney, Drew Gerkey, Kenny Maes, Sarah Cunningham, Shao Zang, Bryan Tilt, Loren Davis, Leah Minc, Lisa Price, David McMurray, David Lewis, Natchee Barnd, Mehra Shirazi, Marissa Chapel, Megan Ward, Susan Shaw, Linda Richards, and, especially, Cari Maes. Loretta Wardrip and Karen Mills made miracles happen behind the curtain (and looked the other way as I wheeled my bicycle into my office every day so I did not have to worry about theft). Conversations with Argenis Hurtado Moreno, Ana Carolina de Assis Nunes, Laura Bennett, Lisa Grabinsky, Liesl Cohn, and Nick Fisher have sustained me. I am also grateful for the representation of the United Academics of Oregon State University and my colleagues and union representatives who have collectively organized to protect our academic freedom and intellectual labor.

This book was an exercise in collaboration from start to finish, with so many people pouring their time into it as it was taking shape. I could not have asked for a better developmental editor than Micha Rahder, who read and gave incisive feedback on two separate drafts. Carlota McAllister, Sandra Rozental, Ken MacLeish, Risa Cromer, Lindsay Bell, Jenna Grant, and Rebecca Kanter also commented on every chapter. Sandra, who has been a part of my work since the start of our doctoral program two decades ago, also helped me with the book's title and cover art, holding my hand as the book took form (and through so much more). Discussions of early chapter drafts during the height of the COVID-19 pandemic with Betsey Brada were crucial, as was motivation to get words on a page while screen schooling my resistant children that came from a writing support group organized by Rebecca Galemba and Kate Centellas. Inspiration and feedback from several academics I admire greatly helped me finish the book, including Amber Benezra,

Krisjon Olson, Dana Simmons, Martha Lincoln, Ted Fischer, Susan Erikson, and, especially, Hannah Landecker. Members of the Nutrire Co-Lab helped me remember why the study of nourishment is as radical and revolutionary as it is. Thank you always to Megan Carney, Alyshia Galvez, Jessica Hardin, Dana Simmons, Ariana Ochoa Camacho, Natali Valdez, Lauren Carruth, Maggie Dickinson, Megan Warin, Hanna Garth, Emily Mendenhall, Emily Vasquez, Lenore Manderson, and Adele Hite for the conversations and encouragement along the way.

I presented the book's introduction to the Anthropology of the Environment Laboratory at Humboldt-Universität zu Berlin and the Culinary Mind Center for the Philosophy of Food, Universitá Degli Studi di Milano. I presented chapter 2 at Martha Lincoln's 4S panel, "Caring Economies," the David Rockerfeller Center at Harvard University, the Department of Anthropology at Vanderbilt University, and the Oxford Unit for Biocultural Variation and Obesity. Chapter 3 benefited from feedback at the Social Life of Medicine Series at the University of Southern California; chapter 5 was improved by comments from participants at the University of Amsterdam's Writing Care workshop; chapter 6 received brilliant commentary from the Taller de Etnografía run by the Universidad Autónoma Metropolitana and the Colegio de México; and chapter 7, which was written during a writing residency supported by the Spring Creek Project of Oregon State's Environmental Humanities Center, was strengthened by feedback from faculty at Carleton University. I shared the entire book in draft form in classes taught by Luísa Reis Castro (USC) and Risa Cromer (Purdue). Thank you to Dionee Simmons, Ivana Karastoeva, Rishi Malay, Nada Dalati, and Erika Lopez, and thank you as well to Rebecca Martinez, Shradha Naveen, Rebecca-Eli Long, and Cassandra Apuzzo, and finally, again, thank you to Ana Carolina de Assis Nunes. Participants in the Ann Johnson Institute's first writing completion workshop cheered me on and gave me vital feedback on my book proposal. Thank you to Allison Marsh, Leah McClimans, Suman Seth, Riana Betzler, Sarah Brothers, Jillian M. Hinderliter, Martha Lincoln, Gabriela Morales, Matt O'Hara, Diane Tober, and Catherine van de Ruit.

None of the chapters has been published elsewhere, although some small sections from the chapters got their start in other essays. The opening of chapter 1 appeared in a Vital Topics collection in *American Anthropologist*, I first conceived chapter 2 as a short essay for *Somatosphere*, and a small section in chapter 7 was included in a Cultural Anthropology Online series that was later reprinted in a book with Punctum Press. The concluding analysis of Carla's advice to me to eat well appeared in an article in *Anthropology of Work Review*, and I first wrote about the death of Claudia Gómez González for the magazine *Sapiens*.

At the University of California Press, I am grateful to Kate Marshall, who saw the merit in this project from the beginning, gave me the time I needed to write the book I wanted to write, and helped me through the finish line. The feedback from each of the four peer reviewers was excellent, exactly what the book needed. My gratitude also goes to Chad Attenborough for patient production assistance,

Bill Nelson for making the map, Sheila Berg for copyediting, and Micha Rhader for assembling the book's index. I thank Édgar Calel for the artwork that graces the cover of the book, Mac Grollman for quick design work, and Sara Martinez for helping bring it to Spanish-speaking audiences.

In Guatemala, Dr. Noel Solomons welcomed me to his research center in 2005, and over the past twenty years he made time for me and my questions whenever I was in Guatemala. He died on March 23, 2024, when the book was already in production, so he never got to see it in print. But he made time to meet with me when he was already very sick so that he could give me a thumb drive containing comments that he made on all of the chapters. Conversation over unpretentious meals with him has been one of the honors of my life. He introduced me to many of the people I interviewed in my research, but I am especially indebted to the introduction he made to Rosario García, whose friendship, careful thinking, and unflagging cheer have been a gift. I have also benefited immeasurably from the intelligence and generosity of the affiliates of CeSSIAM: Marieke Vossenar, Mónica Orozco, Raquel Campos, María José Soto-Méndez, Liza Hernández, Gabriela Montenegro Betancourt, and Doña Julisa Gallego. I often arrived in Guatemala City by bus or plane at odd hours, and I cannot overstate my appreciation for the punctuality of taxi driver, Don Chepe. María García Maldonado accompanied me on dozens of trips to San Juan, and her knowledge of history profoundly influenced this book. I have also been lucky to know Glenda Lopez and others at the El Quetzal Spanish School in Quetzaltenango, Guatemala, which was a perfect place for an anthropologist traveling on her own to study Spanish when I was in my twenties–and still today. Luisa Madrigal helped me find the Pachali farm and has shared her insights with me ever since. I appreciate the opportunities I have had to learn from Anne Marie Chomat's ongoing dedication to Guatemala and commitment to change. I also shared a terrific seminar in Guatemala at just the right time with Miguel Cuj, Eileen Rivera, Tatiana Lemus Paz, Meghan Farley Webb, Gabriela Montenegro, Ted Fischer, and Mareike Sattler. To maintain their confidentiality, I cannot name several of the people in Guatemala to whom I am most indebted, but I have tried to manifest my gratitude to them in the lines of the text.

I am grateful for the support of my family: Rose Yates, who regularly dropped off soup to feed me and my children when we could not be together during the pandemic; Phil Gierman; Joe Doerr; Bren Kleinfelder; Riley Yates-Doerr; Emily Aaronson; Isaac and Dorothy Doerr; Zoe and Steve Gierman; Maddie Doerr; and Ted, Carol, and Katherine Roper. Andrew Roper no longer reads everything I write, but he does so when it is important, and he supported this book—and me while I was writing it—in too many ways to name. Saida Retz came on several research trips to watch our children while I was doing fieldwork. Anthropology is often unkind to new mothers. The care she offered to my children while we were traveling and also while we were at home made my job in Amsterdam possible.

Whereas I got my first passport when I was twenty, Orion and Saul received theirs within weeks of their birth (both in the Netherlands). Because of my work, they have been loved and cared for by people in numerous countries, and their presence opened many doors (and windows) for me. Still, they have not always been happy about the amount of travel that my job has required. I am grateful to them for joining me during fieldwork and at conferences when they could and also for believing in my work during the many weeks at a time that I was away from home. Writing, for me, is often all-consuming, and there is much about their infancy and then childhood that I missed to produce this book. Many colleagues have reminded me that they will be better off in the long run because I took time for research and writing and pursuing scholarship that gave me life beyond being their mother. Still, someday, if they ever read this passage, I hope they can know how much I always held them with me while I was away.

For years, I thought this book would be dedicated to them, my two sons, whose naughty and cuddly and playful bodies I love fiercely with all my being. In the end, it doesn't feel right to dedicate to children a book that is critical of how women are compelled to be subservient to their children. I dedicate this book instead to mothers: my mother, Mama Cony, Glenda, Miriam, Bren, Carol, the mothers I met during fieldwork, the mothers who held the universe(s) together during the pandemic when everything was falling apart, and mothers—in shapes and forms everywhere—who simply have not been able to work miracles. So much is stacked against us. The book is written in imagination and conviction that American mothering will not always be hard and cruel—that together-in-difference we can reproduce our communities in more nourishing ways.

MAP 1. Guatemala, with key sites indicated.

Prologue

Dearest daughter
Your death has left
An emptiness in
Our home
Memories in
Our mind,
Your image will live
Forever in the heart
Of your parents,
Siblings, family
And those who knew you.
"Because for me,
To live is Christ
And to die is gain"
(Philippians 1:21)

EPITAPH FOR CLAUDIA PATRICIA GÓMEZ GONZÁLEZ

In 2019, I visited a cemetery in a Maya-Mam community outside of San Juan Ostuncalco, Guatemala, with Julia Lopez (a pseudonym) and our children. I first met Julia a decade earlier, when she was working as an assistant for a health outreach program in her small community. At the time, I was carrying out fieldwork on the rising diagnosis of obesity, and I had begun to accompany the program on its visits to women and children in rural communities, including Julia's. Public health experts were telling me that obesity was a lost cause in the present: to make an impact on the condition, the field of public health needed to improve nutrition in a period of physiological growth that happened during pregnancy and breastfeeding. They called this period the critical window of development, or, because pregnancy and breastfeeding frequently last about three years, the "window of the first thousand days of life." My friendship with Julia coincided with my own shift from studying clinicians who were trying to treat obesity in medical settings to studying epidemiologists who saw improving nutrition in the "first thousand days" as the best hope for preventing obesity in future generations.

FIGURE 2. The gravestone of Claudia Patricia Gómez González. Photo by author, 2019.

Julia and I are the same age and my sons match the ages of her younger daughters, so we gather our children together to play whenever my family is in Guatemala. Julia lives at the far edge of a mountainous region marked by development agencies as experiencing tremendous need. According to government statistics, rates of poverty in these mountains are among the highest in the country and rates

of chronic malnutrition are among the highest in the world. Maternal and infant mortality is also high, too many new mothers and their babies dying in childbirth or soon after.

"The people who live here are victims of colonialism," a health worker once told me, referring to the fact that Maya-Mam communities had fled to some of Guatemala's coldest, rockiest mountains during the sixteenth-century battles of conquest. The "victim" identity was not one I heard from women in San Juan, who spoke proudly of their survival and endurance. But it is also the case that people often find life in the region punishing today. Everyone has close family members who have left for the US. When I first started traveling to San Juan in 2008, it was mostly men who would migrate. In health clinics in San Juan where mothers went for checkups, office rooms would be full of Guatemalan babies wrapped tightly in fabric printed with the red and white stripes of the US flag—a sign the baby's father was living in the US. In recent years demographic patterns of migration have changed. Now teenagers, women, and their children were regularly leaving for the US as well.

Julia lives at the end of a dirt path, close to the regional cemetery. Guatemalans bury their dead above ground, so when Julia climbs the stairs to her concrete roof to hang laundry in the sunny breeze, she looks out upon a sea of colorful tombs. The other side of her house is flanked by cornfields, where our kids hide from us when they play. I like it when the kids run around the cemetery, since it is open and we can keep an eye on them. But on that day, we were not in the cemetery because it doubled as a playground. We were there to pay respects to the grave of Claudia Patricia Gómez González.

A twenty-year-old Maya-Mam woman from Julia's community, Claudia could not find education or employment opportunities in Guatemala. She was gifted in mathematics and hoped to find work as an accountant in the US, where her father had lived for most of her childhood and where her boyfriend lived at the time of her death. Just after she crossed into Texas from Mexico, under the full midday sun, a US border control guard shot her in the head. She had been standing in the vacant field, unarmed. As detailed in court documents, she was a petite woman who posed no threat. A neighbor began to stream the scene on social media as the agent ran off, leaving her to die. "Why do you mistreat them? Why did you shoot the girl? You killed her!" the neighbor shouted into the camera,

Claudia was murdered on May 23, 2018. On May 7 of that year, the US Department of Justice had announced its controversial "zero tolerance" policy. According to international law, people should be able to legally cross any political border to then make a claim for asylum. Contravening this legal standard, US Attorney General Jeff Sessions had declared that the Department of Homeland Security would arrest and prosecute people entering along the southwestern edge of the US, also flaunting that his administration would separate parents from children, deporting parents and sending their children to the Department of Health and Human Services (Blitzer 2019).

Claudia's murder happened to be broadcast at a moment of salacious political spectacle about immigration, and the tragedy of her death received considerable media attention. Several international newspapers, including *The Guardian*, the *New York Times, Al Jazeera, Nation*, and even *Teen Vogue*, covered her death. Now that I was back in Guatemala, I wanted to see Claudia's grave for myself, and Julia offered to join me.

The cemetery was quiet, but someone had been there recently as Claudia's tomb was covered with fresh yellow and gold flowers. The gravestone had a colorful photographic reproduction of an image of Claudia inlaid on a light blue oval, as if she were an angel floating in the sky. In the image, she is wearing beautifully embroidered Indigenous clothing, her hands are planted squarely on her hips, and her face looks poised and proud. Julia's nine-year-old daughter stood next to me, facing the photograph. Mirroring Claudia's confident stance, she put her hands on her hips as I read the Spanish etching on the tombstone aloud:

CLAUDIA PATRICIA GÓMEZ GONZÁLEZ
09 February 1998–23 May 2018

Died in the United States, looking for the American Dream, the victim of a US migration official, but we will always carry you in our mind and in our heart
[translated from Spanish]

Julia and I stood for a long time in silence at the grave, our children running off to play hide-and-seek. I wondered if I had ever met Claudia in the time I had spent with health workers in her community, and I thought about how many young women in the San Juan region were good at math and wanted to improve their talents through schooling and employment. When a reporter for *The Guardian* spoke with Claudia's mother, Lidia González, in the days following Claudia's death, she described her daughter in the most hauntingly human terms: "My daughter was naughty and cuddly and playful. She loved to draw and sing" (Lakhani and Dart 2018). It didn't feel right to draw a comparison between Claudia's mother and me given how differently we were positioned in life: my white skin and PhD helped me secure a "knowledge migrant" visa to live and work as a professor in the Netherlands, and my US passport covered in stamps was evidence of years of relatively easy international travel. Still, *naughty and cuddly and playful* is how I might have described my own children.

Julia broke the silence to ask if I wanted to visit another grave. A stone's throw from where we were standing, the body of another twenty-year-old woman who died near the US border had just been laid upon the earth. The grave of Victoria Méndez Carreto was so recent that it still had no tombstone—just the date of interment etched into the rough sand-colored stone. I had heard about

her death from community midwives over the previous days. Victoria was from a hamlet adjacent to Claudia's and, like Claudia, had struggled to be able to envision a future in Guatemala. She had managed to cross into Arizona after a difficult journey north, but she died of dehydration in a deadly desert region not long after making it into the US.

Unlike Claudia's death, Victoria's wasn't filmed on social media and English-language reporters never showed much interest in it. A detail that went unreported in the Spanish-language newspapers but that her neighbors wanted me to know: she was pregnant when she died. She might have made it to safety—after all, her husband, who crossed with her, survived—but there was no water to be found in the desert.

In the two pregnancies I carried to term, I experienced a desperate kind of thirst, a thirst that awoke me at night and caused me to feverishly swallow my own spit in an effort to quench my desire for fluids. After learning of Victoria's death, I could not shake the idea that when she crossed under the relentless hot sun, her metabolism was also working overtime to provide for her fetus (Campbell-Staton et al. 2021). The year before her death, Scott Warren, a geography professor and a member of the nonprofit organization No More Deaths had been arrested for leaving containers with water for people crossing through Arizona's deserts. Mere days after Victoria died of dehydration, a jury had deadlocked on the question of whether Warren had committed a felony by providing water to people in dire need.

No More Deaths had been founded decades earlier in response to the Clinton-era "Prevention Through Deterrence" approach to migration, a set of policies established in the mid-1990s that channeled people crossing to the US from Mexico into what the anthropologist Jason De León (2016) calls "hostile terrain." De León writes, "Since its inception, this approach has redirected migrant routes into the most inhospitable sections of the border, deploying the perilous desert as a tool to prevent entry into the United States." The US Border Patrol estimates that roughly one person has died crossing into the southern border every day for the past twenty-two years (Verini 2020).

Many people commenting on the death of Claudia Patricia Gómez González reflected that "Prevention Through Deterrence" is a cleverly worded misnomer. The aim of Clinton's policy, they argued, was not really to prevent people from crossing the border. Instead the point was to kill those who were vulnerable in a painful and deliberate way and to use their deaths to create instability and fear. The argument that the state has intended harm looks at recent history; only a few decades ago, the US government participated in the massacre of entire Indigenous Guatemalan communities, contributing to the death and disappearance of over 200,000 people, most of whom were Indigenous and poor.

In March 1999, President Bill Clinton acknowledged that the US had played a role in destabilizing Guatemala over the previous decades of armed conflict. The

United Nations Commission for Historical Clarification (CEH)—also called the Truth Commission—had recently concluded its investigation of the war that officially took place between 1960 and 1996. Its investigation revealed that the US government had provided military assistance for training the officer corps in counterinsurgency techniques, "which had significant bearing on human rights violations during the armed confrontation" (CEH 1999, 19). In the 1950s, the US and Guatemalan militaries had worked together to overthrow President Jacobo Árbenz. Árbenz, who was democratically elected in 1951, was advocating agricultural reform and modest land redistribution projects that would benefit Indigenous farmers—a challenge to the power of wealthy US and Guatemalan politicians (see chapter 1). The Truth Commission found that over the decades of warfare that followed, state or paramilitary forces carried out 93 percent of the violence and 83 percent of the victims were Indigenous. The report they authored described the war as a genocide driven by racist prejudice: "The massacres, scorched earth operations, forced disappearances and executions of Mayan authorities, leaders and spiritual guides, were not only an attempt to destroy the social base of the guerrillas, but above all, to destroy the cultural values that ensured cohesion and collective action in Mayan communities" (CEH 1999, 23).

Clinton responded to the Truth Commission's report: "It is important that I state clearly that support for military forces and intelligence units which engaged in violence and widespread repression was wrong, and the United States must not repeat that mistake" (quoted in Broder 1999). Yet even as Clinton was publicly denouncing US responsibility for the widespread massacre of Indigenous people, he was solidifying the Prevention through Deterrence policy that would cause untold suffering throughout Guatemala's Indigenous highlands. De León (2016) describes this policy as a "war on non-citizens," carried out with "offensive, sacrilegious, or inhumane" strategies. We see in the death of young women from San Juan at the US border how more than two decades after the signing of Guatemala's Peace Accords the same racist prejudices that the UN Truth Commission named as a driving force in Guatemala's US-backed genocide remain strong.

• • •

Our children hopped from tomb to tomb under the sunny skies, oblivious to the agony of the cemetery. Before long, they grew hungry and skipped back toward Julia's house, and we followed. Once we had settled in her kitchen, Julia pulled out a bag of potatoes and began to slice them, setting a pan of oil on the low-burning wood stove where it began to pop and sizzle. As if we hadn't just been standing at the graves of women killed by the deadly passage, Julia told me she too was thinking of leaving Guatemala for the US. Not only was there no longer any work in San Juan Ostuncalco, but there were no possibilities for work. The responsibility to nourish her family fell on her shoulders, and she was finding it more than she could bear.

In the sixteen years Julia and I have known each other, Guatemala has had seven presidents, each with different health cabinets and health agendas. When we had first met, Julia made roughly $5 per day for her work with the maternal health extension program funded by the administration of Álvaro Colom, Guatemala's president from 2008 to 2012. Only forty-four public hospitals exist for Guatemala's 17 million inhabitants, all located in cities (Ketelhöhn and Arévalo 2016). Small health centers in some rural towns offer basic health services, but many Guatemalans must travel hours for medical care. The Colom administration had envisioned the extension programs as a way to bring health services such as vaccinations, prenatal evaluations, and basic health education programs to rural communities such as those surrounding San Juan, which didn't have easy access to medical centers. The program subcontracted enthusiastic local women who could speak both Spanish and their native language, Mam, to help attract pregnant and breastfeeding women to pop-up health clinics. Julia was part of a small network of Maya-Mam women tasked with recruitment, monitoring, and distributing the protein powders that were a primary part of the care.

Their official title was *promotora de salud*—health promoter—but they often jokingly called themselves *vigilantes de salud*. The phrase "health vigilante" reflected a tongue-in-cheek ambivalence about working in the service of the state, which has long used medicine and health care to explicitly harm Indigenous communities. The historian Martha Few (2015, 17) notes that Guatemalans have experienced centuries of "military occupation of some communities and the prosecution, physical punishment, and jailing of indigenous elites who refused to submit to health care programs." When I lived in Guatemala between 2008 and 2009, the news was also full of reports of a "crime against humanity" carried out in the name of medicine. In 2005, the medical historian Susan Reverby (2011) had uncovered archives that showed that in the 1940s, US health scientists had injected hundreds of Guatemalans—most from poor, rural communities—with syphilis without their knowledge or consent (see also Cerón 2011). Many people I spoke with were unmoved by President Barack Obama's subsequent apology for this cruel history. They viewed public health with suspicion and medical care as an avenue of state control.

The title "vigilante de salud" also speaks to the armed conflict. At the height of the violence the Guatemalan military forced rural—mostly Indigenous—men and boys into a vigilante civil self-defense patrol system (Patrullas de Autodefensa Civil). Vigilantes were responsible for surveilling their communities and reporting any suspicious insurgent activities to the military, who then forced the patrols, under threat of death, to engage in horrific war crimes—often against their neighbors or their own family members. Human rights organizations widely denounced the psychological and physical violence wrought by the civil patrols, which created the persistent threat of an "internal enemy" (CEH 1999, 20). Disbanding them while also compensating participants for past work was a major aim of the Peace Accords. Nonetheless, in the postwar period community-run

vigilante patrols persisted. As the anthropologist Ellen Sharp (2014) explains this, vigilante governance has been sustained in Indigenous communities in large part from a sense that official systems of justice and protection were not viable.

As with the civil patrols, women who worked as health vigilantes were often called upon to do community surveillance, monitoring pregnant friends and neighbors and reporting questionable health behavior in their communities to state authorities. The sociologist Abril Saldaña (2014) found during research with health promoters in Mexico that this organizational structure created mistrust among working-class women, weakening much-needed collective ties and community organization. And yet, as with the endurance of vigilante patrols after Guatemala's armed conflict, women have assumed work as health vigilantes because there were few other avenues for employment or channels for organized care. I heard in their self-given title a Faustian bargain: the state could not be trusted by their communities, and vigilantes could not be entirely trusted by their communities, but what else could they do?

In 2012, Julia had worked as a health vigilante for many months without pay before she finally gave up hope of being compensated. When Otto Pérez Molina became Guatemala's president at the start of the year, he took over the health extension program. One of his first acts in office was to abruptly end the program's funding (Orozco 2013), but the women working as vigilantes were not told their services were no longer needed, so they continued to work, not realizing they would never be paid. Not long before our visit to the cemetery in 2019, the same pattern of expected pay not being received occurred yet again. In place of health extension programs, Pérez Molina had handed the care for maternal health in the rural highlands over to the US Agency for International Development (USAID). USAID had promised Julia's community its programs would be there for years when it contracted with Julia. But when Donald Trump became president, he cut the foreign budget, the payments stopped, and, for the second time in recent years, Julia never saw compensation for her labor.

Her salary had been meager, but its loss meant that she was now entirely dependent on her husband, who was frequently absent looking for jobs himself, and their marriage was strained. Her eldest son was severely disabled, and his need for specialty care was growing more acute as he aged. Her nine-year-old daughter was at the top of her primary school class, but this didn't count for much, Julia lamented. Julia too had been a model student, and look where she had ended up, she said, gesturing to the pig in her yard, which she could only afford because it had been gifted by a development organization.

It was just days before the presidential election to replace Jimmy Morales, a television comedian backed by conservative Guatemalan military leaders, who was elected after Pérez Molina was arrested on criminal charges. Ads for politicians were everywhere; even Julia had a poster of a local politician leaning up against her house. But Julia, like every single one of the dozens of people with

whom I spoke leading up to the election, was skeptical that any of it would make a difference. She had once hoped her work as a vigilante might help transform the Guatemalan state's violent history by contributing in a meaningful way to the lives of women in her community, but the years of politicians' false promises left her feeling that her energy was wasted.

She did not yet have much more of a plan when it came to getting to the US than to pack up her family, including her teenage son who could barely walk and her still-nursing youngest daughter, and head north. She had an address of an aunt who lived in Texas and a vague promise that if she showed up this aunt would help her out. She knew her plan did not really make any sense. She also knew the dangers. Claudia's death was the most publicized from her small community this past year, but many other members of the San Juan communities had recently died or disappeared while attempting to migrate and Victoria's grave was still fresh. The cemetery served as a reminder that many US emigrants return in caskets. But when Julia tried to imagine a future in Guatemala, she came up blank. She saw no life there for herself, or her neighbors, or the community's children, whom she loved. She could not see any other decision but to leave.

• • •

Two weeks later, I was back in Oregon when I received a call at my office from the health equity specialist from a nearby hospital. Pregnant women from Guatemala were arriving at the emergency room far along in their pregnancies, if not actually in labor. They had not attended prenatal checkups, and some of the women avoided follow-up appointments. The women primarily spoke the Mayan language Mam, not Spanish, and many had not spent much time in the US. The specialist had read that I worked as an anthropologist in Guatemala and knew I was affiliated with the local university. She didn't know much about the country herself and was looking to help the hospital connect with Guatemalan women living in the community. She thought I might have ideas.

The book that follows is written for many audiences, including academics interested in the intersections of care and violence, international humanitarian workers wanting to learn from past mistakes, and anthropologists reckoning with the limitations and possibilities of their field. It is also written as a response to the health equity specialist's open and sincere query to me about what I had learned from my time in Guatemala that I could share with her and other staff members at her hospital that might improve care for Maya-Mam women.

Since I had moved to Oregon the previous year, I had regularly heard health advocates and community health workers frame the problem of inadequate maternal health care as a problem of miscommunication. When pregnant Maya-Mam women in Oregon did not arrive at the hospital to give birth or to attend prenatal care programs it was because they didn't speak Spanish, let alone English. Likewise, when the COVID-19 pandemic hit, state governments across the West

Coast distributed health information in Mam, hoping to overcome what news reports referred to as the "language barriers" that kept Guatemalans in Oregon from accessing health care services. We are facing "urgent communication issues," the local newspapers reported (Templeton 2020). This was something I had heard from health professionals in Guatemala for years as well. "Rural mothers need to be educated, they don't understand," was the prevailing sentiment driving maternal health nutrition interventions. This narrative placed the origin of the problem in Maya-Mam women's lack of understanding. But what if they grasp the social dynamics at play perfectly well? What if Maya-Mam women who saw US health care systems as unsafe spaces were right?

The death of Claudia Gómez González has been told as a story of border violence. In the chapters that follow, I suggest it can also be understood as a story about the effects of maternal health science. In Guatemala, there is a graveyard that holds the bodies of young women from a community that the field of international development has for decades prioritized as a site for investment in maternal nutrition. For at least half of the life of Claudia Gómez González and Victoria Méndez Carreto, programs targeted women of reproductive age in their communities with nutrition supplements and nutrition education. The Guatemalan government—and then USAID—delivered this aid to young Indigenous farming women in San Juan with the promise it would better their future. And yet the future that these programs facilitated was so unimaginable that many had no choice but to leave for the US.

The dissonance seen in the US government's declarations of care and its actions of cruelty was in full effect in San Juan. All around me was visual evidence of USAID's health projects claiming to make life better for young women. At the same time, the US government was also putting in place policies, such as Prevention Through Deterrence or zero tolerance on migration that would cause the horrific deaths of young women at the border. USAID's nutrition interventions delivered supplements that promised to "boost the brains" of children in Claudia's community. And yet an agent of the US government had seemingly casually shot in the head a young, unarmed woman from San Juan who posed no harm. Maternal health programs throughout Guatemala were claiming their work to alleviate hunger would help the lives of malnourished women. But what if the problem was not that women were malnourished but that nutrition was the wrong framing through which to better the world?

The equity worker at the Oregon hospital asked me for insight into how to reach regional Maya-Mam women who didn't understand what the hospital offered to pregnant women and, as a result, were not making use of the hospital's maternal health services. This book shifts the premise of this request. It asks its readers to consider that "the problem" of women's absence in hospital prenatal and delivery care might not be caused by their lack of understanding but because maternal health services are centrally implicated in broader state violence. Maternal

nutrition, as I suggest in the chapters that follow, may not be an antidote but an extension of US warfare in Guatemala, in which harming Indigenous women is central to the design and practice of American empire.

The provocation is to consider that perhaps the necessary changes lie not with women and their bodies and behaviors but with US hospitals and their staff and from there to suggest that healthcare workers must address their own complicity. Does the field of US medicine know Guatemalan history, by which I mean to ask: Does it know its own history? Further recognizing that knowledge is often not used to bring about health equity, it also asks a question about learning more generally: What will it take to be transformed by knowledge of history? Maya-Mam women are radically and actively not reproducing the social world as it has been. How can those working in science, policy, and care delivery also break the cycles of harmful systems? The question is also one for anthropologists, like me, who are invested in the production and reproduction of knowledge: How do nourishing transformations come about?

Introduction

Fetal Development as Global Development

FEED THE FUTURE

Between 1969 and 1977, a team of scientists fed supplemental nutrition to thousands of women and children in four Guatemalan communities. In two of the communities, the scientists set up feeding stations containing a drink of vitamins and sugar they called *fresco*. In the other two communities, the stations contained a thick protein powder prepared with sugar and dry skim milk they called *atole*. For nearly a decade, scientists offered people in the four communities unlimited amounts of either the fresco or the atole drink twice daily and recorded the amounts that pregnant women and children consumed. They also measured the bodies of the babies involved in the study and, as they grew, conducted IQ tests on them as well. The randomized decision about which communities drank protein and which drank fresco would allow the scientists to assess the outcomes of consuming the high protein drink—what would soon become known worldwide as "better nutrition."

Several generations later, the study is frequently held up as a gold standard for scientific research. The scientists had been meticulous in their records, and many of the babies born into the study are still monitored as adults today. Scientists have collected and analyzed new data on education, income, and height to show that the protein babies eventually grew taller, did better in school, and earned more money relative to their fresco-village peers. Anthropometric measures were the only biological data collected in the initial phase of the

study, but scientists have since collected biomarkers from blood and other tissues to make claims about the importance of better nutrition in early life on long-term cardiovascular health and, more recently, executive functioning and mental fitness.

At a Feed the Future summit of international leaders in 2010, US secretary of state Hillary Clinton launched a global movement focusing on "better nutrition" in early life. She did not cite the Guatemala study, but many scientists have pointed to it as foundational to her agenda. One of the study's most conclusive and enduring findings was that human development has a "critical window." If babies were introduced to the high-protein diet after they were about two years of age, it made little difference for later outcomes. It was the early developmental period during the window of pregnancy and breastfeeding that mattered. Clinton called this "the first 1,000 days of life," explaining the idea of the critical window to her audience at the United Nations as follows:

> When I talk about nutrition, people are often surprised to learn that undernutrition is a major problem for which we have basic, affordable solutions, such as vitamin and mineral supplements, fortified foods, and nutrition education. . . . We also know enough about the science of nutrition to know these interventions have the biggest impact when they occur during the first 1,000 days of a child's existence. That begins with pregnancy and continues through a child's second birthday. Interventions after that second birthday make a difference but often cannot undo the damage that was done because of the undernutrition during the first 1,000 days. So we can be very targeted with our investments to save and improve the greatest number of lives.
>
> But while we have life-saving solutions, they remain out of reach for hundreds of millions of people worldwide. And it also is a problem that even when we have such solutions, when it comes to delivering them—particularly to rural communities—the last mile is the longest. (Clinton 2010)

In the years after the Feed the Future summit, the "first 1,000 days of life" agenda would become an organizing force in the field of maternal nutrition. "We must intervene early. If we don't act we'll lose the opportunity," a policy maker told me at a nutrition conference in 2015. He then underscored the urgency of the time frame: "It really is an emergency." Companies and institutions addressing humanitarian relief, economic development, food and agriculture, and global health would all be connected through the push for better nutrition in the first thousand days. Charities such as Save the Children and CARE and many of USAID's international programs would focus their aid on this critical window. The women and babies who once drank protein or sugar water and the Guatemalan researchers who fed and studied them would come to shape political

FIGURE 3. Women wait at a nutrient supplement distribution site in San Juan Ostuncalco. Photo by author, 2017.

agendas worldwide as policy makers declared the "early life" period as key to global development.

ONE THOUSAND WINDOWS INTO AMERICAN VIOLENCE

This book is an ethnography of the agenda to improve nutrition in the window of the first thousand days of life in Guatemala. I trace the emergence of the agenda through a historical analysis of the four-village study. In response to how the first thousand days agenda has specifically targeted rural communities—what Clinton referred to as "that last, long mile of development aid"—I also examine how the agenda was deployed in the Maya-Mam communities surrounding San Juan Ostuncalco, located roughly an hour from Guatemala's second-largest city, Xela.

The dozens of small, rural communities that surround the city of San Juan are a prime spot for development projects. Since I began traveling there in 2008, urban health care workers and nongovernmental organization (NGO) employees have run a variety of maternal nutrition interventions throughout the region. The communities are routinely characterized as a site of "extreme poverty" (Angeles et al. 2014). Their proximity to Xela also makes them convenient for development organizations, since their doctors, engineers, and project managers can live with the comforts of city life while undertaking rural aid work. As a result, the region is a place that is, in the words of the Indigenous studies scholar Eve Tuck (2009, 412), "saturated in the fantasies of outsiders." Signs covered in development project acronyms are scattered throughout the communities. CERPOCAL gave away goats; CGAP provided financial empowerment service for the poor; CIPCA trained youth in agriculture techniques; DFAP provided food assistance; Save the Children and PCI offered maternal health services; PHAST provided hygiene education; PIRR gave trainings to help reduce risk; and so on. People in San Juan don't know what many of the acronyms stand for (neither do I), but the broader meaning is clear: the region is underdeveloped and needs outside help.

Social theorists have vociferously critiqued the harm caused by development projects that seek to bring progress and modernity to the so-called Global South. The historian David Carey (2009, 290) writes that twentieth-century economic stimulation plans in Guatemala dispossessed small-scale farmers, most of whom were Maya, by transferring their land to large-scale foreign and domestic landowners. This dispossession, carried out in the name of development, has reinforced one of the world's most unjust systems of landownership, with 2.5 percent of farmers holding 65 percent of the country's arable land (Carey 2009, 290). As the anthropologist Arturo Escobar (1995) has long noted, development was but another name for imperialism—a trap that disguises the poison as the cure. Escobar's general argument is that the West's push to bring progress and development to Latin America became, in practice, a way of maintaining "power and domination" (xvi).

A core argument of this book is that the twenty-first-century focus on fetal development at the heart of the first thousand days agenda serves to heighten and extend this power and domination, adding a clear dimension of gender violence to the violence that Escobar highlights in the broader colonial projects of modernity. That biological growth and economic growth are both termed "development" is not merely a case of semantic slippage. Both aspirations of development—one biological, one financial—impose a violent teleology of competitive and individualized growth and advancement on community relations, opening the door to "untold exploitation and oppression" (Escobar 1995, 4). My book shows how today's efforts to improve fetal development harm the communities targeted by these interventions, transforming the maternal body into a site of imagined potential, future economic prosperity, while leaving actual women—and their families—further isolated, undernourished, and dispossessed. The premise of the first thousand days agenda is that women who have spent a lifetime gardening, farming, and cooking are ignorant about how to eat. The agenda recasts the hunger people feel as private companies buy up communal lands and toxic agrochemicals blanket their landscapes as a deficiency in their bodies and intellects. It supplants care for communal-based systems of nourishment with scientific concern for women's anatomy and children's biological growth. The political and social problems communities face are diagnosed as a problem of maternal malnutrition, legitimizing control over what women feed themselves and others, when and whether they engage in motherhood, and how—and indeed if—they move and live.

Mal in Spanish (as in its Latin root) has a double meaning: (1) incorrect or wrong and (2) evil, cruel, or causing harm. Typically, when people speak of maternal malnutrition they are thinking about the first sense of mal: malnutrition is a condition where a woman has not had the proper diet, and, as a result, her nutrition is inadequate or incorrect. I write the term with the hyphen to slow down this association and thereby open up the possibility that the second root of *mal* is at play. *Mal-nutrition*—the title of this book—suggests that the problem that rural Guatemalan women face has less to do with an inadequacy in their bodies than with the frequently harmful orientation of the field of nutrition. Much as Vandana Shiva (1988) has used the term "mal-development" to describe how the field of development destroys and dispossesses as it portends to save, mal-nutrition describes the practice of making people hungry in the name of health.

Academics who have studied "first 1,000 days of life" interventions globally have drawn attention to how frequently these programs harm women (Manderson 2016; Flood et al. 2018; Pentecost and Ross 2019; Woo Kinshella, Moore, and Elango 2020). In her research in Guatemala, the anthropologist Alejandra Colom (2015) illustrates how the agenda's emphasis on prenatal care required girls, some of whom had become pregnant following rape, to carry pregnancies that might be dangerous or unwanted. She illustrates how the Guatemalan government deployed

the language of maternal health to legitimize the surveillance and control of the bodies of girls and women.

Mal-nutrition illustrates how the window of the first thousand days gains its violence efficacy by linking women's reproductive biology to the social activities of eating and food production, using quotidian mealtime practices as another means of exerting control over pregnancy, childbirth, breastfeeding—and women and their communities more broadly. The nutrition supplements that accompanied the agenda in San Juan Ostuncalco saddled women with the responsibility for "the future" while also undermining their extensive knowledge about how to reproduce food and kin. Legitimate concerns that women had about bodily and land sovereignty and safe passage across political borders all became redefined as problems of access to or education about nutrients in "early life."

When Hillary Clinton helped popularize "the first 1,000 days of life" in reference to a maternal nutrition intervention, it may have seemed that it was merely a snappy way to discuss the early phases of fetal development. Still, it has never been lost on me that what has become a catchphrase for maternal health programs places the start of life at conception, a threat to the reproductive autonomy of the very women it claims to defend. When I have asked global health policy makers what they think about the fact that the first thousand days of life campaign has an antiabortion message embedded in it, they have mostly shrugged this off as irrelevant. "We're just referring to the period of early development," one policy maker told me at an international conference on the topic. He added, "In fact, we really want to be able to target the 'pre-pregnant woman,' since the decisions that women make before they are pregnant also matter for their children's long-term health."

This was the genius of the slogan. "The first 1,000 days of life" starts life at conception, appealing to conservative antiabortion groups, such as the Catholic organizations that would eventually become involved with intervention monitoring and evaluation in San Juan Ostuncalco, Guatemala. It also directs attention away from the systemic violence that is reproduced in structures of law and policy. The slogan undermines women's bodily autonomy twofold. It smuggles restrictive antiabortion politics into a maternal health campaign. It also implies that the primary way to keep children from harm is for women to eat and behave properly, undercutting women's expertise in the domains of family and food.

Policy makers in and beyond Guatemala spoke about how a critical window of biological development in the first 1,000 days shapes the rest of the life course with effects on national and global prosperity. I instead came to see the window of one thousand days as a window into paradigmatic techniques of American violence, in which cruelty is interwoven into care, communal relations are anatomized and individualized, and control of mealtimes and mothering serves as a means of controlling the broader reproduction of privilege and power.

English speakers commonly refer to the US as "America" while designating Guatemala as part of *Latin* America. In contrast, my use of the category America

encompasses both Guatemala and the United States. To be clear, Guatemala and the United States have different national and cultural identities, but the category America helps me name a shared imperial-colonial experience as well as the complex entanglements of national boundaries I encountered in my research. For example, there were the Guatemalan origins of the science driving Hillary Clinton's US-based Feed the Future summit and other American nutrient initiatives that blended US and Guatemalan research. There was also the basic organizational structure of USAID-Guatemala, which was dependent on US funding structures and responsive to US political pressures but also run predominantly by Guatemalans who brought their critical insights to bear on how USAID's agenda was carried out. Contravening an image of a clear, delineated border, it was not always clear where one country started and the other stopped, and the category America allows me to point to these interdependencies.

Many of the people I spoke with also held complex and fluid American identities. Several of the scientists I interviewed in Guatemala had some affiliation with the US by virtue of citizenship or academic training, but they also held multiple and diverse claims to national belonging. Dr. Noel Solomons—a longtime mentor and a key informant for this book—was born and raised in Boston, but he also spent decades running an independent nutrition research center headquartered in Guatemala City. He, in turn, described the key scientists running the four-village study as "polynational": a Peruvian Jew who was a German exile, two US citizens (one of whom moved permanently to Guatemala and became a Guatemalan national), a Swiss physician, and a Honduran anthropologist.

National identity was also nuanced in communities surrounding San Juan, where nearly everyone has family who lives on the north side of the Mexico-US border—some with US passports or green cards, some without. Many people in Maya-Mam communities do not fully identify with the Guatemalan state, with its Spanish-speaking political headquarters located in the distant capital (Nichols 2022). While territorial boundaries are often rigid and violent, they can also be murky. For much of the twentieth century, many Guatemalans did not have to travel to be on US-operated soil because the land they lived on was owned and managed by the powerful United Fruit Company, with close ties to high-ranking US government officials. The US flag iconography throughout the Guatemalan countryside was a potent reminder of the entanglements of US and Guatemalan history and the legitimate claim that Guatemalans make to US belonging.

I classify the violence that accompanies maternal nutrition policies targeting the window of the first thousand days of life as *American* violence to point to a structuring force of violent motherhood in the Americas that supersedes the specific national boundaries of either Guatemala or the US. There is a risk that people will hear the US recentered, minimizing the central role Guatemalans have played in the field of international nutrition. Yet Guatemalans also lay claim to the geographic title of America, and it is my hope that explicitly including

Guatemala within the category of America will unsettle the US-centered story that people in the US commonly tell about their histories and themselves.

SUPPLEMENTING MAL-NUTRITION

In 2012, the recently elected Guatemalan president, Otto Pérez Molina, and his vice president, Roxana Baldetti, announced their Pacto Hambre Cero, or Zero Hunger Pact (FAO 2012). The pact had become the cornerstone of their social programs, and their signature program for eliminating hunger was a maternal health intervention titled "La Ventana de los Mil Días," or "The Window of 1,000 Days."

The ten-step intervention targeted the early stages of biological development, from pregnancy through breastfeeding, when cell differentiation and growth is especially prolific and the human body is undergoing rapid physiological development. This is also a period where the nascent human being is fed directly by the maternal body—first in utero and then in breast milk. The World Health Organization (WHO) recommends that infants breastfeed exclusively until they are six months, but that breastfeeding should continue for up to two years, at least. As the WHO cautions, "Breastfed children perform better on intelligence tests, are less likely to be overweight or obese and less prone to diabetes later in life" (WHO 2023). These first thousand days marked an altricial, extended fetal period where the mother and child are expected to be united through eating and feeding. Targeting the mother was a way of intervening upon the child, as was targeting the child a way of intervening upon the mother.

The steps of Pérez Molina's Window of 1,000 Days agenda were as follows: (1) promote and support breastfeeding, (2) improve complementary feeding (after six months), (3) improve hygiene practices with a focus on handwashing, (4) distribute vitamin A supplementation, (5) encourage the therapeutic use of zinc to combat diarrhea, (6) distribute powdered micronutrients, (7) vaccinate and deworm children, (8) provide pregnant women with iron and folic acid to prevent or treat anemia, (9) iodize salt, and (10) fortify basic foods with micronutrients. In its focus on the food and nutrients the mother-child dyad consumed, the intervention would reduce hunger, stabilize the country, and make Guatemala—and the world—a better place.

Pérez Molina launched his health agenda in a small town outside of Todos Santos, Huehuetenango, symbolically chosen because of its location in the Guatemalan municipality reported to have Guatemala's highest incidence of chronic malnutrition. In an impassioned speech, Pérez Molina cited the rate of hunger among the town's schoolchildren as 95 percent and promised his majority-Indigenous onlookers, "We will not allow this to continue to rise. We will do our best to ensure that your rates drop, and that they drop drastically." He promoted his visit as the first time that a Guatemalan president had ever visited this Mam-speaking municipality, but Pérez Molina was no stranger to Guatemala's

Indigenous countryside. As a major under General Efraín Ríos Montt, Pérez Molina directed counterinsurgency efforts in the Ixil triangle in 1982–83, serving in a command position at the site where Guatemala's genocide was its most vicious, during its deadliest years.[1]

When Pérez Molina was running for president, the Indigenous-led organization Waqib Kej presented a letter to the United Nations Special Rapporteur on Torture reporting that a documentary made in 1982 features Pérez Molina walking casually near four battered corpses. In the film a subordinate explains that these men had been prisoners who wouldn't talk when handed over to the major—"not when we asked nicely and not when we were mean" (Andrés 2019). Reputable human rights organizations have accused Pérez Molina of being directly engaged in torture and at the helm of genocide. Though he denied this, he played up the thirty years he spent in the military during his presidential campaign, running on the slogan, "¡Mano dura, cabeza y corazón!" (Iron fist, head, and heart!) (Wirtz and Andrade 2011). Now that he had been elected president, he was promising his constituents that he would improve life for Guatemalans by connecting an iron fist to an iron supplement.

Over the coming years, as Pérez Molina and Baldetti were promoting the end of childhood hunger as central to the mission of the presidency, they were also dismantling government-funded health programs. One of Pérez Molina's first presidential acts was to transfer maternal health care in the rural western highlands to USAID, giving the agency for international development the mandate to carry out his "zero hunger pact."

As USAID was setting up its interventions, Pérez Molina and Baldetti met with officials from the World Food Programme in the highland city of Totonicapán, a city close to San Juan Ostuncalco. The gathering presented an opportunity to publicize their Window of 1,000 Days agenda for a larger audience. The national census, which had just been released, showed that seven of every ten children in the municipality were dangerously small, and health experts pointed to nutrient deficiencies acquired in utero and infancy as the cause.

Speaking to a crowd of women wearing traditional Maya clothing, Baldetti distributed packages of powdered nutrient supplements called "Mi Comidita"—My Little Food—for babies between six and twenty-four months. She repeated the powder's motto to the crowd: "With love one grows better." A footnote to the theatrics was that the funds for this particular nutrient powder came from a $2 million dollar grant from the Canadian government, which was also at the time involved in expanding its controversial hydroelectric dams and nickel mines in Guatemala. Indigenous Guatemalans widely held the dams to be a source of "dirty energy," and social movements had arisen throughout the country to protest how Guatemalans were being forced to drink polluted water so that transnational corporations could acquire obscene profits (Granovsky-Larsen 2018; Nolin and Russell 2021). None of this was supposed to be evident that day, however. Instead, the

giveaway was intended to showcase the Guatemalan government's commitment to combating malnutrition and the international community's support.

Not long after the supplement giveaway event, both Pérez Molina and Baldetti were imprisoned in a massive embezzlement scandal, caught stealing large sums of governmental money for their personal gain. They had claimed to care, using "early life nutrition" as evidence they were making things better, but their acts of social improvement would be shown to be a sham. Pérez Molina and Baldetti had explicitly campaigned on a platform that emphasized improving nutrition in early life. Their arrest called their broader agenda into question. For many people in San Juan, the Window of 1,000 Days agenda did not imply betterment but duplicity.

On the eve of Pérez Molina's arrest, the cultural critic Francisco Goldman (2015) wrote, "Otto Pérez Molina is an embodiment of the role the Army has played in Guatemala in the past half-century. . . . Pérez Molina represented a perfect union of Guatemala's past terrors and its current model of power." Goldman is thinking about how Pérez Molina merged the explicit violence of "murder, disappearances, torture, clandestine prisons and graves" with the political violence of corruption and the erosion of democracy. But we can also think about how Pérez Molina mobilized military imagery in his promise to fight hunger, legitimating the spread of the military state into domestic spaces of kitchens and homes. As recently as 2024, a United Nations webpage about Guatemala described Pérez Molina's cabinet as prioritizing security, economic empowerment, and poverty eradication through antihunger efforts (UN Women). The very same president linked to Indigenous massacre in the 1980s had mobilized nutrition as a show of force.

In 2015, when hundreds of thousands of civic protesters joined in collective objection against Pérez Molina, they were responding, in part, to the Janus-faced problem of mal-nutrition. On one face, nutrition functions as a farcical technology: political leaders had co-opted and hijacked the language of good nutrition to extract resources from the state. The shiny, desirable veneer of "maternal nutrition" allows a politician with a history of destabilizing Guatemala to consolidate military and political power to engage in more of the same. Despite his calls for better nutrition, it had become clear that Pérez Molina's goal was to steal large sums of money from Guatemalans and their government. The problem, in other words, is that nutrition was absent when politicians promised it was there.

On the other face, nutrition was not only a mirage, but a powerful force. The supplements, the vitamins and minerals, the fortifications and powdered micronutrients all strengthened the very processed and profit-based food system that further exploited farmworkers while dispossessing them from their land. The Window of 1,000 Days agenda transformed the problem of hunger into a problem of inadequate nutrient composition in the maternal body, to be solved by scientists and overcome by more development. It cemented a vision of health that pushed supplements as a solution to hunger and poverty. Locating the source of

hunger in women's reproductive biology harmed women while also undermining their considerable skills in political revolution, labor mobilizations, and collective organizing. As my book shows, the agenda claimed to be helping people who were hungry and poor, but structurally speaking, the more successful it was—the stronger the field of maternal nutrition became—the more it would end up reproducing violence.

A BIOLOGY OF VIOLENCE

In the Maya-Mam language there is no word for "violence," but everyone in San Juan knows and uses the Spanish word *violencia*. "We did not have violence in our history the way we do now," María García Maldonado, a Maya-Mam lawyer, told me. Though warfare had existed in the past, García Maldonado's point was that the patriarchy and misogyny that made news reports of femicide a daily occurrence in the Guatemalan countryside were—like the word *violence* itself—a legacy of conquest. This was a view widely held by other Maya-Mam and K'iche' people in the region with whom I spoke, who pointed to how they continue to live with the pain of colonialism that their ancestors had suffered.

Scientists working in Guatemala offered a biological explanation for the idea that the harms of conquest endure into the present. They frequently cited the archeological record as evidence that long term physical and emotional violence had become embodied in the human skeleton, pointing out that Maya people were generally taller in the 1550s than they are today. An article in the *Annals of Human Biology* points to a decline in adult mean stature in Latin America between conquest until 1939 (Bogin and Keep 1999). Its title, "Eight Thousand Years of Economic and Political History in Latin America Revealed by Anthropometry," sums up the idea that suffering expresses itself in stature.

An influential paper presented at the Pan American Health Organization in 1968 by the Guatemalan pediatrician Moisés Béhar (1968) points to the land dispossession that crushed Maya food and cultivation practices following conquest as a primary cause of present-day nutritional deficiencies contributing to shortness in height. Precolonial people, he writes, "were in general strong and healthy" (9). He cites the sixteenth-century colonial priest, Diego de Landa, who had reported back to Spain that Maya babies "grew wonderfully handsome and fat during the first two years" and stayed "bonny and mischievous" throughout their active childhood (8). In contrast, writes Béhar, "we cannot say the same about the majority of preschool children of Mayan descent today; they are usually apathetic and frequently very sick" (10).

Béhar was the second director of the Institute of Nutrition of Central America and Panama (INCAP), taking over from the US-born food scientist and physician Nevin Scrimshaw, who was appointed INCAP's founding director by the United Nations in 1949. Béhar was its director from 1961 to 1974, the period in

which the four-village maternal nutrition study of atole and fresco was launched. Born to Turkish Jewish immigrants in Huehuetenango, Béhar spent his childhood in the high-altitude mountains of San Marcos and Quetzaltenango before attending medical school in Guatemala City, then specializing in pediatrics and hepatology at the University of Paris, and finally completing a master's degree in public health at Harvard. In 1974, the WHO would recruit him to direct their nutrition programs in Geneva, which he did for several years. It was written in his obituary that spending his childhood in Guatemala's pristine western highlands gave him a love of the natural world that would stay with him throughout his life.

Béhar was prescient in linking malnutrition to the acute violence of Spanish colonialism. In his 1968 paper he writes:

> Food intake at the present time is barely adequate for adults and frequently inadequate for children. As a result, the environmental stresses, particularly the heavy burden of frequent infections in early childhood, have caused poor nutritional conditions for the general population, with frequent and severe cases of nutritional deficiencies found particularly in early childhood. . . . The socio-cultural and economic changes that have taken place after the conquest have deteriorated the diet of the present Indians and resulted in serious nutritional problems, among which protein deficiency, particularly in small children, is the most important. (1968, 13–18)

The phrase "structural violence" is typically credited to the sociologist Johan Galtung (1969), who sought to give a name to the psychological harm produced by poverty and social repression that leads to an experience of suffering. Gultang developed the phrase in contrast to the "direct violence" of war or military action, but he also described these two forms of violence as highly interdependent in producing selective and unequal premature death and/or disability. At the turn of the twenty-first century, the anthropologist and physician Paul Farmer (2004) would popularize the term "structural violence" in anthropology to describe "the social machinery of oppression" (see also Farmer 1996). He wrote that structural violence "constricts the agency of its victims. It tightens a physical noose around their necks, and this garroting determines the way in which resources—food, medicine, even affection—are allocated and experienced" (2004, 315). As a specialist in tuberculosis and AIDS, Farmer was interested in illustrating how racist and exploitative systems impair human biological function. He wrote:

> How does structural violence take its toll? Sometimes with bombs or even airplanes turned into bombs or with bullets. However spectacular, terrorism and retaliatory bombardments are but minor players in terms of the body count. Structural violence, at the root of much terrorism and bombardment, is much more likely to wither bodies slowly, very often through infectious diseases. . . . Racism and related sentiments—disregard, even hatred, for the poor—underlie the current lack of resolve to address these and other problems squarely. (2004, 315, 317)

Though Béhar did not use the phrase "structural violence" himself, his writings showcased how violence of all kinds becomes embedded—and embodied—in human biology with deadly effects. This concern for embodiment was important—even radical—because of its potential to upend common racist ideas that Maya people inherently had inferior blood and that an influx of "European blood" would save the nation from Indigenous vices and deficiencies (Angel Asturias 1923; see also Casaús Arzú 1998). Instead Béhar argued that Maya physiological impairment was a consequence of colonial violence, including "environmental stresses" such as infection and disease.

In theory, this marked a departure from the widespread idea that the biology of Maya people was *inherently* defective. And yet Béhar's overarching thesis that malnutrition caused physiological impairment left in place the troubling idea that Maya bodies were inadequate and inferior. The cause was different (bad environment vs. bad blood), but the resultant message was the same: there was something wrong with Maya bodies and Maya people. For example, Béhar linked physiological impairment to mental aptitude, moving quickly from deficiency in the food supply to deficiency in intelligence. He wrote that most Maya children and adults suffered from subclinical and unrecognized forms of malnutrition that likely had the consequence of "interfering significantly with mental development in children and with work performance in adults" (1968, 14). Characterizing "practically all the Indian populations" as being "associated with low educational and economic levels and poor sanitary conditions," Béhar then offered an assimilationist solution based on proper integration into the ecological and cultural conditions of Western civilization (16).

It might seem that a focus on how inequality becomes embodied will provide a platform for fighting against—and transforming—this inequality. This is precisely why many epidemiologists and anthropologists have drawn attention to the embodiment of harmful social forces such as poverty and racism. But as I show in the chapters that follow, the story about the impaired biology of hungry Maya people also undermined Indigenous sovereignty over bodies, food, and land. It became used to uphold poverty, legitimizing what Farmer (2004, 317) referred to as the "disregard, even hatred" of Indigenous people, women, and the poor.

Farmer, in his emphasis on the embodiment of inequality, advocates for scientists to pay attention to the "materiality of the social," his point being that poverty weakens biology and makes people sick. But next to the materiality of the social, we must also consider the materiality of theory, asking how ideas about embodied poverty become self-fulfilling. Clearly hunger can have negative physiological effects. Eating matters in material ways. But so too do the stories that we tell about bodies, since they shape where we direct our attention and the subsequent possibilities for action.

One influential outcome of scientific interest in embodiment, which this book critiques in detail, is that US psychologists arrived in Guatemala to probe and

analyze Guatemalan intelligence, running several randomized nutrition trials to study cognitive and emotional development of babies (Barrett, Radke-Yarrow, and Klein 1982; Barrett and Radke-Yarrow 1985). These studies of maternal nutrition, some of which continue to the present day, focused public attention on how certain kinds of eating behaviors and mothering practices produced intellectual and physiological deficiency in early life and how this deficiency would become set, irreparably, in brain and bone. This was not science that fought to change socially conditioned racism or to overturn colonial definitions of intelligence. Instead, it was science that narrowed in on biological processes such as the "inhibition of brain growth and myelination during critical periods of neural development," as described by a recent publication about the effects of malnutrition in Guatemalan children (Ramírez-Luzuriaga et al. 2021). This was science that helped naturalize the idea that the pregnant and breastfeeding body was a key site for the origin of social and biological pathology. It was also science that supported the development of commercially available nutrient-filled products to enhance growth (and with it, intelligence, happiness, well-roundedness etc.) in the first thousand days. Diet during pregnancy—not conquest—was held as a primary determinant of cognitive acuity. Maternal nutrition, not antiracist collective action, was treated as key to psychological well-being and social and emotional health.

The Window of 1,000 Days agenda is a direct legacy of Béhar's observations about the embodiment of inequality. Béhar's writing on food and nutrition during conquest had emphasized how disadvantages in infancy become fixed in human biology, the repercussions magnifying over the course of life, and, as I discuss in later chapters, also passed down to children, who inherit their mother's disadvantaged biology in the womb. Yet if policy makers frame early life nutrition as a way to intervene in—and transform—disadvantage, nutrition also becomes a means by which disadvantage is reproduced. The biological framing of malnutrition empowers nutrient-based capitalist food economies. Locating hunger in Maya women's bodies had the effect of limiting their bodily and reproductive autonomy. Pregnancy, breastfeeding, and motherhood—all sites of potential power and community connection—became sites of state and scientific control.

REPRODUCTION OR TRANSFORMATION?

The initial plan for my research, funded by a three-year fellowship from the Dutch Science Foundation that began in 2015, was to study Pérez Molina and Baldetti's Window of 1,000 Days policy programs and interventions. By the time I arrived in Guatemala at the start of January 2016, Pérez Molina and Baldetti were behind bars. I anticipated I would need to radically reimagine my focus on the Window of 1,000 Days agenda upon the collapse of the presidency. In fact, the presidential arrest changed very little about maternal health projects in the region, where interventions focused on the first thousand days of "early life," continued to flourish,

not transforming, as it first looked as if they might when Pérez Molina and Baldetti were arrested.

The next presidential cabinet, headed by military-backed president Jimmy Morales, who served from 2016 to 2020, developed the World Bank–funded program Grow Healthy (Crecer Sano) as part of its National Strategy for the Prevention of Chronic Malnutrition. Grow Healthy targeted pregnant women and children between the ages of 0 and 3, including "a course on maternal and child nutrition in the first 1000 days to improve knowledge and skills related to the prevention of chronic malnutrition" (FANTA Project 2018). Alejandro Giammattei, who succeeded Morales to the presidency in 2020, initiated the National Crusade for Nutrition (Gobierno de la República 2020–2024 2020), which also focused on interventions targeting the first thousand days of life. In referring to the agenda as a crusade, its advocates did not attempt to diminish the field of maternal nutrition's ideological underpinnings, or its likeness to a religious holy war.

I came to understand that the Window of 1,000 Days intervention had the capacity to transcend individual Guatemala presidencies because of how it has emerged out of decades of partnerships between scientists, policy makers, and development professionals. Guatemala's national government spends very little on nutrition; as USAID reports, only 2.4 percent of Guatemala's gross domestic product is directed to health services—the lowest percentage in all of Latin America (USAID 2017). Pérez Molina used nutrition to promote his presidency, but rural nutrition programs were largely run by global institutions and NGOs, part of a wave of privatization in which public and commercial interests merged (Chary and Rohloff 2015; Beck 2017; Hall-Clifford 2024).

The Guatemalan Ministry of Health had its name on the pamphlets and posters promoting the Window of 1,000 Days agenda, but the projects were also branded with the USAID logo, which featured the US flag, as well as with the logo of Save the Children. Meanwhile, for people in San Juan, the specific ten-step Window of 1,000 Days intervention was but a continuation of similar nutrition projects that had come and gone in their communities. Small tape measures and infant growth boards float around rural communities, detritus of development workers who have left them behind. Home-run bodegas sold chocolate-, vanilla-, or strawberry-flavored nutrient supplements for children next to chips and lollipops. For decades, supplements have been a primary source of poverty relief efforts in Guatemala, with CARE, the World Food Programme, and other UN organizations involved in their distribution. A wide range of humanitarian and commercial nutrient supplements—Incaparina, Vitacereal, the US-produced corn-soy supplement blend called CSB, Bienestarina, Plumpy'Nut, Mi Comidita, Herbalife, or Omnilife—can be found in rural hamlets and urban centers alike.

"Guatemala is a petri dish for research on maternal malnutrition," a scientist who worked at INCAP through the 1980s told me. This assertion that the small country has made an outsized impact on the field of nutrition was widely shared.

Diana Martínez (a pseudonym) was another Guatemalan nutrition scientist who similarly described Guatemala as an "experimental laboratory" for nutrition. To emphasize her point, she shared her experience setting up a randomized control trial for supplements with me.

In 2016, Diana had been contracted by the philanthropic wing of a US-based nutrition company to assist with trial research to test the efficacy of a peanut-based emergency food supplement similar to Plumpy'Nut designed to treat severe malnutrition in pregnant women and babies. She scoured small rural towns throughout Guatemala in search of a place where people were not already regularly consuming supplements, since this would have interfered with the trial's findings. But everywhere she went she found supplements in use.

After considerable effort, Diana finally came across a small town where supplements didn't seem to be in broad circulation. She began to secure contacts within the community and to initiate the process of ethics review. Industry scientists shipped her some of their products as she made preparations for the trial to start. Then, one day early into the work, she happened to enter the town's main Catholic church. On the wall, she noticed a flier for peanut paste, and on further inspection, she learned that one of the church's priests was involved with direct-to-consumer distribution of a nutrient supplement to women in the community. She told me of standing in the nave and raising her arms. "There are no nutrition virgins in Guatemala," she shouted her frustration to the heavens.

Indeed, the field of nutrition has deeply shaped what and how most Guatemalans eat, with supplemental nutrition woven into the fabric of daily life. Since its founding in 1949, INCAP has produced thousands of peer-reviewed articles on nutrition, contributing tremendously to global sciences of nutritional health. The institute helped develop standardized nutrient recommendations and a comprehensive food composition table used by UN organizations worldwide and has been responsible for promoting the availability, accessibility, and acceptability of supplemental nutrition throughout the Americas and the world. Its scientists have carried out research on every known vitamin and mineral, developing short- and long-term research projects into deficiencies, imbalances, economic outcomes, human capital, childrearing practices, and so on. The institute has served as the intellectual home for numerous longitudinal nutrition studies that track pregnant women and babies through adolescence, adulthood, and the process of aging. Nutrition is a robust and widely debated field of science in the country.

And still Guatemala consistently ranks as having one of the largest crises of chronic malnutrition on earth. Today Guatemala has more asylum seekers waiting for their cases to be processed by US courts than any other country, and the rate of people leaving has grown each year (TRAC 2022). As the anthropologist Megan Carney (2015) found in her work with Guatemalans living in the US, many were unable to feed their families in Guatemala and were forced to migrate because of "unending hunger."

The theme of how harmful structures reproduce themselves even as people and organizations ostensibly work toward change remained the most haunting and enduring as I carried out my research. Dozens of aid projects in rural Guatemala were established with the expressed goal of ending hunger in women's and children's lives. By intervening in an early phase of fetal and infant development, they claimed to be acting to transform structural violence to bring about lasting change. And yet women, especially Indigenous women, remained extraordinarily persecuted and marginalized. So much political energy claimed to be making things better, with so little transformation taking place. Instead the very actions that claimed to be improving the nation (and the world) provided a haven for corruption, defined Guatemala as a site of scientific experimentation, forced a narrow idea of motherhood on young women who may have wanted something else for their lives, and advanced US economic and neocolonial interests in the region.

Observing how harm happened in the name of care, I wondered how my work as an anthropologist could be any different. Given that deep structures shape the possibilities for action, how can we act in ways that make these structures reproduce themselves in other ways? Since systems are frequently designed to ensure their own reproduction, how can they be broken (and remade) to bring about meaningful change?

I had been taught to think about performativity as one response to these questions: seemingly small changes in representation can iterate through time, eventually producing a changed social order. This is an optimistic social theory—one that refuses to grant powerful people and institutions the omnipotence they claim to have. And yet Sara Ahmed's (2006) "nonperformativity" seemed to better describe the nutrition interventions that unfolded around me. Ahmed uses nonperformativity in the context of academic diversity committees that perform antiracism in order to shore up racist practice. She draws on Austin's theory of a speech act as having material effects to point out that some speech seems to act, but no change results: "Such speech acts do not do what they say: they do not, as it were, commit a person, organization, or state to an action. Instead, they are nonperformatives. They are speech acts that read as if they are performatives, and this 'reading' generates its own effect" (104).

When racism in the university persists, we might be inclined to see this as a *failure* of the diversity committee. Ahmed turns this around to suggest that nonperformatives "work" precisely by not bringing about the effects that they name. "In my model of the 'nonperformative,'" she writes, "the failure of the speech act to do what it says is not a failure of intent or even circumstance, but it is actually what the speech act is doing. In other words, the nonperformative does not 'fail to act' because of conditions that are external to the speech act: rather, it 'works' because it fails to bring about what it names" (2006, 105).

Sameena Mulla's ethnography of sexual assault interventions, *The Violence of Care* (2014), extends Ahmed's observations about how calling for change

can prevent change from taking place. Mulla worked with rape victims and the forensic examinations system that professed to care about them but ultimately left them underserved and undermined other forms of care they needed. She writes that the violence of the interventions she studied was "not simply corrective but foundational, as it re-founds the state's social order, drawing the actors back into its structures and underwriting the social contract by which they abide" (227).

Mal-Nutrition is a study of how maternal nutrition interventions likewise become foundational to the social systems they claim to transform so that even seemingly well-meaning individuals using state-of-the-art research techniques from an established scientific discipline would end up reproducing harm. Some might see the considerable energy that has gone into maternal nutrition and the persistence of hunger in Guatemala as a paradox, which would make sense if the main goal of nutrition science was, indeed, hunger's amelioration. In this book, I suggest the "failure" of maternal nutrition to ameliorate hunger is not a paradox or contradiction but a predictable outcome of the body- and nutrient-centered focus of the field. If we seriously consider Ahmed's and Mulla's illustration of how systems we live within are organized to ensure that some people suffer, we begin to see the persistence of hunger not as a *failure* of nutrition but as a system that *works* because it does not bring about change.

HISTORIA AS METHOD

In my research on obesity, I had developed a rebellious method. Against a commonly held medical view of obesity as a problem of bodies to be studied in clinics with doctors or nutritionists, I drew a lesson from the field of food studies to see obesity as a problem rooted in politics and history (Guthman 2011; Landecker 2011; Penniman and Washington 2018; Reese 2019). Accordingly, I began to travel to farms, spending my days walking along riverbanks to trace stories of growing and selling food. This method became this book: instead of looking at malnutrition as an inadequacy of nutrients to be treated in clinics, I turned my attention to directions I had been socialized to ignore: landscapes instead of bodies, collective politics instead of an individual's diet.

The anthropologists Dána-Ain Davis and Crista Craven (2016) describe attention as one of our most powerful tools. It is in learning to be attentive to marginality while addressing how power differentials can structure the research process that ethnographers can "contribute to a more transformative politics," they write (13). The work of ethnography, as I put it into practice, was the work of learning from others where and how to give my attention to overlooked places, including those full of silences and absence. The feminist philosopher Jeannette Pols (2015) describes this approach to ethnography as a "rescriptive" practice. She uses the term "rescription" to emphasize how anthropology does not neutrally *describe*

the world as it is but folds knowledge and values acquired through fieldwork together into a re-description—or rescription.

Because I approached all people I interviewed as experts, I have been tempted to use their real names in my analysis.[2] Instead, I have decided to use pseudonyms for all but a few scientists and journalists who are public figures or people who are my coauthors in other venues. My reason for using pseudonyms is to emphasize the interpretive character of my analysis and to differentiate myself from a journalist who is in the position of reporting facts. I have gone to great length to transcribe and translate interviews and lectures with precision, but I also see this book as a "tale of interlocking stories," in the words of Isabelle Stengers (2017). Stengers uses this phrase to describe the importance of collecting stories whose legitimacy arises not because they are true in a universal sense of truth—that is, true from any position—but because of the explicit positions they take, which help imagine different ideas and thus live in different ways.

The anthropologist Luísa Reis Castro (2019) notes how Latin languages do not separate the practice of "storytelling" from history in the way the English language does. Reis Castro leaves the word *história* in the Portuguese language of her fieldwork both to distance her historical accounting from a universalist singular history and to remind readers of the uneasily translated concepts and experiences that shape ethnographic practice. Likewise, the Spanish-language *historia* encompasses the idea that the past is made both by the stories we tell and by the way we tell them. To write an anthropology of *historias* is to use expertise gained through research to retell familiar and historic stories in ways that will alter both past and present, changing our attention and with this, fostering transformative possibilities.

When Paul Diener, a US cultural anthropologist, studied protein deficiency in Guatemala in the 1970s he found that the people he interviewed had a question of their own for him: "Why was I in eastern Guatemala, among a people so poor, funded by an agency of the United States government and performing the research I was engaged in?" (1982, 255). A half century later, people also asked me this question. In my case, I was doing ethnographic research in Guatemala to learn from Guatemalans about how nutrition programs impacted their lives. But cognizant that I am partially connected to a community of scientists who have treated Guatemala as a petri dish for scientific experimentation, I wanted to shift my gaze away from Guatemalan bodies and minds and toward the practices and effects of communities of scientists. In fact, I decided to take seriously the question posed to me about why I was there—even to make it a topic of analysis by seeking out scientists who were engaging with anthropological methods to study and analyze their work.

Spending time with anthropologically inclined nutrition scientists in Guatemala has offered me a way of conceptualizing the possibilities and limits of my own field's history of liberal and decolonial commitments. Anthropologists, like

nutritionists, are frequently engaged in a moral project of doing good. And yet in both fields, this project frequently becomes, as Mulla (2014, 227) warns us, "not simply corrective but foundational," drawing its actors back into violent structures. Lee Baker (2021) analyzes the history of anthropology to ask how a field with such antiracist principles could nonetheless reproduce such racist scholarship. He is adamant that we reflect on situations where well-intentioned anthropologists—those working with seemingly sincere commitments to social justice—ended up producing harmful theories. My book analyzes the field of nutrition, but it does so in a way that places the field of anthropology in the frame. Insofar as a goal of my work is to understand how nutrition science may be done otherwise, I hope this may offer insight into how to remake anthropology otherwise, too.

HISTORIA AS FIELD

I have carried out place-based ethnographic fieldwork off and on in Guatemala since 2000 (see chapters 4 and 5; and Yates-Doerr 2015). Visits to San Juan and conversations with women living there between 2008 and 2022 helped anchor my research on the Window of 1,000 Days. But instead of spending my time in San Juan looking inward at village life, as in traditional rural ethnography, I draw on my time in San Juan to look outward at the circulations of global capital and nutrition science. Policy makers framed San Juan as the endpoint—the "last long mile"—of development. Meanwhile, I saw it as a place where grounded alternatives to nutrition policy were originating and which, in turn, could teach me about the broader field of maternal nutrition. Rather than primarily "deep hanging out" (Rosaldo, cited by Clifford 1996) in a single community, as was the anthropological convention for much of the twentieth century, my focus in this book is the circulations of knowledge. This is an ethnography of a policy agenda and not of a place.

I found one inroad to this work by attending international nutrition science conferences, where global health experts would present on panels and I could speak with them afterward. Much of my "fieldwork" also entailed online activities following social media accounts, live webinars, and the YouTube archives of relevant maternal health nutrition organizations. In 2016, while on a break from listening to the Sixty-Ninth World Health Assembly of the World Health Organization on my computer, I bumped into an anthropology colleague at our department's espresso machine. My colleague also studied global health experts, and we both traveled frequently, so I was excited to let him in on the pre-COVID-19-era secret that I had just been listening to Margaret Chan describe the agenda for the Sustainable Development Goals to the global health community while also scanning the #GlobalHealth hashtag for public reactions. "I'm in Switzerland, without leaving Amsterdam," I shared. My colleague, not convinced, responded, "That stuff that they broadcast—it's just theater. The real stuff is happening in the backrooms, behind closed doors."

FIGURE 4. I carried out much of the book's research at nutrition science conferences such as the World Congress of Public Health Nutrition meeting in Gran Canaria, shown here, held at a critical moment in the design of the Sustainable Development Goals. Photo by author, 2014.

My colleague is right that much of the power in global health nutrition happens out of view and that one anthropological method might focus on gaining access to exclusive, elite spaces (see also Norum 2005). Indeed, this book draws on research based on professional relations with nutrition scientists and policy makers that I have worked decades to build and maintain, including observations made while sitting in boardrooms and at restaurant tables with people who hold political and scientific power such as expert consultants to the WHO or editors of major scientific journals.

But it is also the case that there is much to be learned in nutrition's surface or public representations. The anthropologist Emily Martin has illustrated how cultural stereotypes permeate the concepts of reproductive biology. She offers the analytic tactic of "waking up sleeping metaphors" as a means of intervening in what she calls "bad science"—that is, science that reproduces sexist and racist stereotypes as truth (1991, xxii). Though Martin's work is highly attuned to "raw and brutal" power, she makes clear that anthropologists do not always need to gain access into the backrooms of scientific policy to understand how this power takes hold (xxiv). We can also analyze the stories publicly told by scientists and policy

makers to understand the seemingly subtle or naturalist assumptions buried in the language. From there, we can learn to tell stories that will have less sexist and racist effects.

Accordingly, while the book is grounded in research with people, it is also based on a close reading of policy documents, scientific papers, press briefings released by global organizations, and journalistic accounts of Guatemalan hunger. Though this may constitute an unconventional sense of "the field," analyzing across these sites of knowledge production offered me a way to track the complex circulations of the Window of 1,000 Days. Take, for example, the report used to promote Guatemala's National Crusade for Nutrition, which states:

> Poverty and extreme poverty are among Guatemala's biggest problems. Together with food insecurity, they accentuate the intergenerational cycle of poverty and malnutrition. . . . Malnutrition and micronutrient deficiencies, including iron deficiency anemia in children under 5 years of age, have adverse consequences on cognitive development, especially if they occur in a critical period such as growth and brain differentiation, the peak of which is seen in boys and girls under two years of age. Damage during this period can be irreversible, affecting both early childhood development and national development alike. (Reliefweb 2020)

I am interested in this narrative about "Guatemala's biggest problems" precisely because it is so widely accepted. In the chapters that follow, I trace how policy statements come to impact people's lives, asking what happens when scientists view malnutrition as intergenerational or when health professionals frame poverty as a problem in the baby's brain. What are the effects of treating in utero malnutrition as irreversible? How are mothers, their children, and their communities affected by policies that link fetal and national development? What does the narrative that the key to the future lies in early life development occlude? Guatemala's nutrition crusade claimed to be improving Guatemalans lives through its work to improve the maternal diet. My question was not *whether* it worked but rather *how* did it work: Where does it direct attention? What does it mobilize? How do ideas about malnutrition stabilize as common sense, and where are the openings for challenging and transforming the field?

Each chapter in this book is composed through the warp and weft of various fieldwork historias that answer these questions. I frequently move between seemingly distant sites and points in time to tell a narrative that is more layered than linear and chronological. I often break words apart, writing, for example, about mal-nutrition, bio-logics, in/equality, or co-laboration. I do this to reassemble familiar concepts in a way that they take an altered shape. In this sense, the organization of the book reflects the method of historia. Studying maternal nutrition policy ethnographically allowed me to see connections that were not initially self-evident, and I use the space of writing to stitch these threads together in new ways. My association of writing with weaving is not incidental. Statisticians

routinely refer to Guatemalan women as illiterate. These same women are also, however, expert weavers who have been using the craft of fabric making to tell historias of their communities. Against often-overwhelming violence, they are structurers: they keep track of—and reproduce—place and time. They at once reveal and remake. I have likewise learned from them: in threading together different historias, we can shape the world anew.

An overarching lesson that emerges from the historias in the book is that the field of maternal nutrition policy should move away from its focus on the weak bodies and deficient diets of women and children to instead focus on political and economic violence often authorized by experts and the state. For one concrete lesson: people with policy-making power who care about reducing hunger should work to expand reproductive sovereignty that grants women control over if and when they have children.

Working toward reproductive sovereignty also necessitates the reimagining of what and how bodies reproduce. The Window of 1,000 Days agenda gains harmful force by turning structural problems into narrowly defined reproductive problems, targeting a woman's womb as the critical environment for the future child. Likewise, strategies for resisting the harm of the intervention come from reimagining the terrain of reproductive health to encompass care for other kinds of environments. In Guatemala, the fight against hunger must be tightly linked to the fight for land sovereignty—encompassing agrarian reforms that return political autonomy over food production to Indigenous communities—and border-crossing sovereignty that ensures safe passage across political territories. Free and safe movement across borders is especially crucial for the Guatemalan communities employed in the transnational work of agricultural production and the kin that support them. To mitigate hunger, each of these critical aspects of community-centered nourishment must be addressed.

Another lesson of the book is that strategies to effectively diminish hunger will also quickly become co-opted, made vacuous and nonperformative as a way of reducing their power. Accordingly, the book does not offer universally applicable recommendations for achieving sovereignty of bodies, borders, and food. It rather emphasizes the necessarily situational politics required to nourish people and their land. In her fieldwork with weavers in Cartago, Colombia, Tania Pérez-Bustos (2016) learned that their expertise rested on an ability to both entangle and disentangle. Likewise, the work of weaving historias does not seek a stable master narrative for how to bring about transformation but an orientation to knowledge production committed to telling and retelling historias as they unravel and re-form.

The first three chapters of the book delve into the history of the Window of 1,000 Days agenda, detailing, respectively, historias of military violence, the racist science of stunting, and Guatemala's Longitudinal Study of Human Capital. These opening chapters examine how global health experts have come to

frame malnutrition as a problem of women's biologies and the nutrients they eat. Countering the narrative that describes hunger among Guatemala's agricultural communities as an ironic tragedy, I show how this hunger has been willfully, systematically reproduced by elite politicians and the knowledge systems upon which they draw.

Chapter 4 and 5, at the midpoint of the book, examine how the Window of 1,000 Days agenda is affecting Guatemalan life today. I describe projects meant to fight gender inequality and improve maternal health. I point to how this fight frequently saddled pregnant women with domestic responsibilities while undermining the intergenerational networks of support on which mothers might otherwise draw. I also illustrate how women were working to counter commonly told narratives of "embodied inequality." Hardship made them strong and agile—not deficient and weak—and they use this strength and agility to advance forms of reproductive justice that nourish collective networks of kin and care.

The book then turns back to a "critical window of opportunity" in twentieth-century history when nutrition scientists were working to link nutrition to Indigenous knowledge of the land. It considers how the military intervened into these efforts, forcing maternal nutrition into a science of supplements. In reflecting on the successes and failures of scientists' efforts to break nutrition's historias of violence, I also consider the possibilities and limits of my role as an anthropologist who studies nutrition. I note how often both fields of anthropology and nutrition fall into the trap of individualizing responsibility. In the company of Guatemalan scientists, midwives, and mothers, I ask what it might look like to take *collective responsibility* for health, bodies, and their futures. The book returns to the theme of method in its last full chapter. This position in the book's organization reflects the lesson that methods of science and policy should not come from afar but should emerge out of community engagement. Methods may not be what we start with but what we learn in doing fieldwork. And very often, a good research process may be a sought-after end in itself.

I conclude where I began, at the grave of Claudia Gómez González, which I visited again in 2022 as the public health precautions surrounding the coronavirus pandemic began to subside. I highlight the challenges of poverty that people in San Juan, who have lived through decades of intensive nutrition intervention, continue to face. Conversations with scientists and anthropologists allow me to reflect on where the field of maternal nutrition finds itself today: still up against the harmful reproductive power of mal-nutrition but also working to break old cycles, build community support and solidarity, and bring about collective change.

1

Reproducing Cruelty

IMPERIALIST IRONY

In 2017, a US journalist released a podcast titled *A Craving for Nutritional Knowledge*, which described the nutritional landscape of Guatemala as "ironic": "The main crop here was irony. The same valleys that produced a cornucopia of vegetables of enormous size . . . also produced the highest rates of stunting in the Western hemisphere" (Thurow 2017).

Roger Thurow, a hunger policy consultant who worked for three decades as a foreign correspondent for the *Wall Street Journal*, had traveled to a rural health clinic outside of Xela to conduct research for his book, *The First 1,000 Days: A Crucial Time for Mothers and Children—And the World* (2016). At the clinic, he attended a nutrition rehabilitation class for new mothers and mothers-to-be. His podcast tells a story about how a K'iche' clinician quizzed the dozen women in the room about where calcium and iron came from and how the women answered with "Milk, meat, green vegetables, spinach, beans."

Their correct responses to the clinician's questions offered evidence of the uncomfortable truth that nutrition education often does little to alleviate hunger in Guatemala's highlands, where, as Thurow reports, "childhood malnutrition and stunting rates were about the highest you will find anywhere in the world." He mentions that a civil war ravaged Guatemala's countryside, and he highlights the inequalities of the export trade, which makes vegetables costly for the people who grow them. Thurow is struck by the tragedy of the situation: women who produce food for the world do not, themselves, have enough to eat. The podcast concludes with an emphasis on irony: "[The women] left the classroom

empowered and burdened at the same time and walked home, past the fields of the valley, ripe with irony."

This chapter critiques Thurow's framing of Guatemalan malnutrition as "ironic," suggesting that what he labels as irony is in fact a dangerous rhetorical trick that elides the historical brutality of US-Guatemala relations. In making this argument, I take inspiration from Renato Rosaldo's discussion of imperialist nostalgia. Rosaldo (1989) coined the term "imperialist nostalgia" to characterize the mourning for a past that one has been complicit in destroying. He gives the example of colonial officers and missionaries who deplete environmental resources and then worship nature, kill and then deify their victim, or alter life immeasurably and then lament that life is not how it was before they arrived. "Imperialist nostalgia," writes Rosaldo, "uses a pose of 'innocent yearning' both to capture people's imaginations and to conceal its complicity with often brutal domination" (108).

"Imperialist irony" similarly deploys a technique of feigned surprise to conceal clear exploitation and deeply patterned cruelty. Irony, like nostalgia, comes from the Greek word *eirōneia*, meaning "simulated ignorance." Eirōneia served as a performative device in Greek tragedy, where the audience was a knowing observer of conditions about which characters living through these conditions were unaware. As with imperialist nostalgia, imperialist irony functions as a power play: those standing apart see something that they mark as surprising or unexpected, implying that insiders do not see this themselves. And as with imperialist nostalgia, imperialist irony allows an observer to convey a longing for things to be different while they elide their own culpability for the way things have become.

Thurow is correct in his assessment that knowledge of nutrients will do little to improve the lives of the women in the vitamin education group he visited, but there is no irony in this fact. The conditions that Thurow documents are not an ironic surprise. For years, people with political and economic power in Guatemala, with the aid of US politicians and the complicity of many US-based newspapers and journalists, have run an intentional and well-orchestrated campaign of Indigenous genocide, targeting women as a means of destabilizing communities. There is nothing ironic about how women are today marginalized in a land of plenty or about how their children suffer. Great effort has gone into foreclosing their life possibilities, and Guatemalan women are well aware of the systemic cruelty that shapes their communities.

The literary theorist Jean Franco (2013, 1) notes that cruelty generally connotes the deliberate, conscious attempt on the part of individuals to hurt or damage. I write instead of *systemic cruelty* to shift the focus away from any singular individual's decision and toward socially patterned forces that produce iniquity. For example, systems of cruelty are at work when politicians exploit fear of immigrants in order to gain attention to get themselves elected to platforms where they can spread more fear. Systemic cruelty is likewise at work when an education

FIGURE 5. A woman waiting at a San Juan health clinic has wrapped her baby in a US flag. Photo by author, 2008.

system teaches us that women's ignorance is a primary reason they are sick, suggesting the remedy is more education, which reinforces the idea of women's ignorance. When it comes to the claim of irony, we can see how the claim of innocence obfuscates the sources of harm, causing the audience—not the actor—to look in the wrong place for the remedy. In each of these cases (politicians mobilizing fear to create more fear, educators promoting education that obscures knowledge, journalists promoting innocence rather than responsibility), cruelty is systemically reproduced. The focus on systemic cruelty does not discount that individuals can and will act in cruel and abusive ways. Clearly we could point to cruel politicians as drivers of malnutrition in Guatemala. Yet naming cruelty as *systemic* shifts our focus away from individual actors toward broader sociopolitical structures that normalize, reward, enable, and amplify harm.

Thurow is concerned with the lost potential that results from nutrient deficiencies in the weak bodies of mothers and their vulnerable children's subsequent cognitive decline. His job as a narrator is to move his audience to feel sorry for forgotten or abandoned women and children, to then react heroically to alleviate their suffering. Yet his narrative frame of irony allows us to overlook how nutrition policies are not *failing* women and children, but they are *succeeding* in buttressing and reproducing the systems in which they operate, creating an underclass of poor

and Indigenous people whose lives are treated as expendable and whose violent deaths are leveraged as a way for those in power to maintain control.

THE POWER OF HISTORIA

Since the release of his book, Thurow has become a spokesperson for maternal health programs. He is frequently invited by philanthropic foundations to speak about the far-reaching consequences of malnutrition and he has created several podcasts and interactive web stories on the topic of hunger in the early life period of the first thousand days (Thurow 2020). Reviews of his book have appeared on National Public Radio (Aubrey 2016) and the websites of numerous humanitarian organizations. The World Food Bank's CEO, Richard Lackey (2018), writes that Thurow's work reminds him of something Tony Hall, a former Ohio congressman who served as the US ambassador to the Food and Agriculture Organization between 2002 and 2006, once said: "The capacity to end hunger exists today. The only thing lacking is the will to make it happen". Lackey (2018) continues, "Thurow makes the case for focusing on more complete nutrition during the first 1,000 days as a mechanism for not only reducing morbidity and mortality and the obesity and stunting caused by malnutrition, but also for improving the capacity of children to complete higher levels of education and to take on better paying jobs with lessened risk for chronic illness and less stress on the family unit."

As an experienced journalist, Thurow uses the narrative power of storytelling to raise awareness about the urgency of improving maternal nutrition. At a roundtable focused on the theme "the first 1,000 days of life" hosted by the Chicago Council for Global Affairs, he reflected on his experience visiting mothers and their children who had survived famine. He spoke of a boy named Hagirso in Ethiopia, who was five years old at the height of the famine and weighed just twenty-seven pounds. Thurow described listening as a doctor told the boy's family that he did not know if the boy would survive. Ten years later, Thurow met the boy again. This time, at the age of fifteen, the boy was in a first-grade classroom and only just learning to spell. Five years later, at another visit, the boy was now in a fourth-grade classroom where half of the students were eighteen or older.

This classroom, Thurow says, exemplifies the "long-term generational aspect of early childhood stunting." Thurow asks his listeners to imagine an entire cohort of "babies" (his word, not mine) in the wombs of mothers who are not receiving proper nutrition, who then transfer their own malnourishment to their children later in life.

> The first 1000 days of life—from the time a mother first becomes pregnant to the second birthday of her child—is when good nutrition is most important. It's when the brain is growing most rapidly and expansively, when the foundation for physical and cognitive development is laid, and when the immune system is strengthened to ward off future disease. It's the most important time for individual

> human development, setting the stage for what is to come. For years. For decades. For generations. (2021)

Thurow calls the classroom a "harbinger of the future," adding that "we carry the burden of failed promise" in which the dreams and aspirations of an entire generation "become stunted along with the bodies and along with the cognitive mind." The website profiling Thurow's work shows the face of a boy, presumably Hagirso, next to a caption that reads: "A Lost Chance at Greatness" (2021). He cautions his audience that it is almost impossible to measure "this loss of human potential and this life sentence of underachievement and underperformance." He concludes, "Just think of the lost opportunity and potential for all of us—what might those children have accomplished not only for their families, but for their country and the whole of Africa—for the whole of the world, for all of us, were they not malnourished and stunted as children."

Thurow and I have much in common. We have both received funding from grant agencies interested in research that explores the "first thousand days of life" (the Pulitzer center funded his research; the Dutch Science Foundation, the European Research Council, and the Wenner-Gren Foundation funded mine). Both of us have spent time with pregnant and nursing women in Guatemala, meeting with families over the course of nearly two decades. We both hold US passports. And both of us are interested in how the narrative power of the stories we tell shapes our worlds. Yet despite these similarities, our stories are built on significantly different premises, leading us to make different observations and emphasize different pathways for change. Precisely because Thurow and I are so similar on the surface, I take the time in this chapter to address how our stories diverge.

Thurow's writing about Guatemala first caught my eye not only because of his interest in the window of a thousand days, but because I have visited the Guatemalan clinic he describes in his book and podcasts several times and know many people from the US who have spent months volunteering there. The facilities are a quick commute from downtown Xela, a short ride on a public bus or a brisk walk through fresh air and scenic vistas that can be made in under an hour when the weather is nice. The clinic's volunteers typically live in Xela, where they have hot showers and access to French or sushi restaurants. The uninformed listener would be forgiven for thinking that the journalist is far off the beaten path, since he never troubles this impression. He describes the clinic as "decrepit," and he speaks of the long-standing neglect that has exacerbated malnutrition in the region.

In fact, the clinic is a well-networked, living laboratory of nonprofit and nongovernmental aid. Cofounded by a US citizen, it has a polished English-language webpage, draws its volunteer pool from prestigious US universities, and its board has had several US Americans, including at least one anthropologist. This absence belies other absences in the story he tells. Not once in Thurow's discussion of Guatemalan poverty does he mention his own government, which has spent

decades crushing grassroots attempts to give Guatemalan farmers control of the land where they grow food. He uses the term "civil war" to describe the armed conflict in Guatemala, a phrase that connotes a country divided in two, minimizing the widely accepted finding that almost all of the atrocities were committed by military and paramilitary forces.

Thurow is not unusual in depicting Guatemalan hunger as a problem whose origins lie in Guatemalan violence. Many journalistic accounts of malnutrition published for US audiences omit the role of the US in creating the conditions in which Guatemalan communities cannot secure enough to eat (e.g., Rodriguez 2021; Sieff 2021; Strochlic 2021). Journalists commonly frame Guatemalan hunger as an unfortunate medical condition that humanitarian organizations are struggling—and typically failing—to mitigate, saying nothing about how US politicians have historically relied on Guatemalan suffering to boost their own economic profits and political power.

Thurow's reporting on food insecurity in the first thousand days highlights ignorance and the toll that lost cognitive potential takes on Guatemalans and, by extension, "all of us." A more precise historia of hunger would focus on the systemic cruelty of military intervention. This historia would not only address the role of the US government; it would also reflect on how US journalists have contributed to the violence by repeating false narratives about Guatemala's history.

"EXPOSITION OF PROPAGANDA"

The well-documented backstory of Guatemala's armed conflict, which directly challenges Thurow's description of malnutrition as "ironic," is that in 1952 a powerful banana corporation known as the United Fruit Company (today Chiquita Brands International) hired Edward Bernays, the nephew of Sigmund Freud and the so-called father of the field of public relations, to run a massive disinformation campaign in Guatemala. As the documentary filmmaker Adam Curtis (2002) explains this history, the Soviet Union had just detonated its first hydrogen bomb and the US government wanted to quell mounting fear of communism by reassuring people that everything was okay. Bernays foresaw a different tactic for his clients, who included President Dwight D. Eisenhower and shareholders of United Fruit such as the US secretary of state and the director of the CIA, the brothers John and Allen Dulles. Curtis (2002) describes how Bernays, strongly influenced by his uncle's theories of the human psyche, wanted his clients to mobilize subconscious psychological drivers of fear to manipulate the masses: "Bernays argued that instead of trying to reduce people's fear of communism they should encourage and manipulate the fear, but in such a way as it became a weapon in the cold war."

In twentieth-century Guatemala, the idiom of national development belonged to United Fruit. In the early part of the century, it was United Fruit more than Guatemala's own national government that built railroads, ports, and transportation

systems, as well as schools and basic health care services for people who lived and worked on company land. By the mid-twentieth century, United Fruit held exclusive rights to the railroad, telegraph systems, and ports in Guatemala and owned 555,000 acres—equivalent to controlling roughly one-tenth of Guatemala's economy (Simon 1988). "Development" had served to facilitate its supply chain, keep its labor force alive, and boost its profits. As I explain further in chapter 6 when I discuss the banana company's reliance on agrichemicals and monoculture, progress, privatization, and capital accumulation went hand in hand.

Jacobo Árbenz ran his presidential campaign on a platform of agrarian reform. In 1952, shortly after he was elected to office—and the same time United Fruit began to work with Bernays—Árbenz signed Decree 900 into law. The decree authorized the redistribution of uncultivated and idle lands held by large private estates to the country's rural poor. The historian Piero Gleijeses (1989, 461) describes the decree as a "moderate law cast in a capitalist mould." But though Árbenz's popular policy affected just 1,710 of the 341,191 registered private holdings, landownership in Guatemala was so unjust that this covered more than half of the total private acreage. In addition, since landowners had historically, and without consequence, grossly undervalued their property on their tax returns, they would not be compensated for what they now declared their land was worth (462, 464). Árbenz's popular agrarian reforms, which had redistributed property to roughly 500,000 Guatemalans by 1953, were particularly a problem for United Fruit.

Curtis (2002) explains that Bernays recognized that he had a "narrative problem" on his hands: "Instead of position Árbenz as a popularly elected government that was doing good for the people, he needed to portray him as a threat to American democracy, close to the American shore." Bernays focused his disinformation campaign first on US journalists. He flew several prominent reporters who knew little about Guatemala to the country, arranging that preselected politicians both entertain them and pass along the message that Árbenz was a "communist controlled by Moscow" (Curtis 2002). During the trip, a violent anti-American demonstration broke out in the capital, which many people working for United Fruit later suspected had been organized by Bernays himself. Bernays also created the Middle American Information Bureau, a fake news organization that bombarded the US media with press releases implying that Moscow was using Guatemala as a communist base.

The end goal was not only to discredit Árbenz, but to legitimize a coup d'etat. United Fruit and the CIA were training a rebel army that would eventually topple Árbenz's presidency, crush the labor unions that had begun to flourish, and restore land to the corporation. Bernays's campaign of propaganda went hand in glove with the US military's campaign of violence, creating the conditions for the coup's acceptance and eventual success. He ensured that the US media would portray the US as a freedom fighter for democracy against the threat of

communism. During the days surrounding the overthrow of Árbenz, the front page of the *New York Times* reported, "Árbenz is deposed by an anti-communist junta. . . . US is asked to help end the bloodshed as the regime shifts" (Kennedy 1954). A front-page headline declared, "Reds Jailed and Captives Freed." The article quotes the then-ambassador to El Salvador, Hector David Castro, who argued that a period of oversight would be necessary "to determine whether international Communist penetration in Guatemala still constitutes a danger to the hemisphere" (Lawrence 1954).

Shortly after Árbenz was replaced by Carlos Castillo Armas, an ally of Eisenhower, Vice President Richard Nixon made a visit to Guatemala, where he was filmed touring the "Exposition of Propaganda." A master class on disinformation, the exposition detailed the Russian takeover of Guatemala by featuring evidence of Russian propaganda such as motion pictures sent from Moscow, Stalinist stories for schoolchildren translated into Spanish, and piles of Marxist literature apparently collected from Árbenz's now-vacated presidential palace.

During his visit, Nixon participated in a televised event staged by United Fruit's public relations department, where he and Castillo Armas stood together in front of a poster with a sword spearing and breaking a Russian sickle, to proclaim the "triumph of freedom" (Castillo Armas and Nixon 1955). Castillo Armas read from a prepared English script. Looking frequently at Nixon for approval, he said:

> I speak not as the chief of state but as a soldier in the war against the communists. Before the revolution, which I directed, and which overthrew the Árbenz government in June, Guatemala was dominated by the communists. That government did not have the support of the Guatemalan people. That government has a destructive influence in this hemisphere, threatening the friendly solidarity of all the American nations. The government of Colonel Árbenz was under the direction of a foreign power which had an ideology alien to my people. That is why the liberation movement, which I have been honored to help, began and that is why the movement organized by a small group of patriots succeeded so quickly. With all the strength of their being, the Guatemalan people wanted the anti-communist revolution to succeed. They were sick of communism and tortured by its system of slavery. . . . I hope you will tell the many people you will meet on your tours about all the things you have seen in Guatemala. (Castillo Armas and Nixon 1955)

Nixon explained to the cameras that the Russian propaganda they had gathered clearly demonstrated that the Russian-backed communist regime of Guatemala had been "attempting to change the minds of the people and to warp them over to supporting international communism." He praised Castillo Armas for upholding the principles of freedom and liberty, a message that he delivered "on behalf of people from the United States and free peoples everywhere and of people who want to be free behind the iron curtain." The exposition offered irrefutable proof, he asserted, that the "Árbenz regime was not a Guatemalan government: it was a

foreign government, controlled by foreigners. . . . It's a good lesson for all of us to be on guard against what the communists try to do." Nixon concluded:

> This is the first time in the history of the world that a communist government has been overthrown by the people, and for that we congratulate you and the people of Guatemala for the support they have given and we are sure that under your leadership, supported by the people whom I have met by the hundreds on my visit to Guatemala, that Guatemala is going to enter a new era in which there will be prosperity for the people together with liberty for the people. (Castillo Armas and Nixon 1955)

In hindsight, it is clear that the US government was implementing a strategy of disinformation that would shape its approach to foreign policy in the years to come. Future US presidents seized upon Bernays's tactical use of fear to gain political and economic control in Guatemala, eventually contributing to a campaign of war so brutal that the 1950s, when the coup against Árbenz took place, was considered a time of peace (officially the war started in 1960). In the 1980s, Ronald Reagan offered military intelligence, training, and arms to Guatemalan dictator, Ríos Montt, and his military general, Otto Pérez Molina, who together led a death campaign, frequently called a "killing field" (Kinzer 2018), that ravaged the Guatemalan countryside. They waged a "systematic campaign of highland deforestation" to remove protective natural resources in order to depopulate areas where communities of Maya farmers were living (Costello 1997, 14). The aim was for people to starve.

Between 1981 and 1983 alone, the military killed or disappeared an estimated one hundred thousand civilians (Costello 1997, 14). The UN-backed Truth Commission investigating the violence learned of hundreds of cases in which army officers led by Ríos Montt held civilians at gunpoint, forcing them to "rape women, torture, mutilate corpses and kill" (CEH 1999, 27). It found that the state had explicitly tried to destroy Indigenous communities, whose strong collaborative social structures posed an economic and cultural challenge to the political oligarchy. The military used rape and sexual violence to damage kinship and community networks, targeting women because of the work they undertook to hold their families and communities together.

Children were also among the direct victims of arbitrary execution, forced disappearance, torture, and rape. According to the Truth Commission, "The armed confrontation left a large number of children orphaned and abandoned, especially among the Mayan population, who saw their families destroyed and the possibility of living a normal childhood within the norms of their culture, lost" (CEH 1999, 23). To explain the brutality of military operations the report points to the state's racist "doctrine of superiority" (24). "This extreme cruelty was used by the state to cause social disintegration," the Truth Commission recounts (27). Meanwhile, in 1982, Reagan stood in front of the press and declared, "I know that President Ríos Montt is a man of great personal integrity and commitment. I know he wants to

improve the quality of life for all Guatemalans and to promote social justice. My administration will do all it can to support his progressive efforts" (Reagan 1982).

Today the "Exposition of Propaganda" appears as a truly Orwellian occasion of doublespeak: Bernays, the father of public relations, directed the future US president and the current puppet dictator of Guatemala—who had just worked together to overthrow a democratically elected president—to publicly assert that communist propaganda was undermining democracy. By the time Thurow published his popular book about the first thousand days, it was widely known that the US government had actively encouraged the conditions of hunger still haunting Guatemala today.

While the *New York Times* never formally apologized for its inaccurate and misleading news coverage, it changed the tenor of its reporting, as demonstrated by a 2011 article that narrated the presence of the US in Guatemala in the 1950s in a much different light than it had at the time of the events: "The Eisenhower Administration painted the coup as an uprising that rid the hemisphere of a Communist government backed by Moscow. But Mr. Árbenz's real offense was to confiscate unused land owned by the United Fruit Company to redistribute under a land reform plan and to pay compensation for the vastly understated value the company had claimed for its tax payments" (Malkin 2011).

This story of deception might itself be further nuanced to clarify that Guatemalans were not mere pawns in the US war machine. The "Exposition of Propaganda" was a well-crafted public relations stunt—Árbenz was never a lackey for Moscow—but many Guatemalans were skeptical of capitalism, and Árbenz was influenced by political confidants who belonged to the Communist Party. As the anthropologist Carlota McAllister describes in her book *The Good Road* (forthcoming), Guatemalans had multifaceted relationships with communism and socialism that included critical intellectual engagement with Marxism and trenchant objections to imperialism. The brilliance of Bernays's propaganda campaign was not only that it deployed propaganda while seeming to critique propaganda; it linked a critique of capitalism to pro-Russia sentiment, refuting the narrative by declaring that Guatemalans were pro-US, which would further serve to reinforce US corporate interests.

Thurow, however, mentions none of this complexity, focusing instead on the "baby" in the mother's womb. When he details Pérez Molina's Window of 1,000 Days campaign he mentions that Pérez Molina was a high-ranking general in the military, but he says nothing about how he was an alumnus of the US School of the Americas, where he developed expertise in tactics of torture that he put into practice under Ríos Montt at the height of the genocide. Thurow (2016, 54) describes how following Pérez Molina's election in 2012, the new president dispatched officers and members of the business community to spend a night with people living in poverty, undertaking what Thurow calls "an anthropological study of malnutrition in the western highlands." He describes the businessmen trying to

get comfortable while sleeping on thin mattresses. "It was my most difficult night," one businessman told him, adding a description of his host family that Thurow included uncritically in his book: "They had big eyes, you could see they were malnourished" (54). Thurow writes, "Between home visits and the study, the ruling class discovered the realities of their own country: the heavily corn-based diets; the fact that women often ate last (and usually least); the tiny houses; the sleeping on floors; the lack of sanitation" (54).

He characterizes Pérez Molina's Zero Hunger Pact as an awakening among the upper classes, which saw Guatemala's competitive edge in international markets flagging in the big, hungry eyes of starving people. Their firsthand encounters with poverty spurred them to action, as they realized that Guatemala's economic future would be "stunted" along with the country's rural poor. Thurow does reflect on the possibilities of *Guatemalan* corruption as he writes of paging through glossy pamphlets that show Pérez Molina and Baldetti hugging rural children (they had not yet been arrested when his book was published), but he mentions nothing about US political corruption. When the mothers at the health clinic tell him, without equivocation, that nothing will change, he does not take them at their word. He insists that it is an open question whether politicians' investments in nutrition will "trickle down" to help rural women (2016, 55).

I have already given away the ending of Pérez Molina and Baldetti's Window of 1,000 Days agenda: they were complicit in massive theft, both politicians finishing their tenure in jail. They used the charade of "good nutrition" to steal from the country, a conclusion that surprised none of the women I spoke with in my fieldwork. Poverty in Guatemala, after all, is not a product of neglect or indifference. It is not "irony" that those championing democracy are overthrowing democracy and those critiquing propaganda are deploying it. These are carefully studied strategies that American politicians in both the US and Guatemala have deliberately executed and that the structures surrounding them support. This is systemic cruelty at work.

NUTRITION IN THE SHADOW OF GENOCIDE

Before turning to the chapter's conclusion, I would like to consider another seemingly "ironic" contradiction that is not ironic at all: the exclusion of reproductive rights from the agenda of maternal nutrition.

Studying nutrition in the shadow of genocide, with the murder and disappearance of young women a daily story in the news, I often reflected on what I would never be able to study or write about. For example, I did not think I could listen to people share lived experiences of abortion, given that abortion is legal in Guatemala only if the pregnant person's life is in danger—and even then the procedure must be approved by multiple doctors. The Guatemalan constitution (title II, chap. 1, art. 3) guarantees full protections for human life from conception

on (its language). People who seek or perform abortions without state-sanctioned permission face one to three years in prison, even if the reasons given for the pregnancy are rape or incest and even if there are concerns about fetal impairment or the pregnant person's physical or mental health. I worried that sharing any knowledge about the topic with me might compromise people's safety, and *not knowing* about abortion seemed to be my most ethical course of action.

Although I did not discuss abortion with people, when I asked midwives and other health professionals what political actions might make the biggest impact on hunger, several pointed to the need to give women more autonomy in family planning. "Gaining control of birth spacing" was a way of referring to reproductive rights that didn't challenge religious conventions too much. That women might not want children or to be wives at all was, I believe, an idea too scandalous for most health workers to speak, but in the background of all of our discussions about family planning was the patriarchal power of the church and the need to challenge this power to genuinely better the lives of all Guatemalans.

I did not need to talk with people about abortion to know that abortions are common everywhere that contraception is not widely available. One group of researchers working in Guatemala estimated that 65,000 abortions are performed in women of reproductive age in the country each year—a rate of 24 in every 1,000 women (Kestler and Mora 2018). They report that 82 percent of rural Indigenous people seeking an abortion are not seen by qualified professionals. They describe abortion-induced maternal morbidity and mortality as a "very significant and preventable public health problem in Guatemala" (531). In describing the problem as "preventable," they are, of course, thinking in theoretical terms—imagining how easy it would be to save lives if people in political power wanted to prevent these deaths.

The oft-spoken cliche about the failure to address hunger is that "political will is lacking." That was Ohio congressman Tony Hall's statement, cited by the World Food Bank's CEO at the start of this chapter. Yet thinking in terms of systemic cruelty, we would notice *how much* political will goes into the design of policies that do women harm (Sanford, Stefatos, and Salvi 2016; Valdez and Deomampo 2019). In other words, will is not *lacking*: political systems are meticulously arranged to ensure that women cannot control their bodies, families, and homes. (Consider that Tony Hall, who led US international diplomacy on hunger for years, was himself staunchly antiabortion.)

When midwives linked hunger to contraception their concern was not about "overpopulation." The idea that Indigenous women having too many babies causes global food insecurity, though still pervasive, has racist origins and has been overwhelmingly debunked (Hartman 1997; Sen 1997; Roberts 1998). Their concern was, rather, for how frequently Guatemalan women became mothers without choosing this path for themselves. The anthropologist Alejandra Colom (2015) describes how Pérez Molina and Baldetti's Window of 1,000 Days intervention not

only ignored reproductive rights, but erased them by subsuming the human rights of women and girls under the rights of the "unborn child." Several of the girls and women she interviewed who were part of the intervention became pregnant after rape. Colom develops the idea of "forced motherhood" to describe how the intervention forced girls and women into a life they did not want to have.

Forced motherhood is a commonly reported reason for leaving Guatemala, although migration is no clear escape from rape and pregnancy. Some reports suggest that men have raped upwards of 80 percent of women who arrive at migrant shelters in the US (Siegal McIntyre and Bonello 2014). One midwife told me that before women leave Guatemala for the US, they will look for injectable contraception, knowing this is an invisible and long-lasting form of birth control. Women frequently cannot find it, assuming yet another risk on their journey north.

In 2017, several pregnant people apprehended at the US-Mexico border tried to secure abortions—which should have been within their legal rights at the time (the *Dobbs* decision to eliminate the constitutional right to abortion did not happen until 2022). Instead, the Office of Refugee Resettlement blocked their requests, forced the women to have sonograms and antiabortion counseling, and denied them medical care (see Cromer 2019). The director of the Trump administration's resettlement program, E. Scott Lloyd, was an avid antiabortion activist. According to the American Civil Liberties Union, he regularly coerced young women into carrying pregnancies to term, forcing them to go to crisis pregnancy centers with religious affiliations (ACLU of DC 2017).

Not long after these cases wound their way through the US courts, a young woman from San Juan Ostuncalco and her husband set off for the US (Paredes 2019). A midwife from San Juan told me Victoria Mendez Carreto had just learned that she was pregnant before leaving. She was early enough in her pregnancy that reporters did not include this information in the stories about her death, from dehydration, in the Arizona desert. As I mentioned at the start of the book, the week Victoria died, the trial of a US citizen who left water for migrants ended in deadlock: four US jurors were willing to convict the defendant of a felony crime for trying to save the lives of people in desperate need (Prendergast 2019).

Less than a year later, another young woman from the department of Quetzaltenango who was crossing with her partner fell eighteen feet from Trump's border wall. Classified as a criminal before she could be classified as a patient, Miriam Estefany Girón Luna was eight months' pregnant when she died of internal injuries from the fall. Meanwhile, people commenting about her death online complained that US hospitals, and ultimately US taxpayers, would have to pay the medical bills of Guatemalans who injured themselves on the border wall (Dedaj 2018)—which the Trump administration had spent $15 billion in taxpayer money to build (Anderson 2020).

The anthropologist Risa Cromer (2019) raises the question of how politicians are able to maintain the seemingly contradictory positions of being pro-life while

enacting border policies that directly lead women to suffer and die. Her answer is that this is not actually a contradiction, given that White Christian America deploys both positions—being antiabortion and anti-immigration—to control the bodies of migrant women. What is termed pro-life is not actually undertaken in the service of "life" but is a strategy of domination (see also Cromer and Bjork-James 2020).

When Thurow visited the rural clinic in Quetzaltenango to discuss health during "the first thousand days of life," he followed the lead of policy makers everywhere by engaging women in discussions of nutrients—not reproductive autonomy. Thurow's book likewise mentions nothing about contraception in Guatemala, focusing instead on women's knowledge about vitamins, iron, or fiber. As I illustrate in the following chapter, the framing of malnutrition as a problem of biological deficiency sets up remedies focused on technological innovation. We can also see this in Thurow's podcasts, which tell a story of a mother whose first child died in infancy and who then received nutrition education and support from Harvest Plus, a biofortification organization that provided her with iron-enriched sweet potatoes and beans. Thurow (2020) recounts that during her second pregnancy she ate the biofortified crops with positive results: "When her son Aron was born, relatives and neighbors admired his robust and sturdy size. Aron had thrived on his mother's nutrient-rich breast milk and eventually, those same sweet potatoes and beans are an example of what good nutrition and support systems can do to change a life, a family, and entire communities."

Framing nutrient deficiencies as the root cause of malnutrition allows policy makers and scientists to celebrate iron fortification. Time and again hunger policy makers I spoke with shrugged off contraception and abortion as irrelevant to their work, insisting that they were working in the field of nutritional development and not in reproductive politics. Meanwhile, midwives who work closely with pregnant women point to reproductive autonomy as one of the most effective ways to address the structural foundations of maternal hunger.

We must consider that this efficacy is precisely why reproductive politics are so frequently cleaved from the agenda set by hunger policy makers: constraining reproductive rights serves to uphold existing structures of power, and those with power do not want to give up their power. To push the argument further: we can understand the separation of abortion politics from hunger if we consider that "first thousand days of life" programs may not function to make lives better for the women they claim to help. A reason that an intervention to better women's health ignores an obvious avenue for doing so—strengthening women's reproductive autonomy—is that bettering women's lives is not, after all, the end goal of the intervention. This is not a space of irony, in which a knowing audience can decipher what women cannot see for themselves. The assumption that underpins Thurow's discussion of rural poverty is that governments are "failing," but women plainly see that their governments are succeeding in keeping them poor.

When policy makers describe malnutrition as a problem of deficiency (lack of nutrients, lack of education, or lack of political will) the treatment, in turn, is supplemental: more iron, more fiber, more nutrition classes, more politicians doing what they do. But if malnutrition were instead understood as orchestrated and coordinated, rooted in the cruelty of systems that gain and retain power by producing suffering, a different set of responses would be necessary. The focus would shift away from nutrient deficiencies in women's bodies to structural deficiencies in the science and politics of maternal health.

WHEN CRUELTY IS THE POINT

One of the major stories in the Guatemala news while I was carrying out fieldwork in 2016 and 2017 recounted the details of the Sepur Zarco case being tried in the Guatemalan court system. The Q'eqchi' community Sepur Zarco, in the east of the country, had been a site of horrific violence. In the 1980s, community leaders had decided to fight for legal titles to the land they had lived and worked on for years (Beaudoin 2015). Plantation owners called in the Guatemalan army, which declared the area a communist base. The army disappeared at least fifteen of the community's men and forced their wives into sexual and domestic slavery for the next six years.

In 2011, fifteen survivors of this sexual violence met with women's and human rights organizations to receive training in how to translate the haunting memories into a viable legal case. Words and concepts such as "rape" or "sexual slavery" did not have obvious corollaries in the Q'eqchi' language. A woman who was gang raped by the military for years might say, "We were forced to take turns" (UN Women 2018). To make this intelligible to the justice system, she would need to learn to articulate her suffering as "victimization" and "violence against women." As the sociologist Alison Crosby and the justice theorist M. Brinton Lykes (2019, 130) explain the process, Maya women tended to think of violence in collective terms and as distributed across time and place, but to be victorious in a court of law they needed to be able to narrate an "individuated, spectacularized, singular, sexualized event" (see also Posocco 2021).

Joining forces with legal experts and three Maya Q'eqchi' men, the fifteen survivors launched a landmark legal case against Esteelmer Reyes Girón and Heriberto Valdez Asij, who had served in relatively low-level military positions in Sepur Zarco. The women testified to the brutality they had experienced, recounting graphic details of rape and torture. It was the first trial to bring charges of sexual slavery during war to the court system of the country where the crimes had occurred (Eulich 2016). In 2016, Guatemala's national court handed down prison sentences of 120 and 240 years to Reyes Girón and Valdez Asij, respectively. Nearly three decades after the Truth Commission had documented widespread and willful brutality against women, the national court recognized that the Guatemalan state had deployed sexual violence as a weapon of war.

The clinic where Thurow visited with women during their nutrition class is on the other side of the country from Sepur Zarco, but the women he spoke to surely followed the arc of the case. Women throughout Guatemala, especially Maya women, cared deeply about the outcome, pushing for the case to be tried in court and when it was, marching together in hopeful solidarity. "Nuestra Mirada Está en la Justicia: Sepur Zarco" (We Look to Justice in Sepur Zarco) became a nationally recognized slogan (Lakhani 2016).[1]

When Thurow speaks about the urgency of malnutrition in Guatemala, he presents a story about ironic ignorance among Guatemala's business classes who are oblivious to how bad things are for the country's rural poor. He does not mention that Pérez Molina was trained and supported by the US government to use the brutality and suffering of women as a tactic to further US military power. That the businessmen are "surprised" by the scale of poverty fits his narrative of irony. They didn't know—for surely if they had known they would have cared. The impression we are left with as readers is that if only we can awaken people's consciousness, they will be moved to action.

In contrast, the political scientist Cristina Beltrán (2020) shows how US politicians are routinely elected on racist platforms, where narratives meant to increase fear of migrants and showcase migrant suffering help to "sustain White Democracy." Conventional liberal and humanitarian responses to racism frequently focus on educating a White public about how health policies produce health disparities. Yet this strategy does not take seriously that many who occupy White public space *want* health disparities to exist because these disparities help maintain their social power (see also Metzl 2019). Beltrán's argument is that drawing attention to the plight of Guatemalan migrants for a White Euro-American audience would not be an effective way to transform politics: the political system was designed to keep poor, Indigenous Guatemalans marginalized.

Consider that as Thurow was raising awareness about malnutrition through his podcasts and public narratives, the bodies of Salvadorian migrants Óscar Alberto Martinez Ramirez and his baby daughter, Valeria, were photographed at the Rio Grande border, where they had drowned in each other's arms trying to cross the river. As the image circulated, so did the warnings: "Stop showing this picture," many from the Latinx community urged, including the the National Association of Hispanic Journalists (NAHJ) (2019), which called the photo exploitative and condemned its use. Those objecting to the image's dissemination pointed out that its circulation did not do antiracist work of bearing witness to evil but would instead embolden a White, racist public that benefits from migrant suffering. Illustrating the existence of suffering as a means to end it ignores that people already know. This sought-after awakening of consciousness overlooks the history of US imperialism in the Americas in which cruelty is, and has long been, the point.

Of course, there may be individual businessmen unaware of the scale and scope of poverty who are genuinely surprised when faced with hunger and who

carry out their "anthropological study" of participant observation with good intentions (Thurow 2016, 54). The anthropologist Emma Kowal (2015) has argued that a focus on an individual can obfuscate global politics that produce systemic injustice (see also Parvin and Pollock 2020). There is, Kowal points out, a tremendous gap between antiracist desires and antiracist consequences, and any individual's intentions should be evaluated as secondary to their action's effects. Accordingly, it is not especially relevant whether Guatemalan businessmen are personally kind or cruel: it is the system and its reproduction, not an individual's will, that we should keep our eye on. For example, when it comes to narratives about hunger we should be asking about the structures in place that allow Thurow's narrative of women's vulnerability to circulate widely and gain social currency and popularity—especially among key aid organizations such as the World Food Programme—whereas narratives tightly linking nutrition to reproductive autonomy, land sovereignty, or US-sponsored genocide are all but erased.

It might seem to be the height of irony to critique Thurow for omitting the role of US journalists in his discussion of maternal malnutrition while ignoring the role that White US anthropologists like me have played in contributing to the conditions of dispossession that we later critique. Yet my argument in this chapter has been that we should see this as an example of systemic cruelty, not irony. That a system of knowledge production would allow me to overlook my field's culpability would be an example of structural hubris if not outright maleficence. This omission would be a way of reproducing structures of power as they are.

This reproduction is also something I can act against by acknowledging and addressing how often US anthropology has been complicit in the very problems it claims to work against. When Eisenhower was training Guatemalan dictators, Richard Adams, who would eventually serve as president of the American Anthropological Association (AAA) and who helped establish the field of applied anthropology, was hired by the CIA to interview pro-Árbenz prisoners and report on their political activities.[2] The agency had realized that anthropological knowledge of community life would be especially valuable for counterinsurgency. Soon afterward, Adams leveraged his anthropological skills to improve the palatability and flavor of a powerful nutrient supplement, helping make it the widely popular and immensely lucrative product that it is today (see chapter 3). Though this was not Bernays-level propaganda, it is certainly not work to address and transform the political cruelty that underlies so much Guatemalan hunger.

Less explicit but also dangerous is the frequent repetition on the part of anthropologists and medical professionals of the trope of vulnerable, hungry women also used in Thurow's writing about the irony of hunger in Guatemala. Irony positions the narrator and anthropologist in the role of a hero who can see what the vulnerable insider cannot. Irony, or simulated ignorance, becomes an especially convenient device for policy makers when they discuss what or why or how people eat. The anthropologist Emilia Sanabria (2016) makes this point clear when

she demonstrates how nutrition policy makers routinely, and willfully, produce certain kinds of people and communities as ignorant so as to justify intervening in their bodies and behaviors while leaving untouched the political and economic systems in which they live. Likewise, when someone claims irony, they put themselves in the role of the knower, casting the people in the scene they are viewing as ignorant. The maneuver of making the viewer the expert redirects attention from the expertise of the people in the scene when it comes to the question of what to do next. Logically, it makes sense that when a US narrator tells the story of vulnerable women saved by US interventions, US institutions would repeat the narrative. Since institutions such as USAID are predicated on intervention, the narrative holds in place the conditions that allow them to exist.

CONCLUSION: CHANGING THE HISTORIA

In 2021, protests erupted across Guatemala. The attorney general, María Consuelo Porras, had just fired Juan Francisco Sandoval, the prosecutor who was investigating high-level corruption and human rights violations and who was thought to be very good at his job. Cases of COVID-19 were higher than at any previous time during the pandemic, and Guatemalans were not willing to wait patiently for things to turn themselves around. Protesters, organized largely by Indigenous community leaders, mobilized a national strike on July 29, 2021 (Cuffe 2020). Across the country people took to the streets, demanding the resignation of Porras and President Alejandro Giammattei.

Many of the images of the strike were reminiscent of a classic protest image taken near the end of the armed conflict that shows unarmed women and children facing a line of militarized police (@soydelfuego 2021). "No one is backing down or even showing fear," Irma Alicia Velásquez Nimatuj (2013, 170) writes about the historic image from the armed conflict, which she describes as a "highly condensed image of gender, race, agrarian struggle, resistance, and potential violence."

One photograph showed women in pink huipiles who had erected a stone barrier in the road on a rainy highway, a direct action to interrupt political life (see @NeryPeriodista 2021). A line of oil tankers and semis looms behind them, as the women occupy the road. One woman nurses a baby. Two women directly in front of a big rig are engaged in conversation. Other women fill in the spaces between them to create a line. The women look completely in control of the situation—not scared, or weak, or vulnerable. These are not women who need heroes.

As the photograph circulated on social media, so did the comments. One, posted by the mayor of Huitan, a majority-Mam municipality near San Juan Ostuncalco that has the highest level of malnutrition in the state, disparaged the women involved. "Huevona deplano no tiene marido esta suelra una mujer de casa haciendo el almuerzo estuviera," wrote Mayor César Calderón in a barely intelligible post that called the women lazy, suggesting that they didn't have husbands and

should be at home making lunch (El Chapin Chispudo 2021). Guatemalan women on social media were quick to respond, pointing out the systemic misogyny that Guatemalan women face (@AdaValenzuelaVN 2021). Several posted the Guatemalan constitution's law against femicide and other forms of violence against women on the municipality's Facebook page (Sor 2021).

Their point, which has been my point in this chapter too, is that the framing of Indigenous women as lacking—in vitamins, education, or knowledge of political operations—has the narrative backward. The problem instead lies with a state that is maintained and reproduced by leaders who openly refuse to treat women, particularly Indigenous women, with dignity and bodily autonomy. Policy makers, journalists, and even anthropologists might describe the problem of hunger in a land of abundant food as ironic, but the frame of "irony" is wrong,

> It is cruelty, not irony, that Indigenous women from a land of rich agriculture do not have enough to eat.
>
> It is cruelty, not irony, that politicians tasked with food security do not want to talk about reproductive choice.
>
> It is cruelty, not irony, that a maternal health campaign mobilizes around a message that starts life at conception, undermining reproductive rights.
>
> It is cruelty, not irony, that so-called pro-life politicians spend their time and resources building border walls that will kill children.
>
> And it is cruelty, not irony, that so many public health officials talk about harmful foods that women are eating instead of what politicians are doing to uphold the conditions of poverty that cause them harm.

Talk of irony, in fact, keeps the audience ignorant. As I explore in the chapters that follow, women do not need saviors who see what they cannot see and will come and save them. They need networks of solidarity composed of people who will join them in resisting and refusing the terms of imperialism. The fight to change the historia is ongoing.

2

Bio-logics of Poverty

In late 2015, a prestigious international nutrition journal published results from a study reporting that babies living in the rural communities surrounding San Juan Ostuncalco had high rates of microcephaly, a condition defined by the WHO as being at least 2.0 standard deviations below median growth-for-age standards for head circumference, also known as "stunting" of the skull (Chomat et al. 2015). The study's lead author, a White European woman working at a Canadian university, had carried out long-term research on maternal health in the first thousand days. For three years, she and her research team conducted in-depth interviews with pregnant women, collecting cortisol and anthropometric measurements, including those for head circumference. These measurements indicated that the heads of San Juan Ostuncalco's babies were consistently smaller than they should be according to global guidelines.

Two of her field assistants, both of them Guatemalan women who held university degrees in nutrition, deployed one of global health's least expensive technologies, wrapping a white measuring tape around the cranium of babies at two separate times: once as newborns and again roughly six months later. The publication reported that of the 155 mothers enrolled in the study, 19 percent had infants in the early postpartum period who were microcephalic, with 15 percent of the infants maintaining the condition six months later (Chomat et al. 2015, 433). In the field of public health, these numbers are so high that they seem unbelievable, but the Guatemalan researchers who took the measurements were well trained, and their results across the period of measurement were consistent.

The public health community largely understands the problem of stunted head size in Guatemalan babies as an outcome of malnutrition: the babies' mothers were

malnourished; therefore, the babies did not develop as they should. This chapter suggests that the measurements should instead be understood as an outcome of global health experts' renewed interest in child growth standards, itself connected to a long history of scientific racism. Anthropometric measurements of bodies and heads are one of biologists' oldest fascinations, but the inclination to use head size in nutrition policy is also an example of *mal-nutrition*—the misdirected and harmful actions of nutrition science.

This chapter examines the commonsense idea that biology is a site of investment potential to be maximized through improved nutrition. Specifically, I consider how the Window of 1,000 Days agenda presents the body of the pre-pregnant, pregnant, or breastfeeding mother as the critical site for investing in children, biologizing women in relation to their children's size, growth, and potential to earn and learn. I draw attention to the intersections of maternal nutrition, eugenics, and scientific racism to suggest that theories of fetal development advance stratifications of racial capitalism, in which human worth becomes naturalized along biological lines. Defining women's bodies as the environment of early life facilitates state and bureaucratic control over their domestic activities and reproductive practices. The broader argument of this chapter is that mother-centered biological ideas of poverty, or *bio-logics of poverty*, both produce inequality and hold it in place.

I use the term "bio-logics," a compound of *bios* (life) and *logos* (rules/structure), to highlight how "biology" is offered as an explanatory logic for the problems of poverty and hunger. Many in public health have come to speak of "biologies of poverty," an idea that tightly links poverty and biological function: poverty weakens biology, while biological impairment also produces poverty. I write instead of "bio-logics of poverty," to slow down the assumption that poverty is a result and a cause of an impaired body. I consider this explanation a particular logic of biology that exists among other possible logics of how life can be harmed or flourish. The social science concepts "biopower" and "biopolitics" have given us the language to understand how politics gains its power by turning biology into a site of governance. To speak of bio-logics is to point to how the logics of what constitutes biology are themselves sites of cultural contestation: biology is not only a site where governance happens; what biology is taken to be also emerges out of relations of politics and power.

A common adage in the field of anthropology today is that "race is culturally constructed," meaning that race does not lie in biology but in social practices, and it is these social practices that give race the meaning and power that it has. This chapter seeks to push this anthropological truism further to speak of the cultural formation of biology. Rather than split culture from biology, as would the argument that race is cultural and therefore *not* biological, the term "bio-logics" insists that there is no biology outside of cultural practice. I describe how logics of biology emerge from particular (historical, political, economic, social, etc.) preoccupations and interests (see also Fausto-Sterling 2005). To argue that race is not biological risks reifying biology as an acultural system: it closes exactly what

should be opened up for inquiry, that is, the question of how, and whose, biology is made to matter.

I shared these thoughts about biology with a Guatemalan friend, who was also a high school science teacher. "I am afraid that is taking things too far," he objected. Some things are true; some things are false. He searched for a moment, and perhaps hearing the busy traffic surrounding us, he settled on an example: "If I am standing in the middle of the road and a car comes at me and it hits me, I will be hurt. I may die." He expected me to argue with him, but I nodded in agreement. I then tried to explain that rather than take the event of the accident as a conclusion, we might take it as a place to start our analysis.[1] Some people would have us focus on breaking bones or cardiac arrest. Their concern might be the body that is suffering from impact. But I would also want to know: Was there a pedestrian overpass, or why was traffic moving so fast? How was it that you came to be in the middle of the road? Or, once hit, could you trust the health care system to take care of you? Did the attendants in the emergency room speak your language? Did they deny you necessary care because you did not have insurance or they suspected you could not pay? What other difficult questions should we be asking?

The point I was making to my friend was that the way we understand a problem shapes how we are then able to act. Bio-logical understandings of poverty have become commonplace in recent years, naturalizing the idea that poverty makes bones brittle and cellular tissues weak, producing maternal disadvantage that traps poor babies in damaged bodies, reproducing a cycle of poverty. The concern, both in the conversation with my friend and in this book, is that treating poverty as a problem of biology makes it too easy to ignore how these understandings of both poverty and biology have emerged out of imperial conditions of dispossession, genocide, extractive economics, and Euro-American supremacy (see also Guthman 2011). If we look at how logics of biology unfold in practice, it becomes clear how they are themselves structured by these imperial conditions and, with this, how they might be structured in other ways.

Racism looms over the conversation about bio-logics of poverty, with longstanding racist ideas of biological fitness serving to legitimize claims to political and economic power. In her annual review article, *Interrogating Racism*, the anthropologist Leith Mullings (2005, 667) writes that the consolidation of an exploitable labor market required by global capitalism has created "new forms of racialization." She is in conversation with the political economist Cedric Robinson (2000, 26), who argues that a key tendency of Euro-American capitalism was "not to homogenize but to differentiate—to exaggerate regional, subcultural, and dialectical differences into 'racial' ones." For Mullings and Robinson, what is widely called "race" does not only point to differences in skin color to offer a common understanding of race, but to a broader technique of weighing and valuing a person's worth through embodied difference.

Their comments help reframe the resurgent interest in anthropometry in global health as a key mechanism of racial capitalism, in which health experts deploy the

FIGURE 6. A health worker stands behind a scale used to monitor child length in San Juan Ostuncalco. Photo by author, 2017.

authority of science in their measurements of head size and body length to shore up the perceived superiority of White, European, landowning men. The American studies scholar Mark Tseng-Putterman points out, “Capitalism needs to secure captive labor, resources, and markets to survive. Race is a construct which justifies this process, not an inherent status preceding it” (@tsengputterman 2021). This chapter illustrates how bio-logical explanations for growth become used to justify the poverty of Indigenous Guatemalans, the racist preoccupation with the size of bodies and heads upholding the structures of poverty that efforts to make babies taller frequently claim to act against. It examines how the focus on maternal nutrition takes over women’s health, foreclosing concern for reproductive autonomy, midwifery care, or food and land sovereignty. The overall goal of this chapter is to take away power from racist bio-logics of poverty and instead place power in logics of poverty that will better achieve poverty’s end.

ANTHROPOMETRICS OF STUNTING

The publication of the San Juan microcephaly study in 2015 coincided with the codification of the UN’s second set of development goals, the Sustainable Development Goals, which ostensibly put concerns of long-term sustainability at the center of global health. Julio Frenk, a Mexican physician, former dean of public health at Harvard University, and one of just a handful of people involved in creating the

Millennium Development Goals at the turn of the twenty-first century, explained in a public lecture in 2013 that no one thought the UN's development agenda would be as successful as it eventually became. The "success" he referred to did not pertain to meeting the goals—most countries' attempts have fallen far short—but to how the goals have changed the funding landscape by successfully merging medicine with economic planning.

Indeed, by the time the Sustainable Development Goals took effect in 2016, they were big business. A Unilever CEO called them a "$12 trillion business opportunity," leading one report in the *Harvard Business Review* to dub them "a massive global public relations charade" (Kramer et al. 2019). In the years the goals were being designed and debated, commercial and philanthropic institutions fiercely vied for representation, knowing that the allocation of global spending depended on seeing their interests taken into account.

Many scientists have described the field of nutrition to me as historically marginalized in comparison to medicine: undertaught in public health programs and underfunded in research sciences. Yet the launch of the Sustainable Development Goals seemed to solidify a turning point. Alongside the announcement of the goals, the United Nations named the first ten years of the agenda the Decade of Action on Nutrition, meaning that nutrition was to be prioritized across each of the seventeen goals. Whether the goal was "zero hunger" (goal 2), "good health and well-being" (goal 3), "decent work and economic growth" (goal 8), "reduced inequalities" (goal 10), "life below water" (goal 14), or "peace, justice, and strong institutions" (goal 17), the overarching goal of better nutrition was held to be relevant. As the website on the Decade of Action explains, "The achievement of the Sustainable Development Goals will only be met when much greater political focus is devoted to improving nutrition, as nutrition is both an input and an outcome of sustainable development" (UN 2023).

The centrality of nutrition to sustainable development can be explained, in part, by the increased reliance on metric-based approaches to knowledge production in the development goal era. The first of the Millennium Development Goals had been to "end extreme poverty and hunger." The promise of ending hunger was politically powerful, but it presented a scientific challenge: hunger evoked an individual experience of suffering, but to be useful in global assessments and rankings, it needed to be rendered in a form that could be compared across different aggregate groups. "If something is unitless, it is meaningless," an economist at the Gates Foundation–funded Institute of Health Metrics and Evaluation (IHME) told me. She clarified that she was speaking literally. Without a way to measure something, she could not show it to be statistically significant—an achievement necessary for making policy targets and actions. "Feeling is too messy," she added.

"Stunting" is the solution that global health experts settled on for the messiness of feeling when it came to hunger. The definition of stunting as a measurable deviation from global reference standards for growth-for-age appears concrete

and easy to calculate. Later in this chapter I explain that the metric is not, after all, as clear as it purports to be. But in global health circles there has been broad agreement that stunting serves as a good indicator for the experience of consistently being hungry, and today global health experts use stunting synonymously with chronic malnutrition (but see Scheffler et al. 2020 for a critique of this equation). The idea is that much like rings on a tree, bone growth forms a linear record—an archaeology—of living conditions. Being at or above the growth reference standards is a sign of having been well fed through childhood. If one is consistently malnourished as a child, growth will be impaired, forming an irreversible and measurable imprint on biology.

In the background of the rising global interest in stunting is a series of studies from the end of the twentieth century, carried out in a partnership between the World Bank, the WHO, and the IHME, which sought to calculate which illnesses caused the most harm to global development. Published by *The Lancet*, this "Global Burden of Disease Study" drew on data about death and disability from 195 countries to tabulate the toll that various illnesses had on human health. The research claimed to help spotlight serious health disparities whose toll was previously unrecognized. As Frenk explained at his lecture, the global burden of disease study "brought to the forefront a number of problems that don't kill but which produce a lot of disability and exacerbate global inequality." Stunting, sometimes called a "silent killer," was a prime example. Public health experts expressed concern that stunting, while not as immediate or visible as acute starvation, is disastrous for those living through it. The worry of these experts was that entire populations are moderately to severely malnourished, with tragic consequences.

But the Global Burden of Disease project did not simply shine a spotlight on the problem of stunting, as its authors claimed. Instead, it helped *create* stunting in the sense that the study's data allowed a problem that was not previously actionable to become a focal concern for scientists and policy makers. Of course, the study did not do this on its own, but it was a powerful example of a cluster of studies documenting the far-ranging impacts of malnutrition that allowed experts to unite chronicity and urgency through human biological development. As the WHO's website explains, "Stunting is the result of chronic or recurrent undernutrition, usually associated with poverty, poor maternal health and nutrition, frequent illness and/or inappropriate feeding and care in early life. Stunting prevents children from reaching their physical and cognitive potential" (WHO 2018).

Axel Van Trotsenburg, a Latin America specialist at the World Bank, explained the problem as follows:

> In Guatemala, where poverty affects half of the population, the struggle to eradicate malnutrition is more important and urgent than in any other country in Latin America and the Caribbean, as it exhibits the highest rates in the region: almost one million children under the age of five suffer from chronic malnutrition or stunting. This jeopardizes not just their future, but that of society as well. The reason?

> Malnutrition has enormous consequences for the remainder of children's lives, as well as for the countries where they live. (2019)

The WHO reference guidelines for linear growth-for-age typically serve as the standard for calculating stunting. These guidelines, set in 2006 for height and in 2007 for head circumference, come from data taken from 8,440 children in six countries (Brazil, Ghana, India, Norway, Oman, and the US), replacing earlier guidelines drawn only from children in the US (WHO 2007). Scientists recruited the children to participate in growth monitoring because they lived in environments where food was not in short supply and infection rates were low; in addition, their mothers did not smoke, and the children were breastfed in early life. These children helped establish the global norms for growth, not because they were thought to be typical, but because they were thought to be exceptional—an ideal to be achieved.

Answering the question of whether it is appropriate to apply the WHO growth-for-age guidelines for stunting to children everywhere, the WHO (2006, 22) reports, "The standards depict normal early childhood growth under optimal environmental conditions and can be used to assess children everywhere, regardless of ethnicity, socioeconomic status, and type of feeding." The implications of this brief statement are tremendous. The WHO is claiming that all groups of people have the potential to be the same height and *should* demonstrate the same rates of growth. Deviation from the norm is a sign that something in the environment has manifested in a biological deficiency. The promise that accompanied the statement was that if environments were improved, all populations of people would eventually (after a few generations of biological correction) become the same height.

With the emergence of "stunting" as an indicator of health and illness, entire communities that showed no outward sign of illness had become medicalized and their bodies the targets of health intervention. Or, more accurately, because height is set "irreparably" in early life, entire communities of pre-pregnant, pregnant, and nursing women have become the object of health intervention. According to the bio-logic of stunting, it is the environment—not genetics—that shapes height. But the environment that matters is the maternal environment: a woman's body and the way that her behaviors and beliefs come to shape it.

BIO-LOGICS OF MOTHERHOOD

Four years before the UN named zero hunger as the second of its seventeen Sustainable Development Goals, President Pérez Molina launched his Zero Hunger Pact in Guatemala, with the Window of 1,000 Days intervention as the cornerstone of the hunger prevention program. Both agendas sought to measurably decrease stunting in children. Because of how growth in early stages of fetal and child development was intimately associated with maternal nutrition, first Guatemala and then the UN

specified the need to address the nutritional needs of adolescent girls and pregnant and lactating women as particularly important to their antihunger goals. International organizations, industries, and national governments latched onto the prevention of stunting as a way to increase health and boost economies—which meant that they latched onto women's bodies as the key site for economic growth.

With the eyes of global health experts focused on growth rates, the Guatemalan survey of maternal and child health (INE 2017) was released to great anticipation while I was doing fieldwork in 2016. The survey documented growth rates for children under five years of age across each Guatemalan department, reporting that 47 percent of children under five in Guatemala were stunted (a minor change from the previous survey carried out in 2008–9, which put stunting rates at 50 percent). Majority-Indigenous regions of Guatemala fared the worst, with rates of stunting at 68 percent and 70 percent, respectively, in the departments of Huehuetenango and Totonicapán. Throughout the public health community, Guatemala was held up as an example of a disaster. "The 6th most stunted country in the world!" numerous outlets reported, referencing the World Bank's global stunting rankings (World Bank 2017).

In 2017, the World Bank granted the incoming Guatemalan president, Jimmy Morales, a $100 million loan for his newly launched nutrition campaign, Grow Healthy: Childhood with a Future (Crecer Sano: Niñez con Futuro). Grow Healthy was not just a catchy slogan; growth rates were the metric driving the World Bank's funding, and the World Bank would use growth rates to determine whether Morales's nutrition campaign was a success. The document advocating for the loan to Guatemala put stunting at the forefront of its goals: "Reducing pervasive chronic malnutrition (stunting) is both one of the critical challenges and one of the key priorities of the Government, given its impact on individual welfare, costs to the society, and negative impact on economic growth" (World Bank 2016).

Height might seem at first glance self-evident; children around the world are familiar with the experience of standing with their backs to a wall and being told a number that becomes a piece of one's identity. Yet as bone growth has emerged on the recent global health agenda, so have questions about how to assess it: Is torso size what really matters? Or should researchers disaggregate height by measuring the length of the limbs or by calculating a ratio of limb length compared to trunk length (or sitting height length, or metacarpal length, etc.)?[2] Or perhaps it is head circumference that will best represent a child's fitness in the world, and skull size data is what researchers and clinicians should collect when assessing stunting. Even for a well-trained researcher, head circumference is not straightforward. Scientists measuring heads in Guatemala are themselves unsure of whether the data they collect reflects bone growth or subcutaneous fat or some combination thereof.

Added to the question of what to measure was the question of how and when to collect the measurements. Noel Solomons, a nutrition scientist with whom

I collaborated in Guatemala for several years, was dubious about common techniques for measurement, including the use of balances and scales. Recognizing that Maya people do not generally like people from outside their communities touching their children, he spent years experimenting with the use of photographs or shadows to indirectly calculate children's height (Beintema et al. 2016). In the Netherlands, where my own babies were born, it is widely thought that stretching out the legs of a newborn, who has been curled tightly in a ball for many months, can damage the hips and pelvis. Newborn height data is simply not collected, the preference being to wait until babies have had time to stretch out on their own. Historically, the global health community has focused on the bodies of children under five, for whom normal growth curves are the steepest. Global health experts have recently homed in on the period of the first thousand days as the critical window for gathering measurements. But is there another window within this window, they ask themselves?

Compounding the complexities of how and when to measure growth is the question of what form an intervention to improve growth should take. Researchers are confident that pregnancy and early life marks a critical window in which to intervene, but which supplements and vitamins should be added to the pregnant person's diet (or, in recognition that people eat together, maybe it is the family's diet that should be addressed)? Should prophylactic antibiotics or antiparasitic medication be given in pregnancy to reduce minor infection so that existing nutrients in pregnancy can be absorbed? How about offering cash transfers so that mothers can decide for themselves what their children need?

The push to resolve this uncertainty focused on collecting more measurements and developing more sophisticated data technologies. The Gates Foundation especially has become interested in how to make children taller and has begun to compile various assessments of growth taken throughout history in its databases. At the Universidad del Valle in Guatemala City, data from hundreds of old studies in which researchers had collected height, weight, IQ, age, and other pieces of information is stored in filing cabinets and boxes, almost forgotten. Similar dusty records exist in universities and laboratories worldwide. The Gates Foundation has hired assistants to enter this old data into its repository. A scientist involved with the Gates Foundation's Maternal, Newborn, and Child Health Programs explained this to me in 2017:

> The database that the Gates Foundation is creating will be available to anyone. You can get data from China, India, Guatemala, Brazil, Canada—for whatever study you want. It's not just height and weight. It's cognitive test scores, it's intestinal biome studies, it's blood biomarkers. The Gates Foundation is paying consultants from the pharmaceutical industry and other very high-powered mathematical modelers who work for the drug companies to analyze data on growth to find the best medicine to prevent stunting. That's where they'll make their big profits.

The scientist continued, connecting the push to file data to maternal health.

> The billionaire members of the foundation are taking all this information, and they're going to come up with specific interventions, like a vaccine. But the "vaccine" might not be injectable. It may be cash at a certain time, an educational program for pregnant women given at a certain time, a cell phone contact at a certain time. Because they're amassing data from thousands and thousands of studies—ultrasounds in Africa, weight for age scores in India, IQ tests in Guatemala—they're going to see when stunting really starts. Since stunting sometimes starts before birth, we're going to see which trimester is critical and which factors are most predictive of stunting even before birth.

The scientist emphasized that all the data that had been collected about people and their life circumstances would be entered into this super database. This database would be used to assess different health risk variables so we would finally know what he called the "true cause" of stunting and the best way to cure it. The project website states, "This will allow our collaborators to learn from all available data rather than gaining incomplete insights from partial datasets" (UN 2015). The scientist explained, "That's the advantage of putting it all together, digitizing it and then applying mathematical and statistical analysis."

Several years later, another scientist familiar with the study reflected that access to the so-called super database has remained highly restricted, inaccessible even to scientists who have contributed data. Optimism about what the calculations might someday achieve also stands in stark contrast to the general failure of existing interventions. Supplemental feeding programs carried out in Guatemala—and elsewhere—have not resulted in significantly improved growth. Several well-funded and long-term studies of lipid and vitamin supplementation in pregnancy and childhood have failed to achieve the expected reduction of stunting in children around the world (Dewey et al 2023; see also Goudet et al. 2019). "We cannot feed children taller," the biological anthropologist Michelle Lampl noted at the 2017 Nestlé Nutrition & Growth Symposium (Lampl 2017).

Yet we can see in the fantasy of the "billionaire members" of global health funding boards what this failure is actually achieving. Guatemalan poverty, which might be thought of as a problem of imperial exploitation, is here transformed into a problem of maternal environments to be solved, first by more data and then by an intervention into mothering such as a cell phone contact with a pregnant woman during a critical trimester to provide her education or an iron pill.

As I show next, the standardization of the human body seen in the global health focus on stunting recapitulates long-standing white supremacist and assimilationist ideas of biological fitness. The primary way to see deficiency is through biology; the primary avenue for its amelioration is to make everyone's body an optimal size; and the primary pathway for optimization is to intervene in maternal biology to improve the biology of future kin. This bio-logic justifies and upholds racist social

orders. It also transforms social problems into bio-logical problems, paving the way for solutions focused on the control of women's anatomy to be given the highest priority (see also Valdez 2021; Ross et al. 2023). When it comes to addressing poverty, questions of broader political transformation are all but set aside.

EUGENIC BIO-LOGICS

The research on microcephaly, cognitive growth, and stunting in Guatemala is part of a twenty-first-century wave of global health studies tracking children's head circumference, but head circumference measurement has a long American history. Growth curves, pioneered in Europe in the eighteenth century (Cole 2012), made their way to the Americas through the imperial science of natural history, described as "the exact description of everything" by the French statistician Georges-Louis Leclerc, Comte de Buffon (1707–88), who is credited with the first longitudinal study of human growth (cited in Pratt 1992, 34).

Buffon, while a proponent of abolition, is also known for his unabashed racism. He argued that American life was weaker, smaller, and feebler than life in Europe, using growth charts to show how American bodies had degenerated in comparison to European bodies (Dugatkin 2019). The literary theorist Mary Louise Pratt (1992) writes that subsequent natural historians who adopted Buffon's methods, such as Jean-Baptise Lamarck (1774–1829), thought of themselves as engaged in a project of discovery when they were instead engaged in an ideological project invested in presenting European sciences as authoritative and European people as more advanced than people elsewhere in the world.

Explorers in the Americas further developed an array of racist sciences of body measurement to justify slavery and overt imperialist domination of Latin America's Indigenous people (Stepan 1991; Lindee and Ventura Santos 2012; Few 2015). Phrenology entailed the observation and feel of skulls as a way of assessing a person's psychological attributes; craniometry measured the cranium's volume and was a subset of cephalometry, which calculated the volume of the entire head; physiognomy examined facial features and expressions; biometry was particularly concerned with facial angles.

European scientists used their various body-quantification practices to fabricate distinct typologies of people—they called these races—which they then used to demonstrate European racial superiority. The current tendency to call these measurement practices "pseudosciences" belies the fact that they were esteemed fields of scientific inquiry at the time—and that these older histories of anthropometry have given shape to sciences of body measurement and bone analysis held in high regard today (see also @MCHammer 2021).

"Statistics, as a lens through which scientists investigate real-world questions, has always been smudged by the fingerprints of the people holding the lens," writes the mathematician Aubrey Clayton (2020), who argues that regression

analyses and normal distributions are deeply intertwined with racist eugenics (see also Bogin 2020). Consider that in 1884, the most visited event at the London International Health Exhibit was Francis Galton's Anthropometric Laboratory, which popularized the use of anthropometric and psychometric data to quantify an individual's fitness. Yet what Galton branded as a tool for revealing innate worth can be better understood as a tool for asserting dominance. The progenitor of the idea that "nature" is in a battle with "nurture," he held that intelligence was a trait of nature and that the upper classes were naturally more intelligent than the poor (Galton 1865). Galton (1870) sounded alarms, incorrectly, that poor people had a higher birthrate than rich people, arguing that this would lead to the decline of genius.[3]

"Eugenics" was the term Galton (1883, 24) coined to describe the science of selective reproduction, which aimed to give "the more suitable races or strains of blood a better chance of prevailing speedily over the less suitable." In a chapter in his autobiography titled "Race Improvement," he argued that selective reproduction "is precisely the aim of Eugenics. Its first object is to check the birth-rate of the Unfit, instead of allowing them to come into being, though doomed in large numbers to perish prematurely. The second object is the improvement of the race by furthering the productivity of the Fit by early marriages and healthful rearing of their children" (Galton 1908, 323).

Galton was never able to devise an intelligence test that confirmed his theories of heredity: the poor did as well as the rich on his experiments, challenging his theory that poor people were intellectually inferior. But Galton blamed his test design rather than his theory, and his anthropometric laboratory continued to thrive. He produced an array of scientific instruments to assess mental and physical characteristics—for example, limb or foot length, neck sensitivity, breathing capacity, and head growth—all of which he used to rank people, particularly children, against their peers. "A comparison of the measures made from time to time will show whether the child maintains his former rank, or whether he is gaining on it or losing it," Galton wrote in his essay, "Why Do We Measure Mankind?" (1890, 237).

Galton's eugenic theories found especially fertile ground in the Americas. The sociologist and law professor Dorothy Roberts (1998, 60) notes that at the turn of the twentieth century, wealthy White American men were concerned that non-White immigrants were having more children than their wives. Many promoted the eugenic principle that intelligence and other personality traits were inherited in order to authorize reproductive control over poor, immigrant, and Black women (Roberts 1998, 59–60). The historian Laura Cházaro (2005) points out that American governments have long fixated on how manipulation of Indigenous women's anatomy can be a means of improving society. Drawing from archival work in nineteenth-century Mexico, she shows how theories of European racial superiority caused doctors to assume that Indigenous women had "pathologically

deformed pelves" that couldn't successfully birth babies without medical intervention (100). The result was an intricate science of measuring women's bodies (complete with protractors and scaled rulers inserted into the vagina) that justified ignoring the assistance of midwives and instead send birthing mothers to hospitals to be treated by men.

The field of US anthropology was born out of a related interest in the bio-logics of reproduction.[4] Franz Boas, the so-called father of US anthropology, obtained anthropometric data from 27,000 people around the turn of the twentieth century (Jantz 2003). A German-born Jewish US immigrant, Boas is widely credited for *critiquing* narratives of biological predetermination, such as Galton's claims that physiological measurements demonstrated the innate, biological superiority of London's White aristocracy. In the battle of nature versus nature that Galton had invented, Boas came down firmly on the side of nurture. Boas's statistical analysis of anthropometric data showed "slight but significant changes in physical traits such as head-form among descendants of immigrants" (Müller-Wille 2020). This finding underpinned anthropology's critique of racial typology (Boas 1911). Still popular in anthropology today, the critique holds that racial categories are not predetermined by human genetics but change on the basis of location and over time (Goodman et al. 2003; Gravlee 2009). As Boas wrote in 1912, "American born descendants of immigrants differ in type from their foreign-born parents. The changes which occur among various European types are not all in the same direction. They develop in early childhood and persist throughout life. . . . The influence of the American environment makes itself felt with increasing intensity, according to the time elapsed between the arrival of the mother and the birth of the child" (530).

While Boas's anthropology challenged the inherent superiority of the Anglo bloodline, it nonetheless helped legitimize the idea that meaningful knowledge about human worth lay in the physical measurement of the body—indeed, that anthropometry is a science that follows what Boas (1922) called "biological laws." "Anthropometric measurements do not, as a rule, follow the laws of chance" (1893, 572), he wrote, authorizing the use of anthropometry as a means of assessing environmental variation. He also highlighted early life conditions as setting the stage for adult biology: "We know that the bulk of the body of an adult depends to a certain extent upon the more or less favorable conditions under which the child grows up. It has been shown that malnutrition or pathological conditions of various kinds may re***d growth, and that the re***dation may be so considerable that it cannot be made up by continued growth" (1922, 188; elisions mine).[5]

US anthropologists working in Guatemala in the mid-twentieth century followed in Boas's footsteps in their measurement of Maya bodies. Charles Weer Goff, from Yale University, collected anthropometric data from sixty-one Mam-speaking men in Huehuetenango in 1948, comparing the bone structure of living Maya to skeletons unearthed at a sacred site as part of an archaeological project

run by the United Fruit Company. The anthropologist Richard Adams (2010) writes of social anthropologists working at INCAP who produced dozens of scientific papers based on anthropometric data they collected. INCAP's summary report from 1965 notes that the institute's scientists regularly collected seventeen anthropometric measures from people they studied, ultimately using five of these (height, weight, leg length, head circumference, and tricipital skinfold thickness) to determine nutritional status (INCAP 1971). To measure the head, researchers placed a flexible metal tape over the "frontal and occipital protuberances," looking to find the maximum circumference (the guide mentions that women's hair was a problem for this endeavor). To evaluate deviation from the norm, INCAP used reference standards from the United States. The report justifies this decision, saying, "A basic premise is that these standards are a mark toward which the Central American populations should strive as their environment improves and their genetic potential is fully attained" (INCAP 1971, 40).

Anthropologists at INCAP did not explicitly associate race with genetics, but they were nonetheless invested in looking at biological "types" (Boas's word). In their analysis, the environment conditioned biology, but locating difference in biology nonetheless racialized the populations being measured. The bio-logic at play had a clear eugenic underpinning: improving the environment would improve biology and help Central Americans attain their full potential—assessed against US norms. The environment they sought to change was not the racist environment of European supremacy that subordinated Maya people. Instead, the environment they targeted was that of reproduction, which the science of stunting increasingly equated to the environment of the womb.

CULTURES OF BIOLOGY

In 1965, as INCAP was lauding US biological standards, President Lyndon B. Johnson's labor secretary, Daniel Moynihan, famously released a document meant to support Johnson's recently launched War on Poverty. The Moynihan Report, as it became known, offered "cultural organization" as the reason that Black Americans suffered from poverty. Published on the heels of the passage of the Civil Rights Act, the report is today widely understood as an attempt to undermine political movements for racial justice happening at the time. It focused on kinship structures in the Black community as limiting their potential, not political oppression or racism (Greenbaum 2015).

The report spoke of cultural—not biological—inferiority, but it also focused on Black women's reproduction, offering heredity of culture as an explanation for how poverty is maintained over time. It argued that equality would be out of reach because of the matriarchal structure common among Black Americans, which resulted in welfare dependency among mothers. The report advocated for Black Americans to assimilate into a White, patriarchal culture, noting that "at the center

of the tangle of pathology is the weakness of the family structure" (Moynihan 1965, 30). It also argued that instead of receiving state welfare services, Black communities needed to contribute their labor to US corporations. Only efforts to support employment "can restore the strained bonds of family relationship in a way which promises the continued functioning of that family," Moynihan wrote (1965, 19).

Moynihan had been influenced by the anthropologist Oscar Lewis's (1966) "cultures of poverty" thesis, which argued that culture was to blame for poor people's poverty. Drawing from ethnographic fieldwork in Mexico, Lewis argued that behaviors adopted by poor Mexicans—for example, pathological family structure, social isolation, and behavioral traits (cf. Davis 2012)—created an environment from which poor children could not escape. This thesis has been widely critiqued in anthropology for misrepresenting poverty as an outcome of bad mind-sets. Yet it nonetheless has had pernicious persistence, as policy makers have frequently cited it to uphold the idea that poverty is caused by self-perpetuating moral deficiencies. Following in Boas's footsteps, Lewis's framing for poverty was explicitly focused on culture, not genetics. But his emphasis on the intergenerational transmission of poverty from parent to child nonetheless resonates with eugenic ideas of biological heritability.

In the decades following the introduction of the Moynihan Report and Lewis's cultures of poverty thesis, scientists have worked to shore up the links between poverty and heritability and between biology, culture, and fitness. Echoing Galton's concern for intelligence and race improvement, INCAP researchers developed and deployed cognitive tests alongside their anthropometric findings. They measured head size, frequently contrasting the circumference of Guatemalan skulls against US national standards. To also assess what researchers called "early intellectual ability," they gave children quizzes such as "picture vocabulary recognition," "memory for objects," "matching familiar figures," or "block design copying." Confirming what they suspected—what Galton could not show in his anthropometric laboratory—they found that "poorer children receive lower mental test scores than their peers" (Klein et al. 1977).

At first glance, concern for the correlation between nutrition and stunting may seem to be a departure from Galton's theories that intellect is predetermined by biology. After all, those who are concerned about stunting argue that poverty is caused by poor environments, not poor genetics. For no fault of their own, children receive bad nutrition in early life, trapping them in disadvantaged bodies forever. Yet this environmentalism was not the radical, antiracist break from Galton's predetermination that Boas claimed it was. In arguing "nurture" against Galton's "nature," Boas nonetheless ceded the terms of debate to a eugenic bio-logic that organized the worth of life through bodily fitness and ranked some kinds of people as more fit than others. The fault may not be children's, but it was often held to be the mother's. As the Kahnawake Mohawk anthropologist Audra Simpson (2018) notes, Boas's seemingly neutral, depoliticized, dispassionate, and

scientific approach to bodies and blood was also predicated on an assimilationist fantasy of the world in which Indigenous people naturally become absorbed into White culture and their political sovereignty simply disappears.

Stunting discourse in Guatemala likewise returns us squarely to the realm of Galton's eugenics by advancing the deeply troubling belief that Indigenous bodies are biologically inferior. The promise—the trick—of the indicator of stunting is that every body has the same potential, but that potential is still measured in relation to White European values of fitness and worth.

SMALL BUT HEALTHY?

The global health community has coalesced in agreement that growth standards can be "applied to all children everywhere," but near the end of the twentieth century this was thoroughly contested. In the 1980s, the economist David Seckler (1984) proposed the "Small but Healthy" hypothesis to heated debate. On Seckler's side were biological relativists who argued that it was completely possible to be short and healthy and that the preference for being tall was a colonial value. Short people are not impaired, they held. If anything, their small size is a positive adaptive response to adverse conditions. On the other side were biological universalists who saw being short as harmful. Numerous studies had linked stunting to impaired disease resistance, reproductive challenges, and decreased work capacity and cognitive performance. The argument of the universalists was that stunting was a product of social and environmental inequality, and the very claim of relativism held this inequality in place.

The debate between biological relativists and universalists seemed to be a debate about biological theory, but it was also the case that development aid was at stake in the argument. As Gretel Pelto (1989, 11), a US nutrition scientist (with a PhD in anthropology) who worked for many years in Guatemala, explained, if shortness was not a biological disadvantage, hamstrung food aid budgets could be further reduced: "Humanitarian people can give a sigh of relief that hundreds of millions of people formerly thought to be suffering and in need of help are actually 'healthy' after all." Reynaldo Martorell, a lead scientist in INCAP's Human Capital study, discussed extensively in the next chapter, came down clearly on the side that small stature is *not* healthy. He observed that growth monitoring of children was an excellent tool for identifying health problems and interventions. "To acclaim small body size as a desirable attribute for populations is also to affirm that its causes are desirable," he wrote in an effort to highlight how dangerous it would be to leave the causes of stunting unchecked (Martorell 1989).

The centuries-old interest in reproduction and fitness hangs over the debate. A key worry among nutrition scientists is that it is not just an individual who is affected by stunting but their progeny as well. Barry Bogin explained this at a 2017 lecture in Guatemala: "The Maya are not short for genetic reasons because when

we measure them in the United States they're much taller, and they get taller in less than one generation" (Bogin 2017).

Bogin is a physical anthropologist from the US with a specialty in human development who has worked in Guatemala for decades. In the mid-1970s, he held a visiting position at the Universidad del Valle, where he studied bone growth rates among rich and poor Guatemala City schoolchildren (Bogin 1978; Bogin and MacVean 1978). In the 1990s, he began measuring the growth of Maya immigrants in Indiantown, Florida, comparing these measurements against height data of Maya people in Central America. Analysis of his height surveys suggests that Maya children who grow up in the US are much taller than Maya children raised in Central America. At the lecture he explained:

> They're still not tall—they're still only about 30th percentile. They're still, you know, shorter by one-third compared to European Americans and African Americans. But they're much bigger than in Guatemala and I think it'll take another two or three generations to get up to about the 50th percentile. That's what happened with Mexican Americans, after four generations they're getting up to the 50th percentile.

When I asked him after his lecture why it took many generations, he clarified this in terms of reproductive disadvantage.

> If you are a girl growing up malnourished it's not just affecting your height—your skeleton. You also have reduced muscle mass, you have a smaller brain, and you have a smaller reproductive system, and that reproductive system may not work as efficiently, so when you develop a placenta it doesn't work as efficiently. When you grow up, the baby you eventually carry—well, you have less body reserves to turn that muscle into protein for the baby, to turn the fat into energy, to turn the bone into calcium for the baby's own growth, and your uterus and placenta are not working as efficiently. The baby you carry is already disadvantaged, so the baby's reproductive system is therefore affected.

Inheritance, as depicted here, is not coded in the genes but is shaped by other biological attributes of reproductive women, including skeleton, brain, uterus, and placenta. The maternal environment centers on biological reserves, understood as the key to the development of the future. Disadvantages in pregnancy give rise to embodied disadvantages for the developing fetus (frequently called a baby or child), creating a nongenetic but nonetheless biological mechanism for the cycle of malnutrition to persist through generations. USAID's "Guatemala: Nutrition Profile 2017–2022" (2018) explains, "Maternal short stature, which is a determinant of childhood stunting, is also a significant problem; nationally, 25 percent of women are shorter than 145 centimeters, and this prevalence rises to 37 percent among indigenous women."

Stunting seems to rest on environments: bodies, flexible and adaptable, can be shaped by their surroundings. Yet the focus on how inequality is reproduced

across generations—maternal disadvantages passed from mother to baby and beyond—revives Galton's ghost. Theories of bio-logical development that fix inequality within the maternal environment have the potential to reinforce inequality outside this environment as well.

THE STIGMA OF STUNTING

Critics of the Small but Healthy hypothesis were adamant that global health experts pay attention to the humanitarian consequences of circulating the idea that small bodies are healthy, an idea that would authorize the defunding of food aid. Following their lead, so must we pay attention to the social consequences of linking poor maternal health with the condition of being small. As the Guatemalan nutrition researcher Rosario García Meza (2020) has argued, metrics have "social lives," and attending to these should be a crucial part of public health practice.

The epidemiological measure of stunting was designed to compare human growth across populations, not as a diagnostic tool for individual patients. But the clinics in San Juan Ostuncalco have taken this logic up anyway. Height, which is quick and cheap to evaluate, has become a proxy for "health" for clinicians and development workers alike. It can be known with nothing but a measuring tape, or a measuring table in the case of babies. Today individual children are evaluated against global growth standards. If they are two standard deviations below the median size for their age, they are given the diagnosis "stunted." San Juan women arrive at health clinics with their children's growth cards carefully folded in the breast pockets of their handwoven huipiles. They present these cards to attending nurses or educators on entering the consultation room, and one of the first things clinicians do is measure the children's height. They then spend much of the limited time they have with mothers discussing their children's size.

Head circumference has also become important in clinical evaluations. "Serial measurement of head circumference should be incorporated into routine well-child care," policy makers advocate, arguing that it is a cheap, quick, and non-invasive means of tracking intellectual delays and common neurological disorders (Harris 2015, 680). When my long, fat, four-year-old who was exploding off the growth charts became feverish on a trip to Guatemala and I took him to a city health clinic, the first thing we did at the consultation was measure his head size. "Standard practice," the nurse replied, when I asked her why this would be relevant for a fever.

Health workers record anthropometry on the child's growth chart, and if the line is faltering—which it often is—they give mothers a quick lecture on the need to feed their children better so they grow. Though the clinics serve a predominantly Indigenous population, nurses and educators are rarely Indigenous. Their lectures typically repeat formulaic talking points in the language of Spanish bureaucracy: *Your child is too small—this is not good for him. He needs to eat better. Here is a*

recipe for pancakes. You can make it with the powdered formula that we're giving you. Just sneak some formula into the mix.

Mothers were usually quiet in response. They looked at the floor, trying to avoid attention. Because the image of subservient Indigenous women is an ugly stereotype in Guatemala, I hasten to add that the mothers are not generally quiet women. In their homes they are sometimes boisterous and full of laughter and sometimes pensive, busy getting things done. But in the exchanges with care attendants I observed, mothers only very rarely spoke, and when they did, it was to nod in agreement. As I explore in chapter 5, historically, health workers have removed many Maya children from their families under the pretense of unfit parenting, raising the stakes of a seemingly simple health consultation.

I attempted to talk about the public health interest in the head size of infants with numerous midwives, including those who attended home births in the San Juan communities. They were usually willing to speak with me about the topic, though they never had much to say. Even though they had a rich vocabulary of numeracy with which to talk about the dilation of the cervix or the length of time of gestation, it was clear they did not find the subject of infant head circumference important, and they could not tell me about what their patients thought about it.

Mothers themselves had absolutely no interest in conversing with me about head size. I learned early on from María García Maldonado, a Maya-Mam lawyer who frequently accompanied me as a translator when I did home visits with women from the San Juan communities, not to raise the subject of anthropometry. On occasions when I asked Maria if she would broach the question of what mothers thought of growth monitoring instruments—charts, length boards, and head circumference tapes—she would silence my curiosity with an instructive but decisive shake of her head. The message was clear: there was no polite way to discuss anthropometry.

The reason for the silence around the topic had nothing to do with a general discomfort with measurements. After all, the women in San Juan were expert weavers, who could easily handle the minute calculations necessary for intricate tapestries. With many of the men in the community gone in search of employment, they often handled the bulk of their household finances. The problem was not with metrics in general but with what was being measured and how these measurements were collected in a context of long-standing and objectifying fascination with the bodies of Indigenous women and children.

Other researchers in Guatemala, including Solomons, have hypothesized that women may rejoice when their babies are small, their preferences running counter to the public health dogma that a bigger baby is a healthier baby. "The worst way you can die in agony is in obstructed labor," Solomons argued during a weekly seminar at his center, adding, "It's better to have a small baby if you're smaller, despite the consequences to the baby, than to have a big baby if you're small. Then you lose two people." He searched for a way to explain that having a big baby—the

goal of much supplemental nutrition—too often resulted in the dangerous dis-synchrony of needing to birth a large head through a small pelvis. His broader point was that instead of focusing on big or small babies, the field of public health should aim for an intergenerational congruence between mother and child.

Yet this narrative, even as it challenges conventional wisdom in public health nutrition, is still bio-logical. It might not be that babies with large heads are inherently a problem for childbirth. Instead the problem of death in childbirth may rather lie in policies that have made midwifery a stigmatized and dangerous occupation, leaving women in Indigenous communities to birth alone. One midwife in San Juan told me proudly that in her twenty years of practice she had never lost a mother, but she also knew her skills were rare. The most recent national census (2014–15) reported that 35 percent of births in Guatemala took place without a skilled birth attendant. This was not an accident. The anthropologists Nicole Berry (2010) and Sheila Cosminsky (2016) show in their work studying the WHO's Safe Motherhood Initiative in Guatemala how this initiative systemically devalued the knowledge of Guatemalan midwives, making communities reliant on medical birth settings and the commercialized health sector—often with harmful effects.

Whereas midwives were not very interested in head size, they were interested in talking about how to improve reproductive autonomy. A Maya-Mam midwife I interviewed in Guatemala City told me that the best health intervention she had undertaken in the course of her practice was to bring fathers into the birthing room. She said that when men saw the pain and intensity of labor firsthand, they would become more likely to let their partners have control over birth spacing and allow them the contraception this entailed. But changes like this, *because* of how they can benefit women's lives and challenge patriarchal norms, are a challenge to institute in policy. Instead we have policies that tend to tell women to eat better.

THE PROBLEM OF STIGMA

At a meeting with Gates Foundation researchers in Guatemala City, Dr. Solomons raised his hand to ask what they planned to do about the fact that stunting is a normative word and that carrying out research on stunting risks stigmatizing an entire society. "The problem is not in being small. What made you small is the problem, but that message is hard to parse and deliver," he clarified.

He nodded toward me: "I think Emily, along with other people here in the room, is very sensitive to stigmatizing, and very conflicted about how to create a public health message around stunting. If you're going to be open about your research results, you should anticipate how they will be interpreted in many ways—for political reasons among others."

As I explore in the next chapter, Indigenous Guatemalans are often socially marginalized for being short. The anthropologist and physician Gideon Lasco

(2023) has described how racially encoded ideas about the superiority of being tall have reinforced the belief that "height matters," the title of his recent book. He draws on ethnographic fieldwork in the Philippines, where much as in Guatemala it is easier to secure a job, participate in the military, or advance in sports if one is tall. He illustrates how teenagers, who are conditioned by colonial sciences to see height as desirable, desperately want to be a few inches taller. His research reveals the tragic consequences of what he calls "the science of stature," including the ingestion of harmful growth enhancement supplements and other attempts at height manipulation among the country's youth. Maya Guatemalans who are short are likewise denied employment opportunities, limited in schooling opportunities, and called names when moving through urban, non-Indigenous spaces. Many non-Indigenous Guatemalans equated being short with being inferior.

Recognizing the possibilities for stigma, some public health workers reject the term "stunting" as derogatory and harmful (e.g., Cannon 2005). In trying to treat the problem of stunting, they argue, the problem of stigma will cause this so-called treatment pathway to make people's lives worse. Solomons held out hope that a better understanding of the physiological mechanisms of stunting might "help to protect life and restore health." But he also thought it would be necessary to "destigmatize the problem" in order to get a handle on it. "Those who have the power to define abnormality have the power to create discrimination," he warned his audience, making it clear that they would have to play an active role.

Solomons, for one, has recently been a vocal critic of the idea that head size maps onto cognition. As I explore in the next chapter, the correlation between head size, neural density, and intelligence has become a World Bank talking point. In briefings and brochures about the dangers of stunting, experts circulate images of brains that have "stunted" neural networks alongside images of hungry children. Solomons objected to this correlation, teaching his research staff that these images were typically based on bad science, driven by stereotypes and lazy conclusions that would not be upheld in the court of peer review.

When reviewing the materials in this chapter, Solomons lamented how the diagnosis of microcephaly collapsed the dangerous medical condition of having severe neurological damage and the frequently benign condition of having a small head. Heads can be small with absolutely no impact on cognition, he pointed out. Research carried out by scientists from his center also suggests that head circumference is one of the most protected aspects of growth. As a result, high rates of food scarcity in Guatemala may affect stature but have little to no effect on eventual head size—and nothing to do with intelligence (Maldonado et al. 2017; see also Pomeroy et al. 2012).

Since the initial report of microcephaly among babies in San Juan, the scientist running the Maya-Mam study has become skeptical of using stunting as an indicator of human potential. Her team now speculates that babies' heads might

be smaller than average at birth, not because of slow growth rates, but because of dangerously high rates of premature birth in the region. Perhaps what appeared as an epidemic level of microcephaly would self-correct as children grew older. Accordingly, rather than focus on a baby's length, attention should be directed to the widespread trauma and discrimination that pregnant women in the region experience, which is known to result in early labor and delivery (Chomat et al. 2018).[6] In a conversation a few years after her study was published, she expressed hesitancy about collecting data on head size: "Taken on its own the measurement means so little—yet holds such great potential for negative interpretation and stigma."

Having worked in the San Juan region for more than a decade and having gained a deep understanding of the needs of the communities, she has redirected her energy away from the collection of anthropometrics, instead using participatory methods that lift up women's own stories. During the COVID-19 pandemic, she partnered with a group of women to publish a trilingual book with a therapeutic purpose: it offers women a platform to express themselves to a broad audience while doubling as a pandemic-era fund-raiser (it is available by donation at https://buenasemilla.gumroad.com/). An entry from a participant named Julie Lopez includes the carefully drawn image of an eagle, attesting, "I am a hardworking, intelligent and brave woman. I have gone through difficult situations in my life, but I have faced them with courage and I am happy because I have my family with me. I identify myself as an eagle because I fight every day."

Lopez's quote reflects how the stories women offer do not frame their bodies through narratives of lack, deficiency, or personal pathology. They offer their readers a bio-logic—an understanding of how life works—that runs counter to the shaming of mothers for having small children that we saw in the health clinic or the narrative of weakness promoted by global health experts. Instead, the social hardships they have endured have made them strong.

CONCLUSION: OTHER HISTORIAS OF POVERTY

Many public health practitioners deploy the metric of stunting to name how poor environments come to shape human biology in uneven and unfair ways. They offer poverty, which manifests in inferior and unhealthy bone formation, as an explanation for why the global health community should pay attention to how children are growing—or not. In this line of reasoning, anthropometric analyses can offer concrete, actionable evidence for how disparities in resources structure children's future possibilities and potentials: the simplicity of stunting's metrics can be leveraged to make people in power pay attention to how poverty takes root in biology that they might not otherwise see and that they might be in a position to act against.

And yet wrapped in these simple-seeming metrics are living histories of phrenology, fitness, and IQ—all of which perpetuate racist, gender-based violence

against Indigenous and poor people in Guatemala in the name of doing good. This chapter has worked to demonstrate how bio-logics of poverty operate as what Dána-Ain Davis (2019, 32) has called an "adjunct of racial science," proving the existence of racial categories in order to shore up racial hierarchies. I conclude with the suggestion that instead of focusing on impoverished biologies, medical and academic communities should use their power to work against the structures that willfully and knowingly produce poverty—that benefit from it and do not want it to end.

The "small but healthy" hypothesis from the 1980s has been refuted as harmful relativism. Without reviving it, we must also consider that Maya-Mam women suffer less from a short stature than from the discrimination they face—for their size, for their shape, for their bodies, for their active refusal to conform to Guatemalan standards, including language and clothing as well as physiology. Maternal nutrition projects may seem to be designed to improve life conditions and alleviate poverty among Indigenous women. But they are operating within a political and social system that harms women for their successes. Guatemala remains a country where racism is rampant, and many people with political or economic power do not want to see women thrive (Cabnal 2010; Casaús Arzú 1998).

The global health community is currently legitimizing scientific and medical interest in the size of heads—naturalizing correlations between height, head circumference, and cognition (Koshy et al. 2021). This chapter, however, has pushed back against the discriminatory bio-logics of poverty in which a high percentage of babies in mostly poor and Indigenous communities are thought to be born less intelligent and less fit than others. The sociologist Tressie McMillan Cottom (2018, 27) reminds us, "Smart is only a construct of correspondence between one's abilities, one's environment, and one's moment in history. I am smart in the right way, in the right time, on the right end of globalization."

In the current "narrative healing" project that the maternal health scientist working in San Juan has begun to organize, one of the participants from San Juan, Teresa Ortega, tells her audience, "Hello my sisters, I am going to tell you my story: when I was little I liked to study a lot, when I went to school what I liked most of all was mathematics. . . . My dream was to be a teacher, but when I became an orphan, it was no longer possible." Likewise, after Claudia Gómez González crossed into the United States, the explanation that her mother offered to the press for her migration focused on the difficulty she had faced cultivating her passions and intellect. She had loved mathematics, but there was no possibility of continuing her studies at home. The shortcomings these Maya-Mam women faced were not in their bodies or brains but in systems of governance that treated them as defective and disposable. As I examine in the chapter that follows, Claudia's death was an outcome of scientific histories and policy decisions that hurt her community while claiming to care about her intelligence, the food she eats, and her height.

A truth of science is that measurements do not simply report, but shape the worlds they measure. Another truth is that we can intervene in the stories told by measurements by telling other historias. One historia that might be told about poverty in highland Guatemala is that the futures of Indigenous children are foreclosed by a systematic defunding of schools that forces students into classrooms without teachers or supplies even as they are also told that this is the quintessential space for learning and that their own knowledges and forms of education are backward and wrong.

Or we might tell an historia about poverty that focuses on a genocide against Maya people that has actively persecuted and murdered midwives, who are routinely the most outspoken and powerful women in their communities. With their disappearance, we have also lost the knowledge of how to bring babies safely into this earth and to care for their mothers afterward. Global health scientists measuring the size of a woman's pelvis or the size of a baby's health may think they are helping. But the attention focused on anthropometrics serves to distract from the structures of power that want women to be harmed—indeed, that maintain their power by harming women.

In the remaining chapters of the book I turn our attention to these structures, considering how food and nutrition scientists and policy makers have been instrumental in upending claims to land reform, Indigenous sovereignty, women's bodily autonomy, and border reform. The K'iche' anthropologist Irma Alicia Velásquez Nimatuj (2019) reminds us that stories about poverty in Guatemalan communities are also stories of stolen wealth. These stories have everything to do with the violence of colonialism and capitalism, and this violence was historically bolstered—not prevented—by the science of measuring bodies and heads.

This chapter has shown that scientific racism is not only something in history books; the past has not passed, as the saying goes. In fact, the week before Claudia Gómez González was murdered, the investigative journalist Aura Bogado (2018) reported that the US government was keeping alive the science of phrenology. The Department of Homeland Security had been making bone scans to determine the "true" age of immigrant children, using the results as evidence that the children were older than they reported—and as justification for holding them in adult detention centers.

An attorney contesting US Immigration and Customs Enforcement's (ICE's) procedures called this "pseudoscience," and Bogado cited numerous scientists who pointed out that the bone growth reference norms used by ICE were drawn from ethnically homogeneous populations who did not fit the profile of the immigrants. These scientific objections to ICE's use of phrenology, however, mattered little to the child who "was taken from his foster family in handcuffs" and held in a detention center for nearly six months (Bogado 2018). Here the "biological laws" of growth and development that Boas once referenced were established by the fraught political negotiations of the US legal system—not by the so-called nature of biology.

The focus that the public health community places on the damage that stunting will have on the future allows the harmful bio-logics of the past to live on in the present. These bio-logics may promise to be a key to ending poverty, but they often further discrimination, materializing exactly those outcomes they claim to work against. To acknowledge and attend to these bio-logics is to work against the racism in biology that is still with us today.

3

Proxy

THE ECONOMIZATION OF FUTURE LIFE

In 1969, teams of scientists affiliated with the Guatemala City–based Institute of Nutrition of Central America and Panama arrived in four small communities in the eastern part of Guatemala. The scientists were there to initiate a randomized feeding trial, today celebrated as the longest running cohort study carried out from birth in a developing country (Ramírez-Zea and Mazariegos 2020). They had surveyed three hundred communities before deciding on Espíritu Santo and Aldea San Juan,[1] with roughly 500 inhabitants each, and Santo Domingo and Conacaste, with roughly 900 inhabitants each. The four communities were small enough and dense enough that their residents could be easily surveyed and tracked (Maluccio et al. 2005). The scientists had chosen Spanish-speaking communities, in large part because it was rare for INCAP's scientists to speak Indigenous languages. The communities were categorized as rural, but they were located in a department adjacent to Guatemala City so researchers could travel there with relative ease.

The scientists set up a centralized feeding station in each community, operating it in the midmorning and again at midafternoon. The proverbial flip of a coin determined that residents of Conacaste and Aldea San Juan received atole, a protein-rich supplement prepared with sugar and skim milk, designed to mimic a traditional and popular corn-based drink. Residents of Espíritu Santo and Santo Domingo received fresco, a sugary fruit-flavored drink with added vitamins and minerals. For nearly a decade, the scientists would pre-pour these beverages twice a day (Stein et al. 2008). The scientists would refill people's cups as often as desired, taking care to record the exact amount of supplement consumed or discarded. They fed everyone

who showed up, but they focused on pregnant and nursing women and children under seven, and only monitored what this segment of the community drank.

Fifty years later, scientists continued to monitor the babies from the study, who were forty-two to fifty-seven years old when I carried out my fieldwork from 2015 to 2017. A founding principle of the research was that the comparison between atole and fresco feeding stations—which soon became equated in their publications with good or poor nutrition—would provide actionable knowledge that could be used to better people's lives. As one retrospective explained:

> The rigor with which the INCAP study was implemented has generated strong and consistent evidence to support the need to invest in nutrition, health, and child care during the first 1000 days of life (from conception to 2 years) to achieve better childhood development, well-being, and human capital later in life. In addition, we are sure that there will be more follow-ups in the future, which will continue to provide invaluable knowledge to understand, prevent, and treat most prevalent nutritional problems globally and their consequences on health, and even for the resolution of emerging nutritional problems. (Ramírez-Zea and Mazariegos 2020, S5)

A US-born researcher involved in the early days of the study told me that the researchers knew what they would find before beginning their research. Veterinarian science had long shown that feeding enhances mammalian growth. In the decades leading up to the feeding trial, the nutrition community had become concerned with how protein deficiency in children led to an illness called Kwashiorkor, described by the WHO in the 1950s as "the most serious and widespread nutritional disorder known to medical and nutritional science" (cited in McLaren 1974, 93). The scientists expected that the children of the pregnant and nursing women who consumed the protein supplement would, much like livestock, grow bigger and stronger relative to the children who drank fresco.

Patrice Engle, a developmental psychologist who worked for INCAP for many years, explained to me in 2009 that the study's origin lay in the progressive optimism that followed the launch of President Johnson's War on Poverty. In Johnson's (1964) words, the War on Poverty sought "not only to relieve the symptom of poverty, but to cure it and, above all, to prevent it." While the War on Poverty has since been critiqued for its racist foundations (see chapter 2), Engle drew attention to the successful expansion of progressive programs during the Johnson administration. "Remember that this was the time when Head Start was founded," Engle reminded me.

Indeed, the Civil Rights Act had just become law, and movements were under way across the US to support children and their families through low-cost childcare. Head Start's stated mission was to break the "cycle of poverty" by offering comprehensive programs to address children's varied and diverse emotional, social, health, nutritional, and psychological needs (HHS 2018). By carrying out the feeding trial, the scientists hoped to provide evidence to bolster funding for

programs such as Head Start that supported low-income school meal programs and childhood education programs more broadly. The potential of this knowledge to benefit children was ostensibly why the US government's newly established National Institute of Child Health and Development had funded the study.

After 1977, when the feeding stations were removed, scientists analyzed the impact the study had on the bodies of roughly twenty-five hundred children, finding that those fed the atole drink grew taller than those drinking fresco, with the largest gains seen among the youngest participants (Ramírez-Zea et al. 2010). Specifically, babies from the protein villages who were in utero or under one year of age when they began to receive the supplement grew the longest relative to their fresco-village counterparts. Those who began the protein supplement between one and two years of age grew about half as much as the younger cohort. And those who began the protein supplement between two and three years of age saw even less of a relative change in growth. Scientists reported no impact in height differentials between the protein and fresco communities if they offered twice-daily supplemental nutrition after three years of age (Schroeder et al. 1995).

Today it seems self-evident that eating well in pregnancy helps produce children who are healthy, wealthy, and wise. Yet this idea is neither universal nor innocent. The historian M. Murphy (2017) points to how state planners turned biology into an economic project in the twentieth century—a trend Murphy refers to as "the economization of life." The Guatemala feeding station research both exemplifies and extends what Murphy describes as an "explosion of techniques for experimental governance" that sought to control reproduction for the sake of economic prosperity (9). As epidemiologists and biostatisticians transformed pregnancy into calculations of potential human capital to be increased or diminished, we see not only the economization of life but the economization of *future life*.

The photos of researchers measuring children's heads that still hang in INCAP's halls fifty years on speak to an enduring principle of the study: anthropometric growth can serve as an indicator of human fitness and economic potential. The prevailing common sense that was both absorbed into and furthered by the feeding experiment was that eating better will create taller, smarter children—and, with this, a better world. Data scientists have worked hard to naturalize the idea that pregnant bodies can be measured and optimized for eventual financial gain. But by following the feeding trial's history—unpacking the swaps and substitutions in scientific practice that helped this knowledge become taken as truth—we can see something else. We can see a situation in which scientists are producing the registers of economic value that they purport to merely describe.

Proxy, as it is used in the English language, implies both proximity and substitution. The word holds within it manifold practices of representation, from political representation (giving voice) to scientific representation (giving truth). In proxy politics, if you cannot vote yourself you can send a replacement (the vote still counts). In computational science, a proxy server allows for re-presentation to happen—data

FIGURE 7. A photograph featuring a young girl having her head measured hangs on a wall at INCAP. Photo by author, 2016.

is made present again—with the effect of directing the flow of knowledge one way or another. In experimental science, if you cannot measure a thing directly you can measure something taken to be representative of that thing. The use of proxies is standard practice in science, but the proxy is also a trickster: it connotes both an act of representation and an authority to represent. It is a thing that stands in for something it is not but in doing so becomes it. In other words, proxies allow for a legitimate doubling of reality: a proxy is, and isn't, the thing that it is proxy for.

Proxies are also central to the exploitation of workers that happens in capitalist economies. In *Capital Volume 1* (1992), Marx argued that the production of capital required the invention of a scale of equivalence that facilitates the comparison of unlike things. The entire system of capitalism rested on proxy substitutions in which objects with different values are treated as if they are the same. In one of the book's most famous scenes he takes readers into the factory, past signs that warn "no admittance except on business," into the realm of the money owner (280). Here he reveals the secret of capital: laborers are paid less for their work than it is worth. It is this sleight of hand that allows the capitalist to accrue a profit. What appears as an equivalence of labor for wages—what sets the system of capitalism in motion—is a lie and a theft.

In capitalist economies, money does the work of hiding the history of the labor, allowing consumers to purchase goods from capitalists in what seems to be an even trade. Yet Marx is clear that this history has not disappeared. The false equivalence remains congealed in commodity goods, which exacerbate inequality by creating a class of capitalists who control the means of production and a class of laborers who are exploited for profit.[2] The monetary exchange between consumer and capitalist is not a fair exchange, but it seems to be fair because of how money presents an equivalence—a proxy—that conceals the exploitation. It is this appearance of justice as exploitation is happening that keeps the system of capitalism running.

Marx offers his readers a method for understanding the power of capitalism: trace the histories of production in commodity objects to expose the theft of labor in capitalist exchange. If exploitation is enabled by those locked, no-admittance-except-on-business doors it can be challenged by throwing open these doors to make histories of production knowable and then acting on this knowledge. What Marx suggests we do for commodity production we can do for knowledge production as well: we can trace the pathways of scientific practice to reveal how value-laden, interested actions become stabilized as "scientific truth" and then illustrate the effects that this stabilization has on the world. The method Marx offers for the study of capital is to focus on the sleight of hand that happens in commodity exchange to show how two apparently equal objects are, in fact, different. This is a method that can also be applied to the study of science: How and when are variables swapped in and out for one another? What happens as a result of these swaps?

In the case of maternal health research, the seemingly small swaps of scientific practice become a potent site for understanding how specific cultural values become a part of science, all the while claiming to be value-neutral. As I show in this book, the equation between eating good food and intellectual potential has powerful benefits for the political and economic interests of an elite, American, ruling class. Slowing down these substitutions can offer insight into who and what is replaced, erased, or hidden. Because power congeals at the site of the proxy, studying proxies can help illuminate both how power reproduces itself and how this reproduction can be challenged and transformed.

A reason that I apply Marx's method of studying capital to my analysis of the feeding trial is that INCAP scientists were themselves mobilizing the term "capital" in their work. They argued that the knowledge gained from the study would help produce and enhance what they call "human capital." To describe this, they reference Adam Smith's (1909) observations that man, "in the same light as a machine," works better when he is well fed and in good health. Smith, an eighteenth-century political economist widely held as the father of economics, described human capital as "embodied monetary value." Along with useful machines, profitable buildings, and improvements to the land, strengthening human capital would be a way of increasing wealth. For Smith, human capital consisted of a person's talents and skills that improved their productive capacity (389–90). Though it

FIGURE 8. A woman is softening maize to make into a thick atole porridge that she will serve to her family. Photo by author, 2015.

required financial investment, these talents and skills ultimately result in a profit. The INCAP scientists working on the feeding trial noted that Smith would not be surprised by the "strong evidence of a positive relationship between maternal nutrition and the future wages and productivity of children" (Martorell et al. 2005, S6). It was not only veterinarians who knew that the INCAP study would yield more productive bodies; free market economists also would have predicted that early life nutrition would help *capitalize* on future outcomes.

Except that the foundation of the four-village study has since crumbled.

INCAP's scientists had held that because Guatemalan women and children were generally deficient in protein, feeding them protein would improve their lives. Over and over in their analysis and reports they swap "atole"—the name they used for their high-protein supplement—for "better nutrition." Yet the idea of widespread, fundamental protein malnutrition on which all subsequent findings have rested was false. It is now widely agreed that Guatemalans were, by and large, never deficient in protein and that Kwashiorkor was rare in Guatemala. In the years since INCAP launched its study, the nutrition science community has reached near-consensus that protein deficiency was an overblown problem (Waterlow 1972; Carpenter 1994; but see Semba 2016).

Proxies move the conversation about malnutrition from a warm, filling atole made from Guatemalan maize that is at the foundation of community sociality to protein to better nutrition to healthier pregnancies to bigger children to more

intelligent and more productive people. In these proxy movements it can become easy to lose sight of all that is covered up and all that is lost. Yet by looking at the act of making one variable a proxy for another, a different aspect of the study becomes visible: malnutrition was not only discovered and treated, but fabricated and imposed.

FROM ORIENTALISM TO FUTURE PROFITS

Scientists working in the 1960s named the feeding trial the "Oriente Study" because it was carried out in Guatemala's east, where it is flat and hot and plantation labor was (and still is) common. The social theorist Edward Said (1979) wasn't writing about Guatemala when he developed his theory of Orientalism, describing how Euro-American sciences essentialized "the East" by depicting people from this geographic region as static and undeveloped. Still, I can't help but think of his work when the feeding trial researchers speak of their early expeditions in which vans full of North American experts—nearly all of whom were men—arrived to monitor and measure the bodies of women and their children based on what was "already known" from research on animals.

In their reports, INCAP scientists describe poor Guatemalan communities as "persisting almost unchanged" for hundreds of years (Solien de González and Béhar 1966). They routinely characterize women and children from these communities as suffering from a widespread and debilitating deficiency in protein that slows their physical and cognitive growth. In 1965, Nevin Scrimshaw and Moisés Béhar, the first and second directors of INCAP, published an article in the *New England Journal of Medicine* identifying protein-calorie malnutrition in Guatemala as a widespread public health problem. They wrote, "It contributes to high mortality in areas where it is prevalent and is responsible for adverse effects upon the health and general well-being for a large sector of the population" (Scrimshaw and Béhar 1965, 138).

In 1967, Scrimshaw again emphasized how malnutrition stunted growth in "underdeveloped" countries. In an article for the *American Journal of Clinical Nutrition*, he wrote:

> For the great majority of children in the technically underdeveloped countries of the world, r****dation in physical growth and development due to malnutrition and its interaction with infection is a fact of existence.[3] This is visible in the almost universally smaller body size of underprivileged populations, regardless of their genetic background. Early malnutrition which stunts growth has also clearly and repeatedly been shown in experimental animals to reduce subsequent learning ability, memory, and behavior. To the extent that this is true for young children as well, the generations on whom social and economic progress will depend in the remainder of this century are being maimed now in body frame, in nervous system, and in mind." (1967, 493)

In the next paragraph he emphasized the importance of the early life period for development: “In the rat, 80% of the brain growth occurs by 4 weeks of age and in the pig by 8–10 weeks of age” (493). Making an implicit plea for the INCAP study that would begin less than two years later, Scrimshaw concludes his article: “The future of the developing countries depends upon improving the knowledge and technological competence of their peoples. Investment in other aspects of development, including schools and teachers, will be reduced in value if the generations of the future are being damaged now in mind and body. The data already at hand suggests that this is occurring” (500).

In the previous chapter we saw how racialized bio-logics of human development have shaped maternal health policy in Guatemala. In this chapter we can see the Guatemalan history of these bio-logics, as well as how these ideas of the body and its reproduction are founded on slippery proxy substitutions. Guatemalans were Othered, in Said’s terms, by being presented as exotic, frozen in time, and almost entirely malnourished. But, perhaps counterintuitively, they were also Othered because of how they were treated as models onto which scientists could map and decipher general principles of mammalian growth and development, as seen in the slippage between their bodies and those of rats and pigs. They were different *and* they were also universal. Specific women—poor Guatemalan women—were asked to stand in as a proxy for a generic reproductive woman. Charting a participant’s physiological development during and after the feeding trial was intended to have policy implications for pregnancy and nursing far beyond Guatemala.

Nutrition and psychology were both young fields when the trial was being designed. They had not yet calcified as separate domains of science, and from its beginning, the study connected nutrition and psychology by establishing the epidemiological relation between eating and intelligence.[4] A decade after the feeding stations were removed, INCAP scientists tracked down roughly fifteen hundred children who had been fed from their feeding stations in infancy. They ran the children through a series of nonverbal intelligence tests known as Raven Progressive Matrices. They selected the Raven tests because they relied not on speech but on the assessment of visual patterns, which became more complex over the duration of the test. One research team wrote that the Raven tests were used because they measured “educative ability,” citing the capacity to see patterns and relations in complex and confusing data as indicative of natural fitness for schooling (Maluccio et al. 2006). When analyzing the results of the Raven tests years after the supplemental feeding had ended, scientists found that once-negligible cognitive differences between the trial communities had widened, with the protein babies having a higher adult IQ.

In this new phase of follow-up research they evaluated physical growth and body composition, maturation, work capacity, intellectual performance, and school achievement. The hypothesis of the original setup in the 1960s had been that “malnutrition has adverse effects on mental and physical development” (Martorell and Rivera 1992, 1). Roughly two decades later, the hypothesis became

"nutritional improvements in the critical period of gestation and the first three years of life ultimately produce adolescents with a greater potential for leading healthy, productive lives," or, as they shortened this, that "improved nutrition in early childhood leads to enhanced human capital formation" (1). Because many of the participants in the follow-up research were still children and not yet employed, the scientists focused on earning *potential*, assessed using data on physical growth and body composition, information processing, intelligence, reading, numeracy and general knowledge, and educational achievement.

In the late 1990s, scientists again measured income and years of schooling among the feeding trial participants to bolster the claim that more protein in the diet leads to improved work capacity and school achievement. They collected data from participants again between 2002 and 2004, when INCAP researchers formally collaborated with Emory University, the University of Pennsylvania, and the International Food Policy Research Institute. This team homed in on economic productivity among 1,560 of the original 2,392 participants to show that not only were men from the protein communities taller and with higher IQ test scores, but they were also earning $914, or 33 percent, more each year compared to their fresco peers. A lead researcher recounted in a public lecture about INCAP in 2019 that they "didn't find an impact on economic activity in women because these were very traditional societies and women were homemakers, with very little participation in the labor market. We think they had capacity, but their culture didn't allow it," he explained.

It was at this time that the Oriente Study was formally renamed the Longitudinal Study of Human Capital.

PROFIT AND HUMAN CAPITAL

I have attended international conferences all over the world—London, Argentina, New York City, the Canary Islands, and Rome—where policy makers have pointed to Guatemala's Human Capital study as offering proof that feeding mothers better makes for bigger, smarter, and healthier babies and future adults.

One place I encountered this narrative was at the International Conference on Nutrition and Growth, held in Amsterdam in 2016. Somewhere at the midpoint of the conference, I found myself in the audience of an industry-sponsored satellite talk, which was given prime time in the program and housed in a large banquet room packed with hundreds of academics and industry professionals. It was funded by Abbott Nutrition. The keynote speaker was a professor of pediatrics at a prestigious US-based university who had also worked as a laboratory scientist for Abbott. He began his hour-long presentation with a discussion of INCAP's study.

> In the villages given the protein/calorie supplement relative to those who got the Gatorade-like hydration supplement: it cut infant mortality by two-thirds, it cut stunting in half. They changed the body composition of children as they got into adolescence and adulthood. They were able to change the body composition of the

> pregnant female. What we know now—what they didn't know then—is the epigenetic implications of that for the future of the child.

This opening framing places tremendous capacity in the actions of scientists and their miraculous treatments. Meanwhile, the people who were studied became transformed into "body composition," their lives dropping from view. The professor continued by emphasizing the lifetime of economic benefits to be gained from the scientists' supplements.

> What was striking to me—and a reason why I got so intrigued about this—was the intellectual capacity of those children was changed for life as a result of early nutrition relative to their peers in the other two villages. They had much better front brain executive function. They did better on tests. This supplement was a social equalizer. When they compare the kids from the two villages who were nutritionally supplemented early in life with other kids in Guatemala who were wealthy and well educated they saw parity from them on their test scores.
>
> That's a lifetime change that came from nutrition. It's a very important change. There is something unique, obviously, about early childhood, particularly from conception—all the way until ages 2 or 3—as the child is growing fast and expanding their brain.

The professor went on to address the risk factors of poor nutrition during this critical window, listing obesity, hypolipidemia, and cardiovascular diseases but also, and in his words most importantly, lost cognitive capacity. Over the next hour he explained that poor nutrition causes people to not achieve their "full genetic potential," leading to "serious problems with cognition and academic success." "You have no idea how expensive poor nutrition actually is," he told his audience, before proceeding to describe children's supplements that would help redress this deficiency.

It was at this point that his slides switched from depicting Maya children to featuring White children sitting behind desks in school—another proxy substitution. As I looked at the images of smiling White children in school classrooms with clean desks, full bookshelves, and colorful art on the walls, it became clear to me that he was promoting these supplements to a privileged audience. The professor's talk used research carried out on Maya children to make statements about White children's future prospects. The statement, "You have no idea how expensive poor nutrition actually is," was both a warning to elite audiences about how malnutrition could affect their children and a sales pitch for supplements. The clear subtext of the talk was that the thousand-day window was a window of opportunity for financial gain for the field of nutrition science.

Not all references to the Human Capital study are so straightforwardly predicated on the reproduction of corporate profit. A second example of how Guatemala's Human Capital study has shaped the terrain of global health comes from Jim Yong Kim's work with the World Bank. Yong Kim is a medical anthropologist and physician who served as head of the World Bank from 2012 to 2019. In the years

before he left that position, he helped build the massive Human Capital Project, traveling around the world to encourage governmental officials to promote the importance of early life nutrition.

In his presentations, he routinely moved between the stunting of physiology and the stunting of economies, making fetal development coterminous with global development. At the Gates Foundation Institute for Health Metrics and Evaluation in Seattle in 2017, I watched Yong Kim present images of shrinking cerebral synapses in children's brains to his audience of economists. One slide titled, "The First 1,000 Days: Lay a Lifelong Foundation," showed two black-and-white X-ray images of skulls, superimposed with clumsily drawn depictions of yellow neurons. The brain on the left, labeled "Child with Stunted Brain Development," showed a small amount of limp neurons located only at the very center of the image. The brain on the right, labeled "Healthy, Cared for Child" showed yellow neurons throughout the entire skull. Yong Kim explained that small children have less brain mass and fewer neuronal connections, with the impact being that "they will not learn as well, they will not earn as well" (Yong Kim 2017). He continued:

> I think that just like HIV treatment 17 years ago, the catastrophe of childhood stunting is a stain on all of our consciousness. In so many countries in the world the heads of state wax poetic about health and education. But if you look at the GDP, this remains incredibly low. Investing in health and education is not something that has been forced. We're trying to get the data to create political pressure that will force [governments] to do this. (2017)

The Human Capital Index was one of the primary tools that the World Bank developed to create this political pressure. In this index, each country receives a ranking measuring "the amount of human capital that a child born today can expect to attain by age 18." A cartoon video narrates this as follows:

> Meet Anna. She was born just this morning. Anna's parents are thinking about her future: Will she survive as an infant? How will she do in school? Will she grow up in an environment that supports health and learning? These questions will shape the lives of Anna, her generation, her country, and our world so it's not too early to start asking. (World Bank 2018)

In the cartoon, a single baby becomes surrounded by dozens of babies, all superimposed on the earth. The video explains that the Human Capital Index uses data about child survival, school enrollment, quality of learning, healthy growth, and adult survival from Anna's country to calculate "how much her generation may fall short of achieving their full potential." In the final cartoon image, the babies have all grown into adults. The video concludes:

> For each country the Human Capital Index tells us a story, a story about what the future of Anna's generation *will* be compared to what it *could* be. For example,

> let's say Anna's country has an index value of 0.7. This means as they grow up, the productivity of her generation in the workforce will be 70 percent of what it could be if they had benefited from complete education and good health. It is saying something more than just education and health are important. It is saying that business as usual is costing Anna's country 30 percent of its income in the long run. Nurturing Anna's human capital and that of all children will fuel the prosperity of their generation and of the global economy. That is why building Human Capital is a project for the world.

When the project was launched in 2018, Guatemala's human capital ranking placed it 109th of 157 countries. The accompanying document states that a child born in Guatemala will be "46% as productive when she grows up as she could be if she enjoyed complete education and full health" (Human Capital Project 2020). It reports that three in every hundred children do not survive to the age of five, and only 84 percent of children who survive to see their fifteenth birthday make it to sixty. After taking account of what children "actually learn," the expected years of schooling for a child who starts school is a mere 6.3 years. Especially frightening was the message that "47% of children are stunted, and so at risk of cognitive and physical limitations that can last a lifetime."

Yong Kim's emphasis on collecting data that can help advance political will resonates with the message of the Oriente four-village study scientists, who spoke of doing science to improve learning outcomes among the poor. Though Yong Kim's early anthropological writings were once critical of the World Bank, his support for its Human Capital Project arguably reflects a "pragmatic play at reorienting the finance sector's incentives towards investments in pro-poor programs" (Shaffer 2018; see also Erikson 2019). As Yong Kim (2017) explained, "For the first time our agenda includes investing in human capital along with produced capital (machinery and building), natural capital (energy, forest, agricultural lands and other natural resources) and net foreign assets."

The promise, as with the promise of INCAP's Human Capital study, is built on proxies: investing in pregnancy is an investment in economic growth, an investment in development, an investment in a better future world. Yet hiding within the cartoon images of human capital are real people who are being pushed into a life that is valued according to its capacity for capital accumulation. A development project that seems to be pro-poor is still based on maximizing human economic potential—a thinly veiled way of leaving human *exploitation* unchecked.

THE LONG LIFE OF THE FEEDING TRIAL

Guatemala's Human Capital study, born from the claim that early life nutrition can prevent poverty from reproducing itself, has come to affect everything from the protein supplements and multivitamins now regularly found in US kitchen cabinets to the development agendas of global health think-tanks and organizations. It has also circled back to shape daily life in Guatemala.

This is not only because global health experts continue to cite research publications from the original study. It is also because the babies served atole and fresco at the feeding stations continue to serve as biological repositories of knowledge, with scientists using their measurements and biological samples to make scientific discoveries and policy recommendations. Researchers are able to mine the data as it fits with their particular interests and international funding agendas. The interest in IQ in the 1980s gave way to an interest in human capital in the 1990s, followed by obesity and cardiovascular health in the first decade of the 2000s. Today researchers have begun to inquire into the emotional correlates of good nutrition, suggesting that more protein in infancy may contribute to improved long-term mental health and executive functioning—a set of cognitive control processes associated with decision making that includes inhibitory control, working memory, and cognitive flexibility (Wray et al. 2020; Ramírez-Luzuriaga, Ochaeta, et al. 2021). As one recent publication stemming from the original Oriente research summarized this, "Improved child nutrition is positively associated with adult psychological well-being" (Ramírez-Luzuriaga, DiGirolamo et al. 2021).

At its inception there was no ethical review of the trial. One scientist involved told me, "There was no concern about ethics at the time. I don't recall any serious discussion about ethics within the group or outside the group involved in the study." The scientist explained that in the 1960s, when the trial was being planned, protocols for research ethics were simply not on the radar of scientists. It was only later, especially following the scandals associated with unethical syphilis research conducted at Tuskegee, that institutional protocols for work with "human subjects" emerged.

In 2016, I attended an INCAP workshop on ethics and vulnerable populations for which guest speakers were flown in from across Latin America. The topics of their talks ranged from the Nazi experimentation on Holocaust victims that resulted in the Nuremberg Code to an overview of the 1979 Belmont report that detailed principles of voluntary consent to civil violations seen in the Tuskegee syphilis experiments in the US. The workshop was sponsored, in part, through a partnership with Johns Hopkins University, which at the time was involved in a massive ethics scandal of its own. The year before, a $1 billion lawsuit was filed against Johns Hopkins accusing its faculty members of surreptitiously infecting roughly thirteen hundred Guatemalans with syphilis, gonorrhea, and chancroid in the 1940s (Stempel 2019; Rodriguez and García 2013; see also Reverby 2011). (The lawsuit was dismissed in favor of Johns Hopkins in 2022.)

The Guatemalan government had declared the experiments a "crime against humanity," but over the two days of the workshop, no reference was made to this scandal. Nor did anyone address the fact that Vice President Roxana Baldetti, who had been a vocal proponent of supplemental nutrition in Guatemala and a celebrated speaker at the recent launch of the year's Global Nutrition report, was at this moment behind bars. Nor did anyone bring up the lack of informed consent in the

FIGURE 9. Packages of Incaparina at a local health clinic are stored over the infant formula. “Proven nutrition, healthy and natural,” the packaging reads. Photo by author, 2018.

early days of the INCAP study. A skeptical researcher in attendance told me at one of the breaks, “The INCAP study is big business today.” The concern she alluded to was that the ethics on display were not intended to repair past harm but to secure the legal right to continue to collect and analyze data (see also Petryna 2009).

The study also lives on because the specific supplement designed for the protein communities is widespread throughout Guatemala today. When the INCAP scientists began to devise the study they brought in US anthropologist Richard Adams to help them mimic a thick, warm drink of ground maize called atole that was a staple in Maya communities. At the time, most supplemental nutrition drinks targeted infants in the form of a milk-replacement formula, but the research team decided to create a product that could be consumed by everyone in the family. They added protein-rich cottonseed and soy oils to corn flour to create a dry powder that, when added to boiling water, was comparable in its protein content to whole milk. As mentioned in chapter 1, Adams would become a founding figure for the field of applied anthropology, in part because of the tremendous success he had making the supplement used in the feeding trial palatable. The supplement, today called Incaparina—a combination of INCAP and the Spanish word for flour, *harina*—would become tremendously popular throughout Guatemala. It can be found anywhere from supermarkets to corner stores, sold in bags full of powders to be mixed with hot water or milk, or in ready-to-drink juice-box form with a straw attached.

FIGURE 10. Staff at a rural Guatemalan school in the department of Quetzaltenango prepare Incaparina for their pupils. Photo by author, 2009.

When Incaparina was developed in the years leading up to the Oriente Study, scientists envisioned it as a low-cost, non-animal-based protein supplement that could be disseminated at scale. Because they could not manage this production process themselves, they licensed it to the Cervecería Centro Americana, the country's largest beer manufacturer, which held a monopoly on the production of beer in Guatemala until 2003 (Reeves 2013). An underrecognized footnote in Incaparina's history is that the lead scientist, Carlos Tejada, was married to a woman whose family, part of Guatemala's Castillo oligarchy, owned the Cervecería. Some scientists insist that the Castillos did INCAP a favor in the 1960s, since INCAP would not have been able to scale up production of Incaparina without the Cervecería's help and the royalties received by INCAP for the supplement have been significant for the institute. Nonetheless, the fact remains that the supplement has been extremely profitable for the beer company.

At its inception, the scientists involved in Incaparina's development had obtained a fifty-year agreement that INCAP could control the formula. The agreement expired several years ago. Today the ingredients of a product popularized as "good nutrition" are controlled entirely by commercial food producers and full of sugar and artificial flavoring. I don't want to overstate its cultural acceptance: many Indigenous communities have not traded their atole for the supplement. For them, it matters greatly where and how maize is grown and ground. But throughout Guatemala, people consume Incaparina's seemingly magical nutrition

powders with the sense that they are improving their life prospects. “Good for the whole family!” the recognizable red and yellow packaging announces, along with the message that it is an excellent source of six vitamins, iron, and zinc. Viewed widely as a national beverage and a source of Guatemalan pride, it is distributed to children in rural and urban schools as part of their feeding programs, and it is found in the kitchens of Guatemalans who are rich and those who are poor.

The Human Capital study also lives on in Guatemala through its influence on development programs, which have come to prioritize supplemental nutrition above other forms of care. In the communities outside of San Juan Ostuncalco, where aid workers have an active presence, three kinds of supplements circulate. Health workers distribute Incaparina, VitaCereal (a powder similar in composition to Incaparina distributed by the World Food Programme), and USAID’s corn-soy power blend, all of which vie for a place in people’s homes. Despite the widespread failure of subsequent nutrition intervention experiments to make children taller by feeding alone, described in chapter 2, nutrition supplementation remains the pillar of Guatemalan development. Aid workers travel to communities decimated by centuries of colonial, imperial violence. They arrive measuring and evaluating height, reporting back that Guatemalans rank among the shortest people in the world. The primary solution they offer in response is a nutrient powder, suggesting that this is the key to future development.

HUMAN CAPITAL FOR WHAT?

When I met Eloida in 2016 she had just finished nursing two girls, both a few months shy of their third birthday. The girls eyed me warily as Eloida and I talked in the sunny courtyard of their home. A few hours later, their shyness worn off, they were playing happily with a few stray chickens and sticks they had fashioned into swords.

Eloida was a regular participant in the maternal nutrition programs held in her community. Every month, she attended classes where educators demonstrated how to prepare protein supplementation and sent women home with packages of the powder. The instructions for making the powder into atole were pinned above her woodstove. On another wall, just under a folded towel printed with a US flag that she was using to store onions, she had hung a flier with recipe suggestions, such as adding the powder to oatmeal or mosh. According to global health standards, the children playing around us were small but not stunted in their size.

The maternal health programs would warn Eloida and the other young women in her community that being short was bad. When handing out the bags of protein, the educators would tell them the powders would make their children taller and healthier—giving them an advantage in life. This was a potent message for women in the community, who had trouble finding employment and had routinely experienced discrimination because of their appearance.

In Eloida's case, her reason for weaning the children who played around us was common in her community: she had a newborn daughter. Less common is that the girls she had been breastfeeding were cousins. Eloida nursed her older sister's child so her sister could continue her education. Rural communities like theirs have no upper-division classes. Primary schooling takes place for a few hours a day in buildings that frequently lack finished walls or ceilings, let alone books or pencils or other basic school supplies. Though the law stipulates that children must attend school through the sixth grade, attendance is spotty, with parents feeling that the time spent in these underresourced classrooms is a poor use of their children's vitality. Most children, especially girls, stop coursework entirely once the years of primary schooling end.

To attend secondary school, Eloida's sister had to travel several hours from home, and because of the length and cost of the journey, she stayed away for several days at a time. I was nursing a small child myself when I first met Eloida and was struck by how hard this must be for both the sister and Eloida, who was in the position of juggling three children under the age of three. But she laughed away my concern. She had plenty of milk and her mother-in-law's help with caretaking, and she was glad to be able to do this for her sister and her niece. Separation from children is common in these parts, with many mothers stretching their care from Mexico or the US. Kitty-corner to her house, grandparents were raising children whose parents migrated in search of work years earlier. Two houses away, there was a similar story of family separation, with the mother working in the US. In comparison, a few hours of distance was manageable.

Meanwhile, so much was not manageable. In 2018, the mayor of the city of San Juan reported that "15,000 of the municipality's 78,000 inhabitants live in the United States" (Tisdall 2018). I find the way he phrased the statistic revealing, since it speaks to the fundamentally mobile character of residency in the community. The idea that one in five *inhabitants* live elsewhere is a vexing claim for a statistical apparatus that imagines that people inhabit a single residency, but it reflects how San Juan families are dispersed across continents.

While Maya people have a vibrant, often joyful tradition of migration (Velásquez Nimatuj 2020), this is not the community's general experience of migration today. Several people—and it's a small community—have died while crossing into Mexico since I began following health workers there in 2008. In the weeks after a US Border Patrol guard murdered Claudia Gómez González, when international journalists were still paying attention, the media reported two other deaths from her small cluster of communities. Darwin Ovidio Vásquez Romero and Marvin Garcia Cabrera drowned in the Río Bravo (Tisdall 2018). Media coverage of Claudia's community stopped a few weeks later, but the devastation did not. The community has been torn apart, with many children raised by extended kin. They may have contact with a single parent, or both parents may be gone. Everyone who has remained is living through death and disappearance.

In the terms of global health, Eloida's daughters were a success, measuring within the range of "normal" on the growth charts. But these were not the terms of success that generally mattered to Eloida's community, where the push to improve human capital by making children taller seemed largely misdirected. If anything, the equation between height and intelligence stigmatized Maya-Mam people for their size, further limiting their opportunities for employment. The equation between height and intelligence entirely overlooked the problem that human capital projects aim to produce not only "health," but more fit workers, who are routinely killed in pursuit of a living wage.

DEVELOPMENT AS DESTABILIZATION

Let's circle back to when the INCAP study started, because there is something else that is necessary to know. When the scientists arrived in Guatemala as part of Johnson's War on Poverty, there was another war under way. At the same time that the US government was fighting poverty, it was also spreading it—destabilizing peaceful and popular land reform in Guatemala, inciting a genocide that targeted Indigenous people. The goal was not to make them healthy or economically "productive" but to kill them and to make their deaths painful to incite widespread fear.

Pérez Molina, the president who initiated the Window of 1,000 Days agenda in Guatemala, was a graduate of the notorious School of the Americas, where the US military trained Guatemalans in the skills of torture and violence. The death squads over which he presided followed tactics of cruelty honed by the US military during previous wars. Howard Hunt, head of the CIA in 1954 when President Árbenz was deposed by the US-backed coup, compared the US military to Nazi forces when describing US efforts to destabilize Guatemala: "What we wanted to do was have a terror campaign—to terrify Árbenz particularly, to terrify his troops, much as the German Stuka bombers terrified the population of Holland, Belgium and Poland at the onset of World War Two—and just rendered everybody paralyzed" (Hunt, cited in Curtis 2002).

Pérez Molina worked under General Efraín Ríos Montt, who described the military strategy he deployed as "taking water from the fish" (*quitarle el aqua al pez*). The phrase implies that the military would achieve victory by attacking civilians as a proxy for the enemy, forcing suffering on everyone as a means of starving their adversaries of support. As the UN-sponsored Guatemalan Truth Commission later reported, the real goal was genocide, with the violent massacres serving as means to eradicate the left, to destroy its connection to Indigenous communities, and to achieve cultural and political-economic domination (CEH 1999).

The Oriente Study was not carried out in Indigenous communities. Scientists at the time explained that they made this choice because they needed to work in Spanish-speaking settings. But it was also the case, as some of the scientists told

me, that INCAP's researchers had found that Indigenous people frequently did not welcome scientists. One scientist reflected that shortly after arriving at INCAP in the 1970s, its director relayed a clear message about where to set up research: "Don't try to work with the Mayans because you can't work with them."

But even if the Oriente Study was carried out in non-Indigenous communities, it was designed with Guatemala's "poor," "malnourished, "underdeveloped" Indigenous communities in mind. As Nevin Scrimshaw (1967, 495–96) wrote, "In El Salvador and Guatemala, the predominantly Mayan Indian children are malnourished in the preschool years. They are also greatly stunted in early growth and are much smaller in stature as adults." The intention to shift from non-Indigenous experimental sites to eventual interventions in Indigenous communities was always clear.

In the 1970s, at the same time the Oriente Study was rolling out, INCAP also began rolling out a massive education and promotion campaign to introduce its supplement to potential consumers. An anthropologist working in Guatemala at the time noted that the campaign used the language of nutrition to justify not only health but also cultural intervention in Guatemalan communities (Diener 1982, 258). The new ideas about food and feeding that INCAP was promoting would radically change mealtime structures and, with this, the broader fabric of community life. "Nutrition" helped authorize surveillance that would soon become commonplace through health and height monitoring programs. Another advantage—this one financial—would come from the creation of new and expanded markets for health food supplements soon to be sold in Guatemala—and throughout the world.

PROXY SUBSTITUTIONS

There are numerous proxies in the stories of nutrition and American science that I presented above, but an especially important one is height for intelligence. A 1980 article in the *American Journal of Public Health* drew from the Oriente feeding trial to report that a high-protein diet in early life improved cognitive performance and that body measurements were the most efficient way of assessing deficiencies in the diet: "Height is generally the best indicator of extended nutritional deficiency; head circumference is most sensitive to malnourishment before the age of two years" (Freeman et al. 1980, 1279).

A 2013 review drawn from the Oriente Study carried out by a team of economists further shored up the equivalence between intelligence and height. After analyzing data that said that well-fed babies grew significantly longer, they summarized the findings:

> Stunting is a marker of systemic dysfunction during a sensitive phase of child development. At the same time that growth failure is occurring, growth and

> development of other organ systems, including the brain and neurologic development, are affected. Therefore, stunting is a summary indicator of all influences that have an effect on growth and development during the first 1000 d of life from conception to 2 y. Consequently, stunting has been linked to many adverse outcomes related to later physical and cognitive development. (Hoddinott et al. 2013, 1170)

In the communities surrounding San Juan Ostuncalco, health and development workers try to teach Maya-Mam women to care about becoming tall. While the public health community may treat height as a "marker for system dysfunction," in daily practice it becomes used as a means to discriminate against Maya people.

To understand the shift between "there are positive health effects to being tall" to "short people are undesirable," we must return to the origins of the Oriente Study. Initially, the study had two protein communities, two fresco communities, and two control communities where nothing would be given. The control communities were deemed "too expensive" and were cut. As time has passed, scientists have come to treat the fresco communities as if they were control communities. In a retrospective publication, Scrimshaw (1998, 355) explained this as follows: "A non-protein, low calorie beverage was given *as a control* to balance the stimulation received by the children in the Incaparina group from daily contact with the field workers" (emphasis mine). Follow-up studies done by INCAP routinely described fresco as "a low-energy drink (59 kcal per 180 mL serving) that contains no protein." Though it may have been "low-energy," the fresco community found the drink refreshing and drank three to four times more than the protein group, which ended up providing a roughly similar amount of calories and a lot of added sugar. In other words, the control group was never a control.

In the logic of the group-randomized trial, the communities are supposed to be interchangeable. The foundation of a randomized control experiment is that only one significant variable—the *independent* variable—is altered. But, of course, life is not a laboratory. Three of the communities were in the cool, wet highlands, with Santo Domingo (fresco) and Aldea San Juan (protein) in an area where soil was especially shallow and rocky and prone to erosion (Maluccio et al. 2005). The fourth community, Espíritu Santo (fresco), was in the warm, dry lowlands with deep soil that attracted capital investment, agribusiness, and large-scale landowners, which led many of the participants into wage labor. This community was but a kilometer from the municipal capital, making access to urban health and education services easier for residents here than in the other communities. Meanwhile, Santo Domingo was also comparatively urban: located just thirty-six kilometers from Guatemala City, the town was near a road that became a major highway over the half century that scientists studied the feeding trial babies. Unlike the other three communities, which experienced economic booms and busts from crops such as manioc, tobacco, tomatoes, and sorghum, residents of Santo Domingo were never reliant on commercial agriculture.

Another detail that jumped out at me when I read about the communities: the larger of the two atole communities, Conacaste, established a large horticultural cooperative shortly after INCAP's protein trial concluded. This cooperative operated for most of the 1980s, providing stable jobs to hundreds of women through that decade. Meanwhile powerful estate owners historically controlled the land in the larger of the two fresco communities, Santo Domingo, resulting in its residents being among the last to receive property titles during the 1940s agrarian reforms. By 1987, unable to grow food on their own property, a majority of Santo Domingo's residents were migrating to Guatemala City for work. It seems to me that these facts of employment and labor might have a direct effect on systems of capital—human and otherwise—but scientists analyzing the study rarely mentioned how these differences might disrupt their comparisons of protein and fresco. None of these differences in location, climate, and community structure seems to have been treated as meaningful. The only differences scientists seemed to care about relate to supplements in the diet.

And while the Raven's intelligence tests are touted as culture-free tests of intelligence, INCAP researcher, Patty Engle, has pointed out that this is wrong: there is no space without culture. Tests developed in a place that prioritized memorization, repetition, and test taking may completely fail in a place that valued problem solving or interpersonal skills (Engle and Fernández 2010, 86). Different ways of thinking that scientists call "intelligence" are not just measured by tests, but legitimized by them.

There is also no control for the fact that people respond to differently sized babies in different ways, which comes to shape these babies over their lives. Short people may have had trouble finding work, not because they were impaired by biological stature, but because they were impaired by discrimination. There is no possible control for stigma in a world where scientists ignore how their results can feed into and reproduce racism.

Recall that the scientists involved in the early days of the Oriente Study wanted to show that care was critical in early life in order to make a case for the importance of preschool and schooling more generally. "Forget that," a Guatemalan scientist who knows the study well has told me, adding: "Once the critical window is over, it's over."

This is a message echoed by global organizations. Nutrition International, a Canada-based policy and research center, tweeted to its audiences, "If children are cognitively damaged by malnutrition before they ever set foot in the classroom, education investments will never yield the desired outcome" (@NutritionIntl 2021). Margaret Chan (2010), director of the WHO from 2007 to 2017, put it this way: "Don't talk about bringing girls and children to school if you can't even give them the right mental capacity to start with to benefit from the educational system." While she may have been trying to improve infant development, the outcome is to discourage concern about what happens once babies grow up.

The focus on pregnancy and breastfeeding that resulted from the findings of the Oriente Study—itself initiated out of an interest in bolstering early childhood education—today disincentivizes investment in quality preschool and later-life schooling, which begins only after the end of the window of a thousand days. This investment would be “wasted energy,” an “inefficient use of resources,” or just “not worth it”—such was the economization of future life that I repeatedly heard from policy makers. And indeed, today there is no accessible secondary schooling for Eloida and her sister, as there were no opportunities for growth and professional development for Claudia Gómez González and Victoria Méndez Carreto or the many other women in the San Juan communities who were required as girls to sit for hours on end in classrooms that did not nurture their education. It is cheaper—more cost-effective—to invest in supplementing the food given to babies and women of reproductive age.

Paging through the history of the study as it takes shape in oral and archival reflections, I was struck by the basic fact that a US government–funded study fed thousands of Guatemalans two beverages with added sugar for nearly a decade, telling participants to consume as much as they wanted, and that the results have helped create an intervention that has become the foundation for global maternal health policy. The director of the Longitudinal Study of Human Capital briefly writes in a retrospective publication that people experienced the two beverages in different ways (Martorell 2020, S8). Fresco, like a juice or soda, was refreshing on a hot day. Meanwhile, people held Incaparina, which mimicked their most traditional and sacred source of corn-based nourishment, to be filling but did not find it refreshing. The scientists working in the four communities tabulated the amount of beverage consumed, paying no attention to how it might have been a substantively different experience to drink sugar water as opposed to a porridge of protein. No one publishing research based on data from the original Oriente Study ever talks about how these intimate textures of eating might have affected the outcomes of their experiment.

When interviewed about their experiences of the trial many years later, mothers of all four communities generally shared positive memories (see Madrigal Marroquín 2017). They recounted being especially appreciative of the health services that accompanied the feeding stations. As part of the study design, scientists provided all members of the community with basic health services, which may have helped save some of the children’s lives as mortality in the testing sites seemed to be lower than in nearby places. But as I’ve read about the correlation between stress and health—sometimes while my own children nurse in my arms—I cannot help but think of the stress that mothers might have experienced as they were being closely observed and evaluated by foreign scientists at a moment when their surrounding communities were breaking out in war and people were being disappeared and killed. Did the presence of the teams of foreign scientists help keep them safe? If so, at what cost? As far as I can tell, among the researchers these questions remain unasked.

From the very beginning, many people voiced objections to Incaparina, as well as the broader foundation of American nutrition. The geographer James Newman (1995, 241) writes that "to many nutritionists and others, Incaparina's story in Guatemala was filled with motives that were unclear, assumptions that were vague, and impacts that were ambiguous." Others have critiqued INCAP's ties to corporate interests. After all, the protein advisory group of the United Nations was powerful, but there was, in fact, no widespread lack of protein in the Guatemalan diet.

The cultural anthropologist Paul Diener, who carried out fieldwork near the Oriente feeding trial in the early 1970s, explicitly critiqued the attention given to protein deficiency as being beholden to profit. The year after Diener returned from his fieldwork, a nutrition scientist working at the American University in Beirut, Donald McLaren, published an article in *The Lancet* that argued that "the entire protein hypothesis had been a hoax, foisted upon an all too willing academic community through commercial expediency" (cited in Diener 1982, 259). He pointed out that the equation of global childhood malnutrition with protein deficiency was false. The attention given to Kwashiorkor globally was "built upon erroneous worldwide generalizations made from correct but limited observations in atypical situations" in rural Africa (McLaren 1974, 95). In the background of the scientific push for protein was a skim milk surplus accumulated in the US after World War II, then later an abundance of soybeans and, in Guatemala, cotton-seed oil from cotton grown for international markets along the Pacific coast. As Diener reflected:

> It was useful to provide scientific "experts" who would proclaim these food items crucial. . . . Since Guatemala's animal industry could not easily absorb all of the cottonseed cake available, it made good economic sense to create some other market for this byproduct. With a few generous grants to INCAP and to major American universities and researchers, the protein fiasco was born. Of course at the time it was justified as "socially-beneficial commercial development," to use the words of Scrimshaw and his colleagues. (1982, 260–61)

The region where Diener was working had been the scene of peasant uprising and subsequent counterinsurgent action while he was there. Reflecting on the more than three hundred people who had been killed in the community where he lived, he characterized "social justice"—not protein deficiency—as the fundamental obstacle facing rural Guatemalans (1982, 256).

At a public lecture celebrating the Oriente Study's fifty-year anniversary in 2019, the director of the Longitudinal Study of Human Capital mentioned that he had been thinking for some time about the "context of nutrition" at the time the study was designed (Martorell 2019). He went on to talk about the protein wars happening in the scientific community, with some scientists believing protein was the key to hunger and others rejecting this claim. The context of nutrition that the speaker pointed to was the driving impulse to fill "the protein gap" and how this concern for protein had ultimately limited the study's design and execution.

A context he still did not bring into the room was that of the war taking place in Guatemala. He did not talk about how the same US government funding the study was also at the time training military officers to run effective death squads. He didn't speak of the racist origins of IQ science or how women were discriminated against in education or employment for reasons that had nothing to do with their "cultural practices" but because political leaders demanded women's subservience, particularly in the realm of reproduction. In his focus on the protein wars, he did not mention the attacks on poor communities taking place in the country as the feeding trial was carried out.

He ended his talk with a PowerPoint slide with a word cloud that featured the word *BIAS* in prominent letters. In foregrounding bias, the speaker meant that with fifty years of hindsight he could see that the focus on protein in the scientific community had kept researchers from considering the role of other vitamins and minerals, not to mention the epigenetic factors of human development that influence future health. "There's a lesson in how easy it is to be influenced by prevailing notions that shape what you have seen instead of what is there," he told his audience.

But "what is there" is not only an historia of how sugary nutrient powders shape embodiment for years, or even generations, to come. What is there is also an historia, still not fully acknowledged, of how commodifying food as nutrients, viewing bodies as potential capital, and assessing value through IQ tests may not, after all, make a better world. Along with this historia about the harm wrought by commodification, a parallel historia might be told about how fighting a war on poverty through nutrient science and supplements failed when it started and continues to fail today. Or in keeping with the argument about mal-nutrition made in this book, we might understand this not as *failure* but a technique through which powerful systems maintain and reproduce their power.

CONCLUSION: REPRODUCING POVERTY

The historia of the Longitudinal Study of Human Capital that I have recounted in this chapter is full of proxies. Protein stands in for good nutrition. Good nutrition stands in for IQ. IQ stands in for development. Development stands in for health. Health stands in for the worth of life. Non-Indigenous communities stand in for Indigenous communities. One village stands in for another. Guatemala stands in for "anywhere." Specific women become a universal woman. Science stands in for politics. Politics stands in for war.

Exploitation is foundational to commodity exchange, but the proxy substitutions of science are not necessarily bad or cruel in themselves. After all, the US-based Head Start program that was founded at a moment of US-backed Guatemalan genocide and political interventions can lessen the destruction of military violence. Noel Solomons, a vocal critic of the study, reflected somewhat

optimistically in an email to me: “No one denies that the Oriente study was a flawed study but clever people can glean a lot from flawed studies, especially since those are the only kind we have come far enough to design and conduct. I grant INCAP major credit for laying stuff out there that one can learn and move on from.”

Possibilities for harm arise when we lose track of the histories, when we ignore that what is erased is never just erased, when we forget that the proxy is and is not the thing that it becomes. For the people living in Espíritu Santo, Aldea San Juan, Santo Domingo, and Conacaste, the future was altered because scientists built feeding stations, filling them with solutions of nutrients and sugar. Expand outward, and you will see similar but altered strawberry- or vanilla-flavored supplements sold or delivered throughout Guatemala today with the warning that children will not grow well without them. Expand beyond Guatemala, and you will see health officials such as Jim Yong Kim drawing from the lessons of the study to encourage the global community’s expanded investment in human capital, pointing to how impaired early life biology holds poverty in place. Continue to expand, and the study will continue to gain new life. But even as proxy substitutions help build new worlds, what they built over still remains.

During the armed conflict, poor Guatemalans had a clear and cogent theory about how to disrupt the cycle of poverty. Unconcerned about “protein malnutrition,” they instead insisted on the importance of land and food sovereignty. While INCAP scientists spoke of nutrient uptake during pregnancy and infancy, poor Guatemalans spoke about securing property rights and equitable employment conditions. “Maternal nutrition” was not to be improved by scientists’ protein powders. Improving what people (not only women) could eat instead required challenging the dispossession of land and the exploitation of their labor.

As I turn to examine in the next chapter, treating fetal development as a proxy for economic development and an effective path to social equality undermined the reproductive and bodily sovereignty that Guatemalan communities desired. Investment in human capital kept women vulnerable and poor while claiming to help.

Critics were skeptical of the American approach to ending poverty from the beginning. Consider that in 1967 Dr. Martin Luther King Jr. gave a speech in which he said this about Johnson’s War on Poverty:

> It seemed as if there was a real promise of hope for the poor—both black and white—through the poverty program. There were experiments, hopes, new beginnings. Then came the buildup in Vietnam, and I watched this program broken and eviscerated as if it were some idle political plaything of a society gone mad on war, and I knew that America would never invest the necessary funds or energies in rehabilitation of its poor so long as adventures like Vietnam continued to draw men and skills and money like some demonic destructive suction tube. (King 1967)

Exactly one year after giving this speech, on April 4, 1968, Dr. King was assassinated. Decades later, as scientists and policy makers use the Oriente Study to create a global movement to improve human capital, they are still not grappling with the context that American governments are fighting a war on one front that they are waging on another. The push to make children taller so as to make them healthier has come to prioritize individual height with the effect of harmful discrimination. An intervention designed to help improve support for early childhood education when it started in the 1960s is now used to disincentivize funding for schooling, which is assumed to be irrelevant since a child's future was set during the first thousand days.

Throughout Guatemala, health workers give women nutrient supplements and the advice to eat them so their babies will be smarter, even as these women are traveling long distances from their children because they lack any opportunities for professional advancement themselves. The historia that the nutrition community has yet to face is that a study once designed to bolster early childhood education has come to reproduce the very problem of poverty it claimed to fix.

4

Circles of In/Equality

WEAVING LESSONS

The first summer I carried out fieldwork in Guatemala, in 2000, I studied the Maya-Mam language and asked women to reflect on their experiences of industrial change. Global economic restructuring in the 1990s, facilitated by numerous international loans to the Guatemalan government to encourage economic development, had ushered in a wave of new technologies. Washing machines, packaged foods, manufactured clothing, and television sets were imported to small mountain communities such as the one where I was living, with an impact on daily routines.

Women in the town were largely uninterested in imported clothing, which they found poorly made and aesthetically unpleasing. All around me, women spent time kneeling in front of backstrap looms, creating beautiful tapestries and blouses called huipiles that they wore proudly over the long blue skirt customary in the region. It seemed like a lot of work to me, but they did not describe weaving as oppressive. Instead they saw it as an artistic and creative endeavor that shoddy cotton textiles would not replace.[1]

To learn more about the practice of weaving, I decided to take lessons. Another foreigner, a woman named Eliza from the US Midwest, had paused in her travels through Central America, and we decided to take lessons together. Rosa would be our instructor. An elderly woman who had never learned to read or write, Rosa could make complex stories come alive with thread. She was rumored to be a good teacher and had agreed to take us under her wing.

Early on, I found I was not good at weaving. I had little patience with mistakes that would force me to unravel hours of work, and I set low expectations for

myself, wanting a simple scarf by the end of the summer. Eliza, however, devoted herself to the craft and set her sights on the bright red and white pants worn by the community's men. These pants were a widely recognized sign of the town, and backpackers wore them around Central America as evidence that they had traveled to Guatemala's northwesternmost corner. Making one pair of pants would be a feat on its own, but Eliza didn't want just one pair; she wanted two: one for herself and one for her boyfriend.

From the beginning, Rosa advised Eliza to make her boyfriend's pants first. Outside class, Eliza and I noted to each other how often women seemed to prioritize men over themselves. Maria, the mother in the home where I lived, always fed the men in her household before she fed herself or her daughter. Her home's handmade wooden table had just two plastic chairs. Maria never sat at the table. Instead, she stayed at the stove until her father and her boys had eaten, sometimes serving them until the food ran out (her husband had left for Michigan several years earlier, and they were not in touch). She rarely filled a plate for herself but would instead eat from the leftovers as she moved dishes from the kitchen to a bucket of water filled by a plastic hose that continued down the hillside to her small vegetable garden.

Eliza, like me, was from a progressive US family. We knew that men did not, and should not, come before women. Raised with the virtue of gender equality firmly cemented into our worldview, we knew that women were as important as men. So Eliza held her ground and insisted, "I will make my pants first." Rosa clearly disapproved of this decision. When Eliza spoke of her partner, as she often did since weaving was a time for talking about relationships, Rosa sometimes reminded us that she should be making her partner's pants before her own. But as the weavings began to take form and time passed, Rosa dropped the subject.

That summer an organization focused on women's empowerment arrived in the community along with instructors who taught women about self-esteem during hour-long workshops held once a week. "You have value," the instructors repeated to the women who had gathered around a table of coffee and sweet bread in a cold elementary school classroom repurposed for the meeting. The instructors taped a poster on the wall picturing a group of smiling women in Maya dress under the large black headline, "Somos Iguales" (We Are All Equal). Smaller print at the bottom of the poster suggested that women have "igualdad de derechos" (equal rights). The poster seemed at once declarative (you are equal) and aspirational (you should be equal, but you're not), but in either case, the poster left the signifier of what women were equal to unspecified.

Many of the women's husbands lived in the US or Mexico, leaving the women responsible for growing, harvesting, and selling their crops. Women did this while also caring for their children, weaving their clothing, pounding out tortillas from boiled maize, tending to broad or black beans growing beneath the peach trees in

the fields, and engaging in the backbreaking work of doing laundry in a town without a water system, where the river welled at the bottom of steep ravines. It was women who sold produce at the open-air markets held on Wednesdays and Saturdays, where most grocery shopping was done. They were the primary customers at the BanRural or Cargo Express money exchange services. Women managed the money their husbands sent from abroad, and they also managed, at least usually, to get by when their husbands sent nothing.

I watched as a group of roughly a dozen women sat straight-backed on hard benches listening calmly as the NGO staff taught them about empowerment. No one said a word when it came time for questions.

Eliza finished her first pair of pants, the ones she had made for herself, by the time I left at the end of the summer. Some work remained, but she had completed weaving the fabric and stitching it together. It was time to try them on. At first, Rosa and I were speechless. One leg was clearly misshapen, and the other had an obvious hole. Eliza tried to get the pants over her hips, but because of errors she caught her leg in the threads. Rosa made a few cuts, and Eliza finally squeezed into them, but they were loose in one spot, tight in another. It was obvious to us that the pants Eliza had spent her summer making were ugly and did not fit.

Into the space of silent disappointment, Rosa interrupted, "I told you, the man's pants should have come first."

IN/EQUALITY NARRATIVES

My story about weaving pants illustrates the shortcomings of representing equality on a universal scale of value. If you read anything about Guatemala from the fields of public health or development, you are likely to read about economic and gender-based inequality. According to the Center for Global Development, "Guatemala is one of the most unequal countries in Latin America" (Cabrera et al. 2015). Although the numbers generated by the World Bank and other accounting agencies tell us that Guatemala has a sizable economy, it has the fifth highest reported incidence of poverty in Latin America, with 59.3 percent of the population living below the poverty line and 23 percent living in extreme poverty (Gargiulo 2017). According to World Bank calculations, more than 70 percent of children under ten live in poverty, with 65.9 percent of Indigenous children chronically malnourished (UN Women 2023).

The same institutions point out that this inequality is further stratified by gender. The UN ranks gender development using a composite score based on life expectancy, years of schooling, and command of economic resources. A score of 0 indicates that women and men scored equally across the measurements, and a score of 1 indicates that women fared as poorly as possible relative to men. Guatemala's gender equality score is .941 (UNDP 2022), one of the highest—that is, one of the most unequal—in the Americas.

USAID's 2018 Gender Analysis report for Guatemala summarizes the situation as follows:

> Guatemala is a patriarchal and male-dominated society, characterized by the historical exclusion of indigenous populations in general and women in particular. Gender inequality gaps are present in all sectors and domains, with broad impacts on decision-making at the household and community level, political and social participation and leadership, access to assets and resources, and the distribution of domestic and reproductive work and time use. Traditional gender roles prevail throughout the country; women are primarily responsible for domestic work and care activities, and men for generating income and managing household resources. This gendered division of labor is particularly notable among rural indigenous women. (Landa Ugarte et al. 2018, 12)

Global institutions' descriptions of inequality serve to justify humanitarian interventions to make women's lives better—including the Window of 1,000 Days intervention that is the focus of this book. In this chapter I suggest that the overwhelming repetition of what Eve Tuck (2009) calls "damage narratives" fails to encompass women's rich and diverse skills in a way that does them further harm. Tuck, an Alaskan Native who has spent years studying community development projects, uses the phrase "damage narratives" to describe the all too easy, one-dimensional framing of her people as depleted, ruined, and hopeless. "Even when communities are broken and conquered, they are so much more than that—so much more that this incomplete story is an act of aggression," she writes (416).

Tuck's critique informs this chapter's analysis of gender in/equality narratives. I connect the terms "inequality" and "equality" to emphasize the conjoined fight *against* gender inequality and *for* gender equality that is a driving force in maternal health science and policy. In/equality narratives serve as a core organizing value that motivates many health workers to do the work they do. In/equality narratives are also, I suggest, a kind of damage narrative that elicits an incomplete story, frequently casting Indigenous women as "broken and conquered," thereby devaluing their experiences and expertise. In/equality narratives failed Rosa and other Guatemalan women and thereby failed the broader communities in which they lived.

A critique of efforts to combat inequality is delicate to make in Guatemala, where only 260 families lay claim to 56 percent of the country's considerable wealth and where patriarchy and misogyny are deeply embedded in institutions such as the army, the church, and the education system (Gargiulo 2017; Cofiño, cited in Santamaría 2021). To be clear at the outset: patriarchy, misogyny, and the exploitation of all people are punishing and destructive—things to be rallied and organized against. Yet the problem I point to lies in how in/equality narratives solidify "equality" as an ideal, allowing the capitalist and patriarchal value of equivalence to spread outward to encompass aspects of life over which they do not, or should not, take hold. As I show in this chapter, women's in/equality narratives, while

perhaps well intentioned, frequently undermine Maya-Mam women's reproductive autonomy and community connections, exacerbating the exclusions they face.

The historian Mary Poovey (1998) has argued that capitalism gained its efficacy, in part, from its ideological force. Its trick was to act as if everything could be valued on a countable, numerable scale (price), then presenting unlike objects as if they were equivalent. She gives the example of the double-entry bookkeeping that underpinned mercantile trade. These records presented an appearance of evenness and balance that conferred authority and virtue on merchants who were, in fact, involved in gruesome violence and theft. More broadly, capitalism took hold by paying laborers less than their labor was worth while presenting the exchange as even. If laborers are well organized they might successfully demand a higher wage. It is harder, however, to question the foundational virtue of equality on which capitalism is based. According to the stubborn myth of capitalism, other economic systems trap people in the submission of hierarchy, while in capitalism people can obtain equality and at last become free.

This myth of equality is especially pernicious for those involved in the unpaid labor of social reproduction entailed in caregiving (e.g., Bhattacharya 2017). The USAID report cited above points to "traditional gender roles" as a culprit for inequality. In contrast, María García Maldonado, a Maya-Mam lawyer and translator who often accompanied me on my visits to San Juan, was quick to insist that there was nothing "traditional" about the brutal exploitation that women in San Juan faced. This brutality was instead, she argued, an effect of imperial history. Wealthy landowners had forced Indigenous people into subservience while claiming that the meager payment they received for their labor made the exchange fair. Her point was that capital relations, not Maya traditions, perpetuated inequality.

María wanted me to see how a common narrative of overcoming gender inequality further traps those hoping to resist. The capitalist virtue of equality compels people to aspire to equivalence rather than learn to cherish valuable social differences. The feminist philosopher Eva Feder Kittay (1999, 6) writes, "A conception of society viewed as an association of equals masks inevitable dependencies." The goal of equality frequently rested on a view of the autonomous liberal subject, perhaps espoused most famously by the English philosopher and political theorist John Locke (1632–1704). As Locke explains this concept of liberal personhood, the individual was enclosed and self-possessed, his equality a virtue of his independence (see Macpherson 1962). Yet this vision of personhood is not, in fact, a universal ideal. Equality may seem a laudable goal, but it too often rests on an impossible standard of white male similitude that most people cannot—and, more to the point, do not want to—achieve.

This chapter analyzes two very different projects targeting the Window of 1,000 Days operating in San Juan Ostuncalco. One was a large-scale USAID-funded intervention that enrolled thousands of pregnant or nursing mothers across the highlands. The second, run by an independent researcher, involved a few hundred

pregnant or nursing mothers and was located only in San Juan. Though different in scale and orientation, both worked to fight inequality and both, at least initially, had equality as a goal. I describe how the gender in/equality narratives driving the projects undermined the care they provided. The push to equality isolated women who relied on broad social support, prioritizing the fetus or infant child while leaving the needs of their communities unmet.

In critiquing in/equality narratives, this chapter aims to add conceptual richness to discussions of hierarchy, asymmetry, expertise, and skill. Conceptual richness may seem a lofty goal, but narrative framings have consequences that are pragmatic and concrete. As we learn from Tuck's analysis of damage narratives, health care systems that present women as predominantly vulnerable, victimized, at risk, lacking, or damaged further disadvantage Guatemalan women. The related focus on achieving equality imposes a normative standard on women that is in conflict with the lives they want to live. In my rejection of flattening, incomplete stories, I hope to enrich the vocabulary we have to discuss differences and, in so doing, expand possibilities for cultivating a livable and nurturing world. One concrete argument that emerges from this chapter is that practitioners in the Global North who want to combat inequality in the Global South need to attend to the values that animate life in the places where they work. The broader argument is that the fight against the injustices of capitalism requires the capacity to think and act outside of the false and abstract promise of equality, to instead learn about what people want for their lives in terms that are their own.

COUNTRYMAN

In 2012, USAID awarded a six-year grant of roughly $48 million to a Guatemala-based division of the international NGO Save the Children to implement food security programs throughout the western highlands. The grant was funneled through Programa de Acciones Integradas de Seguridad Alimentaria Nutricional del Occidente (Western Program of Integrated Food and Nutrition Security Actions), commonly referred to as Paisano, which means "countryman" and conferred a sense of locality on the development project, whose mandate and implementation strategy so clearly came from afar. Over the next six years, Paisano carried out food security projects in thirteen highland municipalities, all selected because their reported rates of chronic malnutrition were among Guatemala's highest. As stated on a USAID (2012) website, Paisano's mission was to "ensure gender equality, mitigate environmental consequences, and influence behavior change." It brought education, nutrition supplements, and health monitoring to 189 communities and 26,500 households, focusing particularly on improving nutrition and health outcomes through intervention in the "first thousand days."

The word *desigualdad*—inequality—came up frequently in my interviews with program staff in Quetzaltenango and Guatemala City. Paisano's administrators

quoted World Bank statistics that showed Guatemala has one of the poorest economies in Latin America and one of the highest indicators of social inequality in the world (World Bank 2022). The target of gender equality was at the heart of Paisano's activities. The project saw itself as fighting inequality by lifting up "rural and vulnerable" pregnant and nursing women.

San Juan Ostuncalco was one of the municipalities chosen for Paisano's work. The San Juan communities, located in a majority Maya-Mam region, are in the department of Quetzaltenango, about 80 kilometers from the Mexico border and roughly 8,500 feet above sea level. The seventeenth-century Guatemalan poet Francisco Antonio de Fuentes y Guzmán described San Juan Ostuncalco as an open plain at the intersection of three hills "where a mountain stream known on the coast as the mighty Samalá River is born" (cited in España 2003).

The written history of San Juan tells a story in which politics was stratified by altitude, with plantations on the coast serving as a site of colonial domination and the mountains as a site of Indigenous resistance. In 1616, shortly before Fuentes y Guzmán penned his description of San Juan, Spanish landowners had established a *mandamiento*—forced employment—system that promised to provide welfare for Indigenous people in exchange for their labor. "Welfare" may sound compassionate, but this was but a means of securing a workforce. Over the following three centuries, Indigenous people on the coast were held in conditions of agricultural serfdom, indentured servitude, or outright slavery (McCreery 1986). Most men from San Juan were forced into hot and often deadly coastal plantation labor and allowed to return to their mountain homelands for only a few months of the year.

The end of indentured servitude under the presidency of Jorge Ubico in 1933 did not end forced labor in San Juan. Ubico had presented himself as a reformer who overturned Indigenous slavery, but backing his presidency were plantation owners who wanted bodies to run their farms. Antivagrancy laws passed in 1934 required men between the ages of eighteen and sixty to work or face jail and fines. William Parsons (1967), an anthropology student who carried out fieldwork in San Juan in the 1960s, writes that if men could not show proof of owning more than 10 *cuerdas* (0.9 acre) of land, antivagrancy laws required them to seek employment for at least 150 days a year. At the time, most of the 8,000 men in and around San Juan Ostuncalco owned patches of land where they grew subsistence maize and vegetables for their families, but only 238 men met the minimum land requirements (Parsons 1967). The rest were conscripted into seasonal labor in coffee or sugar plantations, where they earned less than 30 cents a day. As Parsons notes, "In actuality Ubico had established a more comprehensive form of exploiting the [Indigenous] labor force while appearing to do just the opposite" (6).

The years following Ubico's so-called reforms gave rise to an organized land redistribution movement, ultimately prompting US military intervention to end agrarian reform through the overthrow of President Jacobo Árbenz, described in chapter 1. In the second half of the twentieth century, Guatemala's Indigenous

communities experienced armed conflict, scorched earth campaigns, and citizen disappearances. The twenty-first century saw the rise of drug wars, punishing economic trade agreements, and climatic catastrophes resulting in widespread crop devastation (see Galvez 2018). Through it all, a centuries-old history of forced migration has continued to shape the San Juan countryside, with families still compelled to migrate—now to the US or Mexico, in addition to Guatemala's coastal plantations—to survive. Reported rates of emigration in and around San Juan are consistently among Guatemala's highest. A 2015 USAID assessment wrote that the Mam-speaking western highlands were characterized by "social exclusion and inequality . . . that functions for the few and marginalizes the majority. . . . Local residents live in chronically precarious social conditions, in many cases among the worst in the country" (USAID 2015, 4).

The San Juan city center is today home to a bustling daily market, a modest regional health center, assorted restaurants, and small family-run stores that specialize in pesticides, textiles, baked goods, or motor parts. At the city's west end, microbus drivers pass through a lot pockmarked with potholes calling out which route they take to the twenty-one San Juan communities that surround the city center. For 1.25 Guatemalan quetzales (GTQ) (a rate negotiated with the transportation union and widely respected; no one ever overcharged me), drivers zoom their passengers—four or more to a seat, plus kids piled on top of adults—back and forth along bumpy mountain roads where pine forests are interspersed with plots of potatoes, cabbage, onions, and maize. The census identifies 35,000 of San Juan's 50,000 residents as rural, but many of these rural residents have complex migratory experiences entailing seasonal or extended employment across regional or international borders.

Staff of development projects arrive in San Juan to "build capacity" of people they see as "living in a prior, primitive state," as the anthropologist Paige West (2016, 65) has described the rhetoric that helps justify global intervention. Development professionals who live in Xela or Guatemala City commonly describe the rural San Juan communities as provincial and their inhabitants as impoverished and uneducated. In fact, the twenty-one San Juan communities hold rich, cosmopolitan life as well-traveled residents return from time away with a diversity of languages and cultural knowledges. Imagery of state and national US flags is frequently woven into people's clothing, a signal of the strong connection community members have with Texas, California, Oregon, Minnesota, Ohio, and so on. Cellular technology has boomed in twenty-first-century Guatemala, facilitating connections between those who have emigrated and those who have stayed. Whereas census data reports low-levels of literacy, social media literacy has blossomed in recent years, with families swapping and sharing phone plans to document their experience and stay in touch with relatives abroad.[2]

Most San Juan communities that Paisano served have their own elementary schools and a mix of evangelical churches along with the lone Catholic square

FIGURE 11. Women wait for their turn at a health monitoring station established by the USAID-funded health organization, Paisano. Photo by author, 2017.

characteristic of Guatemalan towns. A typical household has electricity and some access to water (aid organizations suggest that it be filtered or boiled). People sell chips, soda, and pocket candy from their windowsills. Several women run small pharmacies from their homes, where they sell their neighbors painkillers, antibiotics, vitamins for stress, and chemical elixirs to treat a wide range of illnesses, including diabetes and hypertension, or maladies without an easy English translation such as *nervios* or *susto*. No community has an official health clinic, which is where the Paisano project came in.

Paisano used a portion of USAID's food security funding to train a group of men called *técnicos* to run their rotating services for pregnant and nursing women. Once every three months, at a minimum, técnicos arrived at each San Juan community enrolled in the Paisano project to gather anthropometric data from those participating in the intervention. The organization subcontracted promotoras to disseminate information, recruit women to participate, and check on whether participants had questions and were following program recommendations. The promotoras generally lived in the communities where they worked. Several were local midwives, who had access to new mothers, most of whom give birth at home. While all community health workers were first-language Mam speakers, they were also able to converse in Spanish, making them an especially valuable asset for the work of cultural and linguistic translation required of development projects.

Paisano had recruited its promotoras from the pool of women who had been involved in the now-defunded maternal health extension programs operating during Álvaro Colom's presidential administration. Paisano also frequently made use of the same building that the health extension programs had vacated. At the Paisano community checkups, women and their young children enrolled in the programs gathered in clusters outside, while inside the técnicos organized and distributed the monthly ration of foods. This included eleven pounds each of rice, beans, the corn-soy powder supplement to be mixed into boiling liquid or food, and two liters of vitamin A–fortified vegetable oil—all produced and imported from US surplus. At several of the distribution sites, the técnicos had hung a poster with a USAID logo that showed images of food aid. The poster read, "These foods are a contribution from the people of the United States for families who *work* to improve their health," the word *work* conspicuously underlined. Whether an echo of Ubico's historic vagrancy laws or the US government's own tradition of shaming people who draw on social welfare as undeserving and lazy (Dickinson 2020), the message was clear: women's value was contingent on their economic labor.

One of the técnicos would sit inside the building behind the project laptop, while another operated the scale. Together, they collected and recorded the anthropometric data for children enrolled in the project and handed the bags of foodstuffs to the waiting mothers. Técnicos would also run education courses for women who were waiting their turn for monitoring. People in San Juan called Paisano a "women's project," but all its técnicos were men. The prohibition against hiring women for these roles was not explicit, but the ability to drive a motorbike was a prerequisite–a clearly gendered skill in this part of Guatemala. When an otherwise well-qualified woman friend of mine approached Paisano for employment, offering to do all necessary community outreach by bus, she was told that traveling by bus would take too long and the moto requirement was non-negotiable. When I relayed concern about exclusionary hiring to an administrator at the central offices of Save the Children in Guatemala City, the administrator told me it was not safe for women to travel to the communities on their own. When I reported this back to my friend, she dismissed it as clear-cut sexism and further evidence of the sham of "women's equality."

The men working for Paisano, many of them in their early twenties, were in a position of instructing women about intimate details of reproductive health, such as how to stop a vaginal hemorrhage in childbirth. They also advised women about how to shop for, prepare, and consume nourishing food. The técnicos would gather the women outside the buildings and convey the information in a serious and professional tone. Women tried to keep a straight face, though sometimes the ridiculousness of young men teaching women about topics they had been learning about all their lives would become too much and they would erupt into laughter.

Sara was one of Paisano's early participants, having enrolled in 2012, when the program began and she was pregnant. She shared a house with her in-laws, another brother-in-law and his wife, and several children. Their food was largely grown on

their land: corn, potatoes, beans, and other vegetables. The planting, harvesting, drying, grinding, boiling, and patting out of the tortillas that sustained them was often joyful, purposeful work—but it could also be exhausting and relentless. Sara appreciated the backup food aid given to her by Paisano, especially oil and rice, which otherwise had to be purchased from the store with money her family did not have to spare.

The técnicos had advised Sara, as they did all the women in the program, to guard the food rations for herself and her infant child. But this was an impossibility since the stews and porridges at the heart of her family's meals were cooked and shared communally. At one meeting of global health professionals, I heard the nutrition scientists suggest that food aid for pregnant women should be branded as medicine and not food. It would be easier to individualize consumption if women thought of the food as akin to a pill, the scientists conjectured, especially since women tended to feed others in their family first.

The técnicos sometimes gently scolded women for distributing the foods and supplements designated for them and their babies among their older children or other family members. But, with resignation, they told me that distributing food among kin was inevitable. Even if much of the foodstuff intended for pregnant women and their babies ended up being eaten by other members of the family, the developing fetus/child might still get some of the benefit. In Sara's case, while she may have shared her rations with her extended family, she had hung up the USAID recipe calendar the técnicos had given her near the kitchen woodstove that kept atole or water warm through the day, and she faithfully attended Paisano's supplement distribution days and education meetings.

A few years earlier Sara's teenage son had left for the United States in search of employment. He had promised to send money back, but she knew he was struggling and understood when it did not come. In 2017, her father died from pneumonia, leaving another hole in her family. When I visited with her shortly after his death, she told me his death was easily preventable, and she was angry they had not been able to find care for him. Her father's absence compounded her family's instability, and, for the first time, she was seriously considering picking up her family and leaving for the US. She had become pregnant again, but this time she wasn't involved in Paisano.

After Paisano's midpoint evaluation in 2015, conducted with the assistance of a Catholic Relief project,[3] the central offices had recommended "refining the beneficiary targeting strategy," so Paisano narrowed the window of enrollment. The justification, influenced in part by Guatemala's Human Capital study, was that targeting even earlier fetal or child development would give more "bang for your buck" when it came to ending inequality, to quote one English-speaking policy maker with whom I spoke.

When the program began in 2012, it was open to all pregnant and nursing women and children under five. By 2017, only women in the thousand-days

window were eligible. Women with children outside the window were still invited to attend the educational classes, but they inevitably stopped participating when they no longer qualified for food rations. While Sara's pregnancy made her eligible, her cousin, whose youngest child was three, was not, and Sara did not want to attend without her cousin's company. If there was a future good to come from the intervention, Sara would no longer benefit.

. . .

There is an obvious critique to be made that Paisano's focus on equality was a vacuous claim. Much as plantation owners had used the protection of Indigenous people to justify their slavery or Ubico's "reform" served to legalize exploitation, we can think of Paisano's in/equality narratives as a farce—a "nonperformative," in Ahmed's (2006) sense, in which the performance of equality work obscures inequalities, thereby holding them in place. Nonperformativity helps explain why a program espousing women's equality would be run by men, refusing to employ women in decently paid positions: equality was powerful rhetoric but not meant to come to pass.

Yet the critique I want to offer is not only that Paisano was duplicitous in aiming for equality, but that the very aim of equality was often undesirable in women's lives. Eliminating inequality may be a crucial goal when it comes to economic purchasing power, but equality may become a harmful goal as it spreads into the social domains of institutional hiring or household management practices, where holding particular experiences or skills may matter greatly. In the Paisano projects, "equality" denied some women their expertise and skill while pushing many new mothers toward an individualizing, normative standard that they would never achieve—and that they did not want.

A poster hanging in Paisano's office in Xela diagrammed the pathway of intervention with a series of descending arrows. At the top was a regional officer who would train several técnicos, who would then train the promotoras, who would then train the community. The assumption reflected in the image was that knowledge about healthy living could originate outside of the communities and then travel to the communities, unchanged. The ideal of equality helped justify the idea that young men could effectively teach women about their reproductive health. After all, they were thought to be mere conduits of information. That they were inexperienced in childbirth themselves was not supposed to matter, although of course it did, as indicated by the women's laughter at the técnicos' lessons and the fact that they did not find the information in the lesson useful and stopped coming without the material compensation of cooking oil or rice for their time.

Equality also underpinned the scrutiny on pregnant women's bodies. Paisano's education programs offered the goal of improving nutrition during pregnancy as a pathway to future gender equality. Its staff taught women that investing narrowly in the growing body of the fetus—always referred to as "baby" in program

pedagogy—would make a significant impact on future health and well-being. Its services and pregnancy supplements were meant to be a protective measure for women and their babies. When it came to the Window of 1,000 Days, fathers, grandfathers, uncles, and teenage sons were all but irrelevant.

It seemed the attention that the program paid to pregnant women might help them and their children overcome disadvantage so they could eventually become equal to others. But the principle of equality was also used to deprioritize Sara's bodily autonomy, aligning with conservative antiabortion interests that made fetuses equal bearers of human rights—at women's expense (see Colom 2015). This was not a recognition of different support needs of pregnant women that resulted in meaningful care. Instead, treating all pregnant women as if they were responsible for their children's future equality left them further burdened.

Meanwhile, for Sara, the well-being of her pregnancy was not something that could be achieved while also ignoring the broader needs of her community. From her vantage, feeding her fetus while letting her father die or offering nutrition to her infant child while failing to provide resources for her teenage son made little sense. The future child would suffer without a grandfather or without an older brother; nutrient supplementation during pregnancy would not make up for this loss.

To understand the dissonance between what her community needed and what it was offered by USAID, we might consider that the term "target" comes from warfare, with military targeting seeking to destroy or disrupt. While targeting may be an effective strategy for destabilization, the very act of aiming narrowly at a certain category of bodies might have the effect of destroying the relational logics on which Sara's life, and the life of others in her community, depended. When it comes to nourishment, the practice of building up, undertaking repair, and achieving community stability may require a different conceptual tool kit—not focusing on a targeted individual, but acting expansively across a web of relations. Equality individualized, when it was entire communities that needed support.

As I show next, describing a second maternal health program in San Juan, in/equality narratives that presume and compel everyone toward equality can negate the variations in people's experience and expertise, undermining the execution of development projects and the good they claim to do.

LOS CÍRCULOS

At the same time that Paisano was setting out to measure babies and deliver supplements, another women's equality project started up in many of the same San Juan communities where Paisano was run. This second, smaller project entailed empowerment circles for pregnant and nursing women initiated by a doctor from a North American university who I will refer to as "Dr. Z." I use an obviously partial name to remind readers that my analysis is also partial: the descriptions

in this chapter do not wholly represent Dr. Z's work or her project. I also use an initial rather than a name because the critical analysis I develop is not directed at a particular person but rather at the in/equality narratives that were so common in maternal health. As I elaborate below, I am interested in how even well-intended efforts to better women's lives ended up reproducing harm, but I am also interested in where learning and transformation occur.

Dr. Z, a soft-spoken but tireless advocate for maternal health, had previously carried out epidemiological research studying stress that expecting mothers experienced during the first thousand days of life. The hypothesis driving this research was that malnutrition relates less to what is eaten than to the social conditions under which metabolic activity takes place. In contrast to the prevailing interest in nutrient supplementation, Dr. Z was interested in stress ecologies. Toward the end of her research, she initiated an organization to support women's circles and kept them going after her study concluded. Dr. Z saw women's circles, locally referred to as "Los Círculos," as a way to strengthen solidarity, reduce stress in women's lives, and ultimately improve maternal health.

Though her work to improve health during pregnancy and breastfeeding was clearly different from that of Paisano, both projects were founded to address gender inequality. They both used the framework offered by the Window of 1,000 Days agenda, taking this time in which the child eats via the mother's body as a key period to target. During her research in San Juan she had confronted ways that women were disempowered through physical violence and the patriarchal social order that placed decision making in the hands of men. The women's circles were meant to be an antidote to this gender inequality. As described in the program manual, their purpose was to empower women in the rural communities of San Juan, providing tools for health promoters to care for the mental health of mothers of reproductive age and for the health of their children, "always emphasizing the mothers with children under the age of two." In a magazine article that circulated among Guatemala's English-speaking expat and tourist community, Dr. Z elaborated, "Our organization combats inequality and integrates mental health programs into community health programs, prioritizing respect for the local culture" (cited in Entremundos 2018).

She conceived the circles as an equitable space for expecting and new mothers to share their experiences with one another. "Women's Circles are community-led support groups to improve participating women's agency, psychosocial health and wellbeing, and impact the health of mothers and children across generations," promotional materials about the circles affirmed. Referred to as a "holistic intervention," because of their focus on integrating emotional and physical health, they were meant to be spaces where women would work collaboratively and through principles of shared values to lift each other up. The project's website quoted one of the participants: "I used to be very sensitive. I thought that others with more studies or money were worth more. But I realized that no one is worth more than

anyone else and that we are all equal. The Circles have helped me a lot to raise my self-esteem."

The Circles drew inspiration from Paulo Freire's *Pedagogy of the Oppressed* ([1968] 2014) to emphasize how those who are marginalized must play key roles in their own decolonization. Versed in languages and practices of "bottom up" and "community based" projects, Dr. Z emphasized a model of research based in "participatory action." As explained in program materials: "PAR [participatory action research] is not so much a research method as an orientation to research that emphasizes equitable engagement of all partners throughout the research process, from problem definition through data collection and analysis, to the dissemination and use of findings to help effect change."

Dr. Z was critical of how often aid creates cycles of economic and political dependency, in which Indigenous communities become forced to rely on external resources. In contrast, it was important that her project fostered Indigenous autonomy. It was her goal that "local communities would be empowered to be agents of their own change." As they would be the beneficiaries of the circles, they were also meant to be in charge of them. Accordingly, Dr Z worked with the women in the communities in the design of a twelve-class curriculum, with each class focused on a different theme. The classes, called "circles," were meant to last roughly two hours and to occur roughly every fifteen days.

Dr. Z offered trainings for the San Juan women she recruited to lead the circles, paying for their travel to the nearby city where these workshops were held. The hope was that they would become proficient in each theme in the curriculum and that they would then return to their communities, lesson manual in hand, to guide other women through the lessons. In Xela, where Dr. Z had lived when she did her earlier research, she hired two Indigenous women with graduate degrees from the nearby university to coordinate the project from a central office.

Finding women in the San Juan communities to run the circles was easy, at first. Dr. Z had chosen San Juan as the site for her research in part because the community had an established network of women who were trained to be intermediaries between families and development projects. The same women who had worked as vigilantes for the earlier health extension project and who now helped Paisano as promotoras could also help her with her research. They could map who lived where, who was pregnant, and who had children, and they could help recruit and monitor participants. Roughly once a week, she paid the women 50 quetzales, or roughly $8, for a day of coordination work. This was an amount similar to what other development projects paid to men and was considered a decent wage for a day's work. For the women involved, it was an amount that was both material and symbolic. The women could hardly survive on this funding, but it helped, and it mattered greatly to the women involved that they were paid.

In talking with the promotoras in 2016, I heard a lot about how Dr. Z's program was different from those run by large-scale development organizations such

as Paisano. The women cared that Dr. Z spent time with them and knew their children's names. Many women repeated an anecdote about scales. They wanted me to know that whereas the other NGOs working in the region kept the equipment in their own facilities, Dr. Z gave scales to women in the communities to manage. They pointed to the scales as evidence of her commitment. They were excited about the circles she was starting and hopeful about their possibilities.

. . .

When I visited the circles in 2017, some women's attitudes had changed. Dr. Z was no longer in the San Juan area. She was trying to publish her research, writing grants to obtain more funding for her projects, and had a newborn herself. She had come to see the circles as a way of creating low-cost, community-led possibilities for maternal health programs that could be scaled up, and she was now working to expand the idea of women's circles elsewhere in the country. As a result, she needed to stay closer to the capital, where most Guatemalan policy makers she wanted to influence lived. In her absence, she had handed off the organization of the circles to the communities and assistants in Xela, as was her original plan.

The grant-based funding that supported the projects in previous years had run out. Several promotoras were frustrated that their pay had stopped. Other development projects they had worked for had previously assured them they would eventually get back pay, but they never saw it. Eventually they were paid—a priority for Dr. Z—but they did not have confidence that they would be paid at the time I spoke with them. The wait triggered memories of the historical injury of forced Indigenous labor that the people in San Juan had suffered through for generations. Self-sufficiency had been an aim of Los Círculos: the work was supposed to be valuable enough to the communities that women would want to keep the circles running regardless of pay. But without income, some promotoras felt that they were once again contributing free labor that would benefit someone else.

Several women also expressed resentment about the organizers in Xela, who were still receiving pay (for a time after her grant funding ran out, this pay came directly from Dr. Z). Dr. Z was proud to have hired Indigenous women in organizing roles, and the women she employed were well educated and talented. But like many university graduates in Xela, they were K'iche' Maya, a Maya group that has held more economic and political power in the region than the Maya-Mam communities.

Some San Juan promotoras understood Dr. Z's predicament. They knew that she was doing her best—that she was facing pressures as a new mother while trying to make her vision for the circles intelligible to Guatemalan policy makers. These particular promotoras had stepped up to run circles in other San Juan communities than their own, replacing promotoras who had dropped out. But this also introduced an element of frustration for all involved. After all, while the dozens of communities surrounding the San Juan city center have much in common,

Espumpuja is not Las Esperanza, Las Esperanza is not Los Romero, and so on. The small, identical black dots on the map identifying the communities rendered invisible their many differences.

I attended a handful of women's circles during the time that Dr. Z was absent. It was clear that the women who arrived enjoyed the opportunity to gather with one another. One of the women in attendance had even traveled from a neighboring department. She was the only participant who was not from San Juan and did not speak Mam, but like the other women in attendance, she had small children and wanted extra support. Yet it was also clear that leadership was lacking. When women gathered they were often uncertain about what they should be doing, and participants were generally lackluster about the formal twelve-week lesson plan.

Given my book's focus on nutrition, I will describe in detail a lesson from the curriculum organized around the theme "I am a woman; I am a mother: my nutrition." On the day I attended, the women met in an abandoned cinder block building once used by another development project. To open the meeting, the designated circle leader read from the spiral-bound manual outlining the session activities, instructing the other eight women in attendance to sit in a circle holding hands and repeat an affirmation: "Welcome to this new session. Today I feel better than yesterday." A second woman then taped two large sheets of white paper against the wall, drawing a picture of a woman's body on one of them.

I could see in the instruction manual that the day's main exercise was meant to get women talking about nutrition. It advised breaking into two groups and spending fifteen minutes filling in each silhouette with the woman's recommended diet according to her age. Upon finishing, the promotora was to bring the groups back together through a discussion about community nutrition with prompts such as, "Why is the diet of the girl, adolescent, woman of reproductive age and the pregnant woman important?" or "Do mothers in your community teach their daughters about the importance of their diet?"

Departing from the lesson plan, the woman who drew the silhouette instead asked the women to list, "What foods are healthy?" She then wrote down their answers for all to see: herbs, fruit, vegetables, taking vitamins, vaccinations, beets, carrots, lettuce, potatoes, and so on. The women in the group tossed out suggestions, but there was not much enthusiasm for the exercise, and they quickly dropped it, leaving one of the posters almost entirely blank on the wall. Instead, they spent most of the time discussing embroidery tricks, such as how to knit a pattern in the shape of a flower and attach it to a woven hat to give it extra flair.

Across the street from the building where we had gathered lived a woman who did not attend the women's circle, even though her young baby made her eligible. Instead, she had joined up with a small company based out of Xela that was working to export Maya women's handicraft skills internationally via internet markets. When I asked those attending the circles what they thought about the business for exports, they responded with enthusiasm. "We need money more than this," one

FIGURE 12. Women in San Juan used the time at the nutrition circle to build camaraderie and teach each other crocheting techniques. Photo by author, 2017.

of the women in the room told me, nodding at the silhouette illustration and the list of "healthy" food.

The circles were designed to counter economic and political dependency. "They engage women through processes of reflection, conscientization, problem solving and skills strengthening, supporting women in becoming agents of change in their own lives and families," the website reads. But without an income, the participants would remain dependent on their husbands or find themselves with no choice but to move away from their communities. Even if the circle were to help them gain a degree of independence, they were facing a broader political system designed to keep Guatemalans reliant on the United States and women reliant on men.

The circle was meant to conclude with two songs: a maternal affirmation and an affirmation made directly to the women themselves. In the first, they were to hold their babies up in the air over their heads, singing to them, "I love you and I will take care of you, because you are going to be a healthy and strong child." Then they were to form a circle with one another, hold hands, and sing a song to the tune of the popular song, "Yo Soy Puro Guatemalteco" (I Am Pure Guatemalan). The lyrics offered in the manual were, "I am a beautiful woman; I like to participate; I am very strong and hardworking; And I am the change I want to achieve."

As it turned out, the women that day were pulled into discussions of weaving and life. They did not actually ever sit in a circle. A few chose to sit indoors; others with older children with them sat in the outdoor patio or on the steps

leading up to the building. As they chatted with each other, it struck me that they were happy to be there. The circles offered women a relatively safe space to gather, something they could not take for granted given that they lived in a country whose government had recently orchestrated a genocide against Indigenous people for forming collectives. But as for nutrition? The curriculum was supposed to be designed according to principles of participatory action research and in collaboration with the women, but it did not seem that important to them. The group never returned to the topic, and the songs about loving themselves and their babies went unsung.

After the women departed for their homes, I visited a community midwife who lived around the corner from the building where the circle gathering had been held. As a promotora for other development projects, Magda had been involved in Los Círculos when they started up but had stopped working with them months earlier. "The women in the city act as if they don't need me," she said, speaking about the project's K'iche' staff. A diploma displayed near the front door of her house announced that she had completed her midwifery training at the Institute of Nutrition of Central America and Panama in the 1990s. But her real credentials came from experience: she had spent decades delivering babies and caring for mothers in her community, where she had deep networks and had lived all her life. She felt this expertise was not recognized or even desired at the circles, and she no longer felt welcome.

We chatted for a while longer. Magda told me that the vegetables in the hillside garden above her house were growing ripe and asked if I would like to take some home. Craning my head upward to where squash and yellow peppers grew among brilliant red flowers in the vertical slopes, I became worried about whether she was safe living there. Global warming's rising temperatures and wind speeds have caused rainfall to become at once less predictable and more dramatic. Guatemala consistently ranks as one of the world's riskiest places to live when it comes to climate change, with rural farmers battling both drought and flooding (World Bank 2022). Of particular concern for Magda's community, entire hamlets in Guatemala have been destroyed by steep hillsides, much like the one looming over her house, that liquify in heavy rains.

As if reading my mind, she told me that one of the projects that came to her community had promised to rebuild adobe houses with cinder blocks as a flood prevention measure. But funds had disappeared partway through the work, and they had stopped construction, leaving many of her neighbors with half-built homes. Magda was proud of her adobe home, with its indoor kitchen and attached clinic for seeing patients. Gesturing to the completed block houses in the valley below us, she said they could only be built because of remittances sent from family in the US. The houses may be more solid, but the family was likely torn apart. She hoped she would never have to leave her community; she had heard too many horror stories. No, she was going to stay and focus on birth.

As our conversation drew to a close and I turned to leave, my arms now full of squash and licorice-flavored pericón herbs for making tea, she asked me if I would see Dr. Z during my time in Guatemala. I was not sure if I would—we were both juggling babies and busy schedules—but I mentioned I could pass along a message.

"Tell her that we miss her," Magda said to me. "Tell her that we say hello."

. . .

The circle is a compelling image to emphasize principles of equality. It is a shape with no hierarchies or edges; its radius is identical at any point. Symbolic of holism and unity, the circle is complete and self-contained. Yet all the attention focused on the "horizontal structure" of Los Círculos minimized the crucial differences and places of friction between group participants and their broader communities. It should matter that midwives have expertise in labor and delivery or that mothers, aunts, and grandmothers have generational wisdom about childbirth and feeding to pass along to their daughters and kin. The push to make women equal hinders recognition that equivalence may be an undesirable end.

Dr. Z's wish to have the circles be community led follows, in many ways, the best practices in her field. It is also, at least for now, an impossibility since the language of "psychosocial distress," "mental health," "emotional healing," and "play therapy," which was integral to the work of the circles, is not language that women in the community would use themselves. While the circles aimed to reduce stress, in the Mam language that women spoke among themselves there is no direct translation for this term. Sure, women would use the Spanish term *estrés*, and I might also label the way they are forced to shoulder violence as "stress" in my analysis. But this was not a word that arose organically or how they would characterize the problems in their life. While the projects are meant to be "from below," the manuals and notebooks are written in Spanish, and they need to be, or an entirely different pedagogical approach would have to be employed since people in San Juan do not generally read or write their primary spoken language, Mam, which is dismissed in schools. In other words, it is categorically impossible for a Spanish-language mental health project in the Mam-speaking communities in San Juan to be community run.

This is not to say the themes of "mental health" or "emotional healing" are not of interest to women in San Juan, who are, after all, practiced at translating between different vernaculars. This is also not to say that women should not be educated in theories of oppression or power that originate from outside their communities. They do not need to be shielded from new, transnational alliances of feminism, which San Juan women are very capable of adopting or discarding as they see fit. It is rather to say that Dr. Z's presence, leadership capacities, and ability to secure funding to pay trainers and find a space for women to meet was key to the success of Los Círculos, and this difference in her positionality relative to the community was not to be overlooked. In letting me know that Dr. Z was missed, Magda was

passing along the implicit message that Dr. Z could not be absent—at least not yet in the life cycle of the circles. Even women who experienced vital and healing camaraderie when participating would have trouble implementing them without external support. Self-sufficiency may be a laudable goal. Dependence may be devastating. But without the outside funding that Dr. Z can access in a way the women in San Juan cannot, the promotoras would find themselves providing free labor once again.

Specificity of place matters; depth of experience matters; deep wisdom accumulated over decades of practice matters; differences in location, language, and access to funding sources matter. Fighting inequality may sound virtuous, but it may be more crucial to focus on how to attend to and value the different kinds of hierarchies and divisions that influence life in San Juan and beyond. Even when the equality imagery of the circles failed the women, there were ways that the circles were expanded and reshaped to include multiple kinds of expertise across multiple generations of knowledge. In women's partial abandonment of the circle, they were also cultivating an approach to maternal health that is responsive to the particularities of people and place.

Health educators often spoke of pregnancy as a window of economic opportunity—a chance for the disadvantaged child to get ahead. Yet in San Juan Ostuncalco, the requirement to work—whether driven by antivagrancy labor laws or the collapsing markets for local food—has long torn families apart. Rather than turn the window of pregnancy and breastfeeding into yet another economic obligation, we might rather see it as a fallow period to be filled with relaxation, rest, and community care. We might also expand this window so it encompasses not only people who are pregnant or who have newly given birth. The Window of 1,000 Days might be refashioned to include entire communities, who find nourishment in companionship and kin.

MEN COME FIRST: AN OPENING

There is systemic cruelty in the fact that most of Guatemala's land is owned by a handful of families; that these histories of dispossession have left so many people with so little purchasing power; that plantations owners have become rich from the labor of Indigenous men while the families of these men are left to starve; and that women in the highlands, unable to secure waged labor, find themselves subservient to men and forced to give birth or forced to migrate north.

There is also systemic cruelty in the fact that economic logics of suffering and success have become superimposed on other domains of social life, such that equality as measured by economic indicators becomes the core goal of health projects and their primary motive for advocating for power. At the same time that public health projects should fight against economic inequality, so should they recognize that transposing a universalizing frame of equality onto people's lives is

a misplaced solution. Economic inequality arises from exploitation; its alternative lies not in treating people as if they should be the same but in developing capacities to attend to ways they are not. Deviation from the White male—frequently unmarked but often assumed—signifier does not necessitate that one is damaged, as Tuck also wrote.

Rosa, my weaving teacher, taught me through her practice of making fabric that the terms of subservience and dominance break any easy formula of who is powerful. The opening offered through her lessons was that sometimes things are not what they seem at a distance, on other people's terms. The point is not that men come first on principle or in a generalized way but that normative claims—that is, claims about how things should be—should be made in conversation with the values and life experiences of people affected by these norms. In the case of maternal health projects in San Juan, there is a need to shift from fighting for equality to centering the exploitation that has gripped Guatemala since conquest, structuring not only the landscape of suffering but that of apparent resistance as well.

Dr. Z's research on maternal health in San Juan was organized within a "socio-ecological framework," and it was this framework that informed the planning of her circles. Socio-ecology, as she defined it, brings together "all factors known to affect the vertical transmission of stress" in early life. The image she used to illustrate the definition was a pregnant woman in the center of a circle formed by distress, illness and infection, and poor nutrition. It is a framework that emphasizes holism and interconnection. Paisano had likewise depicted interconnection in the design of its programs, painting the slogan "We Are Countrymen United" on walls along the streets of the San Juan communities where staff worked. Given the stated mission to end inequality, the goal of unity would seem to make sense: "We are all in this together, we are all equal," it would seem to say.

Unity, togetherness, and equality: they are all compelling slogans, but they are also a mirage. Men hold jobs that women will not be hired for because they are women. Guatemalan landowners grow rich from the toil of Indigenous laborers. US officials send Guatemala aid in the form of corn-soy supplements made from surplus US produce, grown by the hands of underpaid Latinx immigrants who they will not officially allow into the US. US farm owners depend on these immigrants, but farm owners will not fight for them to be granted legal status, instead benefiting from the cheap labor that they provide. Some people feast while others are devoured.

And yet. Despite these clear imbalances, in/equality narratives fail to capture the complex depth of life, in which deeply exploited people are irreducible to their suffering. Consider that Rosa, while having no formal schooling, could deftly manage the complex relationships of her community, all while weaving her own clothes. Or that Sara rejected Paisano handouts when they were not also available to her cousin, even as she was so strapped for resources that she was considering

FIGURE 13. My son runs with the daughter of one of the health leaders in San Juan past a sign with a pun that says, "We are countrymen united for a healthy country." (*Paisano* translates as "countrymen," and *país sano* translates as "healthy country"). Photo by author, 2016.

leaving her ancestral homelands for the dangerous borderlands of the US. Magda was determined to stay and bring life into her community precisely because she lived in a precarious place. Inequality tells us that the options are either to be powerful or to be powerless, but, as the Gender Studies scholar Chanda Talpade Mohanty (1984, 344) points out, these kinds of binaries are "ineffectual in designing strategies to combat oppressions." Public health's in/equality narratives tend to reinforce the idea that some people are strong while others are weak and that those who are weak should be more like those who are strong. But liberation from oppression should not be dictated by the values of the oppressive system. Instead, political strategies to combat oppression must be able to acknowledge geographic and historical specificities of oppression, as well as how suffering and strength go hand in hand.

The Belgian philosopher Isabelle Stengers (2005, 192) writes, "Unity always means mobilisation, what was asked of armies having to follow orders in a faithful and immediate way." Departing from a socio-ecological framework that emphasizes unity, she offers the framework "ecology of practice." An ecology of practice doesn't emphasize togetherness, a common language, an intersubjective understanding, or the fungibility of relations. It instead aims to attend to different interests and diverging attachments that will result as people interact.

Ending exploitation, engaging in real—not nonperformative (Ahmed 2006)—transformation, requires cultivating the capacity to live in difference without the false pretense of shared or common ideals. I have not offered a single term as an alternative to inequality, for example, trading the goal of equality for that of equity or even social justice. After all, it would be a shortsighted strategy to change one totalizing grand narrative for another. The challenge is instead to cultivate frames of analysis and action capable of acknowledging and acting against anti-Indigenous racism, femicide, and labor exploitation without presuming to know how this violence works from afar.

In the years that have passed since Dr. Z's absence in 2017, the lessons offered by an ecology of practice are ones she has learned herself by talking with people in the community about the projects, soliciting their feedback, and being open to learn and adapt. She, in company with women in the community, has worked through many of the messy, nonlinear, and trial-and-error lessons of collective work, transforming the circles to make them responsive to community needs.

Roughly a decade after her arrival in San Juan in 2010, in 2019, she returned to be a presence in the communities. The women who run the circles continue to be paid for each day they work. These women no longer call themselves promotoras (promoting someone else's ideas) or vigilantes (responsible for transmitting community activities to state officials) but *lideresas* (leaders). The term has obvious resonance with neoliberal visions of business efficacy, but the women running the circles have mobilized it to highlight their expertise, training, and skills. Whereas Paisano became narrower at the midpoint evaluation of its intervention, allocating food rations only to women in the first thousand days, Los Círculos have widened to bring men and grandmothers into the fold. Today anyone is invited to attend in the hope of bringing in a rich diversity of experiences (and circles specifically for men have also started up). The circles still have a weekly curriculum shared across the communities, but the intention is simply to give a scaffolding on which to begin dialogue. It is not a problem—but encouraged—for participants to deviate from the course.

Los Círculos are no longer conceived of as spaces of all-inclusive totalities but spaces for collectively honoring their participants' different histories, life conditions, and future desires. After all, we learn from Poovey's historical excavation of capitalism that the fantasy of equality was always a ruse: a way of papering over power differentials, making them harder to overturn. As Dr. Z's project is put into practice today, it is better to make differences visible to learn from them than to erase them or act as if they are not there. Remember that the women never really sat in a circle.

Nearly a decade after she started and after adjustments in the project structure, the circles remained well attended, and many women in San Juan attest to how they have enabled them to build community and companionship with other women. This success is due, in large part, to the fact that their leaders live in the San Juan

communities and have experienced the challenges in participants' lives. The circle leaders cannot be just anyone; here the myth of commensurability at the heart of equality breaks down. As USAID wrote in an evaluation of the Paisano project, women felt that having a strong tie between message and messenger was crucial. "The person sharing a message should be known" a focus group member from San Juan Ostuncalco was quoted as saying (USAID 2016, 55). While many leaders of Los Círculos may not be able to read and write in the Spanish language, they have literacy in community relations that outsiders do not possess. They would know, for example, that you start with the man's pants because the second weaving will turn out better than the first.

5

Gender Violence and the Violence of Gender

CROSSES

One week in April 2000, in the Guatemalan town of Todos Santos, Huehuetenango, stories began to circulate that babies were being taken. Radio stations, the primary means for mass communication in the Indigenous highlands at the time, were broadcasting the news. "Satanists, foreigners—they're stealing our children." Parents began to keep their kids inside. By that Thursday, school closures were connected to the threat of kidnapping and people erected barricades to protect their neighborhoods. Rumors spread, as did the fear.

On Saturday morning, a busload of tourists from Japan arrived at the busy mountain market in the heart of the town, where every Saturday vendors came from across the region to sell vegetables and chickens and peddle plastic bowls and batteries. Deep in the crowd, a woman became frightened that the travelers posed a danger to the child strapped to her back, and she reportedly began to scream, "They've come to take our babies" (Weissert 2000). The market-goers mistook the Japanese visitors for the rumored Satanists, and by the end of the chaos that ensued, two people were dead.

Saison Tetsuo Yamahiro, who stepped up to protect a friend, was beaten to death with sticks near the tour bus. The driver, Edgar Castellanos, grew up in a Spanish-speaking region on the other side of the country and didn't know the town well. He ran to get help at the police station, but when the police were unresponsive he kept running. He made it just a few blocks, to a place where the dirt road running through the town sloped steeply downward into cornfields before the crowd caught up to him. People threw stones, doused him with gasoline, and

then lit him on fire. The US State Department report printed shortly afterward said five hundred people from the community were involved (DOS 2001).

In the weeks that followed, both international and Guatemalan newspapers wrote that a mob had become motivated to violence by false rumors of baby snatching. The media described the people as hysterical—a medical condition associated with women and Indigenous people in Latin America since the nineteenth century (Gorbach 2020)—and portrayed them as wild and irrational. Coverage of the incident in *The Guardian* underscored that the community's fear was unfounded: "There have been persistent rumours in some Mayan communities that foreigners come to steal children in order to sell them or their body parts abroad, although no cases have been documented" (Villelabeitia 2000).

Huehuetenango, the state where the lynching took place, is also where Efraín Ríos Montt, one of Guatemala's most ruthless military dictators, was born and raised. For generations, elite landowners from this northwestern part of the country had forced Indigenous families into slave-like conditions of plantation labor. When the Guerrilla Army of the Poor (Ejército Guerrillero de los Pobres) entered Huehuetenango in the mid-1970s, it was welcomed by many highlanders struggling to survive the brutality of Guatemala's oligarchy who saw hope in agrarian reform (see Grandin and Oglesby 2019). The Guatemalan military, backed by powerful corporate interests, opposed this push for land redistribution. Ríos Montt took charge of the Guatemalan army following a coup d'état in 1982, and as the guerrilla resistance in his home state broke out in open rebellion against him, he struck back with deadly force.

Ríos Montt is today widely known for having directed the military devastation of Guatemala's highland countryside in the early 1980s. It was called a scorched earth campaign because, like an angry wildfire, it indiscriminately destroyed anything and everything that stood in its way, stripping the landscape in the hope that nothing—no crops, no resistance—would flourish there again. Working in coordination with the US military, Ríos Montt employed techniques of violence honed by ruthless US officers to cause harm as painfully as possible. Tens of thousands of Guatemalans were murdered under his command, often in gruesome ways, and 1.5 million people were displaced by his genocidal campaign. When the Peace Accords were eventually signed in 1996, they contained an "amnesty law" that made it difficult to prosecute any crime that took place during the armed conflict. At the time of the lynching, not only had Ríos Montt avoided being charged with violence, but he was gearing up to run for the presidency (he would lose decisively in 2003).

The Todos Santos lynching has been extensively analyzed as an outcome of political impunity.[1] The political theorist Carlos Mendoza explained to Daniel Valencia (2011), a journalist: "Lynchings are the result of the state's inability to dispense justice." Mendoza then clarified that *inability* wasn't the right word, since it is not that the state cannot dispense justice but that it will not. The sociologist

Anna Sandoval Girón (2007, 357) has extended the argument, writing that people engage in lynchings because they seek "to create some semblance of normality in their lives in the face of a justice system that has failed them" (see also Sharp 2014). Her broader point is that the justice system may be failing people who it claims openly to be serving, but that does not mean that it is failing. Instead, we can see the lynching as an outcome of a justice system that *effectively* upholds the power of oligarchy by systemically eliciting terror.

The lynching happened just weeks before I arrived in Todos Santos with plans to carry out ethnographic fieldwork for the summer. I had briefly visited the town the previous year during a short trip from the colonial-era city of Antigua, where I was living while studying Spanish at one of the city's numerous low-cost language schools.[2] I was majoring in human biology, and on learning that the mountain community had a long history of welcoming anthropologists, I declared anthropology as a second major and applied for a research grant from my university that would fund my return.

I had packed the book *The Two Crosses of Todos Santos* (1951), by the US anthropologist Maud Oakes. The cover of this early ethnography, which described the survival of Maya-Mam religious ritual, featured three crucifixes flanking a traditional straw hut in the mist. One cross is tall, made of ancient wood belonging to the ancestors. The other two are short, made of whitewashed adobe belonging to the Catholic Church. In the story Oakes recounted from her fieldwork in the 1940s, the town's mayor, who was not Maya, had forced the Maya-Mam villagers to tear the wooden cross down, causing rain to stop and corn and animals to die. Against the mayor's orders, the community banded together to resurrect the cross, rebuilding it on a more solid foundation. "If you imprison us, you will win and we will win. Send us to prison; we have no fear," the townspeople reportedly told the mayor, who, in the end, let the wooden cross stand (Oakes 1951, 25). The wooden cross symbolized Indigenous people, while the small stone crosses symbolized the non-Indigenous community members. Standing together in the highland mist, they symbolized the meeting of different systems of religions, politics, and thought and the uneasy cultural syncretism that had occurred.

The crosses that greeted me every day that summer were the two small wooden crosses adorned with plastic flowers erected at the spots where Tetsuo Yamahiro and Castellanos had last been alive. Akin to roadside memorials that marked vehicular crashes on the highway entering the valley, the crosses seemed to mark the site of a terrible accident. In an article titled, "Justice in Guatemala Can Be Gasoline and a Match," the *New York Times* described a scene of cultural confusion: "Government services are few, and police officers and judges often speak only Spanish, rather than the Mayan languages spoken by most residents" (Gonzalez 2003). Yet as I learned more about the lynching, I also came to see that this was not an accidental event arising out of cultural misunderstandings—not exactly, at least. This was a violence *produced* by a political-military system that had, in fact,

taken children from their mothers, wanting women to always be living at the edge of tragedy. This was not an "accident" but systemic cruelty at work.

"Baby snatching" may sound like fodder for conspiracy theories; that is how it was described in the press. But weeks before the lynching, the UN had released a report of a thriving market for illegal adoption in Guatemala, detailing the outright theft of babies from hospitals along with other coercive tactics such as "tricking or drugging illiterate birth mothers into putting their thumbprint on blank pieces of legal paper which are subsequently filled in to read as a consent to adoption" (Calcetas-Santos 2000, 8). A headline in *The Guardian* from July 2000 read: "Guatemalan Babies 'Sold to Highest Bidders'" (Campbell 2000). The article reported that rates of adoption between 1996 and 1999 had doubled to nearly two thousand babies a year, with agencies earning upwards of $30,000 for the sale of each baby. By 2010, documents surfaced suggesting that one in every hundred babies born in Guatemala was adopted to persons in the United States, making Guatemalan adoption a $100 million industry (Gould 2013).

An image of adoption as a voluntary act between consenting adults obscures what was actually happening. Investigative journalists found that many of the thirty thousand Guatemalan children adopted by US parents between 1990 and 2005 had been stolen from their birth families (Acevedo 2019). The historian Rachel Nolan (2020) calls Guatemalan adoption "a tool of political violence." This was not the "human capital" as potential wage labor I described in previous chapters but the direct theft and sale of Indigenous babies. One of the companies involved in the abductions had deep ties to the Guatemalan government, and unredacted documents named many high-level US officials. Overwhelmingly, the market for international adoption was fueled by conservative antiabortion groups working across the Americas that sought to diminish the reproductive autonomy of Indigenous women (Dubinsky 2010). Their interference in women's lives came in the form of restricting access to contraception and abortion care—and also by stealing their babies once born.

Newspapers were quick to characterize the townspeople of Todos Santos as hysterical in their worry about baby snatching. Yet the theft of children was happening all around them, and communities had no safe or legal means to resist. From today's vantage, the fear that babies were being taken does not reflect hysteria but awareness of a violent truth: kidnapping was a political and military strategy to terrorize women, destabilize families, and tear communities apart.

I recount the event of the lynching to place analyses of political injustice in conversation with this book's discussion of maternal nutrition campaigns in Guatemala. After all, the Todos Santos lynching was centrally a story about the mechanics of social reproduction. Community members could not trust that their babies would not be taken from them because the US and Guatemalan governments were complicit in stealing their children en masse. This theft of children happened locally in Guatemala. It also eventually occurred through forced migration and

family separation policies established by the US and Guatemalan governments that I described at the start of the book and that I circle back to below.

Policy makers involved with the rollout of the Window of 1,000 Days agenda in Guatemala told me that their work was meant to support women and children. Communities were to benefit as well. In fact, one of the broader promises of the intervention was to provide relief so that Guatemalans did not have to flee their homes. This was written into USAID-Guatemala's program statements, with maternal nutrition projects explicitly designed to "reduce illegal migration" through "capacity building" in rural communities.

However, when we consider that the intervention was premised on the idea that mothers who had nourished their communities for generations did not know how to feed their children and that people with deep agricultural wisdom needed to eat state-sanctioned supplements, it becomes clearer why these interventions would fail. Or, to make the same rhetorical shift made in the analysis about lynching above, the antihunger interventions would not *fail* but would succeed in keeping women, particularly Indigenous women, hungry so that a ruling class of politicians and businessmen could thrive.

The basic argument this chapter advances is as simple as it is devastating: We cannot understand the drive to improve motherhood through "better nutrition" in Guatemala if we ignore the policies in place that use motherhood to make women suffer. Nutrition crusades—as Guatemala's national nutrition intervention from 2020 to 2024 was termed—must be understood in the context of a wider war being waged on and through women in Guatemala that forces people into narrowly defined gender roles and then brutally punishes those people who are forced to be mothers.

A second argument, which builds on the first, is that work to advance reproductive justice in Guatemala often occurs through domestic activities such as cooking and feeding that challenge patriarchal models of family and kin. The Truth Commission investigating Guatemala's genocide reported that the massacres, rapes, and disappearances of hundreds of thousands of people were enabled by a "doctrine of superiority" that upheld the values of white heteropatriarchy (CEH 1999, 24). Whiteness, maleness, heterosexuality, and physical and mental "fitness" served as the standards according to which Guatemalans were seen as worthy of full legal and political protection. Deviation from these standards—at home or in public—served as justification for often-violent expressions of domination. Whiteness in Guatemala is often aspirational, so that even those people who defend whiteness will not themselves claim it. But centuries of imperial violence have also made the mealtime structure at the heart of Guatemalan kinship a site where Euro-American fantasies of white superiority play out—and also where it can be resisted and transformed. This chapter tells an historia of confronting these violences by remaking domestic practices in ways that both strengthen community care and transform the terrain of reproductive justice.

FIGURE 14. A health clinic in San Juan displays a poster illustrating the “practices for living better: 1,000 days from pregnancy until two years.” Photo by author, 2017.

PRACTICES FOR BETTER LIVING

“Education.” The Guatemalan USAID employee spoke the word as if it was a full sentence. The intervention she was helping implement in Guatemala’s western highlands was premised on the idea that mothers’ education was lacking, and she offered education as the explanation for why Guatemala’s rates of childhood malnutrition were so high. She planned to lead nutrition classes, teaching women who fell within the thousand-days window how to make healthy foods.

Following the design of the Window of 1,000 Days agenda rolling out across Guatemala, she used a standardized, state-sanctioned curriculum, produced in coordination with USAID. A poster titled “Practices for Living Better: 1000 Days, from Pregnancy through the First Two Years,” accompanied the curriculum. Educators would often hang this poster in their consultation rooms or classrooms. It featured an orange wheel with three color-coded sections, marking practices to be undertaken (1) every day, (2) during pregnancy, and (3) during the first two years. Every recommendation but one was accompanied by illustrations of women wearing Indigenous clothing who were culturally coded as “mother.” The recommended practices included the following (my translation from Spanish):

Every day:

1) We plan our family to not have successive pregnancies.
2) We use and maintain a clean bathroom.
3) We keep animals and children apart from one another [this image, which showed children playing in front of caged animals, was the only image to not feature a woman].
4) We wash our hands with water and soap.
5) We drink boiled or purified water.
6) We keep pregnant women and children away from smoke to avoid respiratory illnesses.
7) We participate in community activities [the image showed women gathering in a classroom].

During pregnancy:

1) We need to prepare a birth plan and a plan for emergency deliveries.
2) In the family, we should help the pregnant woman with carrying heavy loads.
3) We should recognize danger signals during pregnancy and birth.
4) Go to four or more prenatal birth services at the health center.
5) Eat better and take vitamins when pregnant.

During the first two years:

1) Recognize signals of danger in children.
2) Keep feeding the baby when they're sick.
3) Take our children to the health center every month.
4) Give powdered vitamins in the food to children.
5) Give age-appropriate food to the child.
6) Care for our newborn and recognize danger signals.
7) Give breast milk and only breast milk until 6 months of age.

At classes I attended in the San Juan communities, instructors began their lessons by parroting the government's mission statement, informing their audiences that "a child who has adequate nutrition during his first 1,000 days will develop his full physical and intellectual potential."

Most classes included a cooking lesson in which instructors showed women how to mix the powdered nutrition supplement—a corn-soy blend distributed as a part of the Window of 1,000 Days intervention—into their meals. Instructors would sometimes demonstrate the importance of handwashing with soap and preparing the supplements with boiled water, not tapwater. Most of the time, however, was spent simply reciting the poster's advice.

Instructors were usually young women, raised in the nearby city. They had taken a brief training course that qualified them for the job, but they lacked

firsthand experience in the communities, and none of the instructors spoke Mam. They would read from the nineteen steps highlighting "practices for better living" to the audience of Indigenous women gathered before them. The audience of women, all of whom had huipiles wrapped around pregnant bellies or wore their babies strapped to their backs with colorful shawls, nodded along, staying quiet and polite. They gave no outward sign of impatience, but they also never engaged the instructors in discussion. If they had any questions (What do you mean by "better eating"? How should we pay for the vitamins you suggest we take? What are the "danger signs" in pregnancy or newborn care? What should we do if our house only has a wooden stove and I am the one in my family responsible for cooking?), they kept them to themselves.

Only three of the nineteen illustrations of "practices for better living" included men. First, in the recommendation for monthly health visits, a man points an expectant mother down the path to a small blue public health center. Second, in the guideline cautioning against lifting loads while pregnant, an Indigenous woman stands slightly behind a man who carries a bushel of kindling on his back. Third, in the guideline about birth spacing and family planning, a man stands over a woman as a clinician speaks. With fifteen of the nineteen illustrations explicitly focusing on women's domestic responsibilities, the poster was not supporting different care needs pregnant women might have, as discussed in the previous chapter. Instead it emphasized a stereotypical vision of motherhood while also transmitting the message that men played a marginal role in raising children. When men were depicted, they held positions of authority, literally standing in front of or over women. The inherent effect of the guidelines was to feed into mother blaming while reinforcing the idea that fathers were not involved.

Health educators themselves often had little faith in the power of their education to change behaviors. They commented to me during interviews that even with schooling, mothers would not do what was asked of them, and they could not be trusted to make good choices about what to eat. This presumed noncompliance served to justify the distribution of the nutrient powders such as USAID's corn-soy blend. "Supplements are there to fill in the gaps in nutrition education," explained an employee at USAID who worried that mothers would not have a balanced intake of vitamins and minerals without them. Mothers might not remember what they were taught, or they might be willfully noncompliant. Either way, nutrients and vitamins would compensate for—literally, supplement—their poor dietary practices.

Oversight was still needed, however, to make sure that the women and infants consumed the supplements in the intended way. A pervasive myth about hunger is that hungry people do not care too much about the taste of food—that if nutrients are lacking, people will eat whatever they are offered. Those working to deliver nutrient powders in Guatemala knew, however, that taste mattered a great deal. Researchers working in sites of famine have long pointed out that even

hungry people—or maybe *especially* hungry people—care about what they eat.[3] As described in chapter 3, anthropologists working in Guatemala in the 1960s and 1970s had helped improve the palatability of nutrition supplements by designing them to mimic the local atole, but policy makers still voiced concern that mothers might not use the powders as they were prescribed; they might, for example, give them to their animals.

I never heard anyone enrolled in the program indicate that they would waste the supplements; they might not have wanted them, but they weren't going to throw them away. Yet regardless of what mothers did—or did not do—with the powders they received, the potential for noncompliance provided justification for monitoring and surveillance. Community health workers had taped hand-drawn maps marking houses of pregnant or breastfeeding women to the walls of the buildings where they worked. They would stop by these women's homes every few weeks to assess the white plastic ten-liter buckets that stored the corn-soy powder, ensuring that roughly the right amount was consumed. If too much or too little was missing, the women were at risk of being flagged for further observation or being expelled from the program.

Why would it matter if they lost access to this program? Why did they come to classes that treated them poorly and taught them little? I asked myself these questions, before learning that expulsion would not only result in the loss of the cooking class or the protein powder, but could mark them as a bad or difficult subject, affecting their standing among health care providers in the region. The classes were held in small rural communities served by a very limited number of care providers. Not attending the classes might bar access to future medical care, with consequences for their children or themselves.

In her work with pregnant persons in the US, the legal scholar Michele Goodwin (2020) shows how prenatal care is caught up in race and class profiling, frequently offering a means for the state to track pregnant women and, ultimately, to "police the womb." Goodwin writes:

> Fetal protection efforts, which are often purported to justify the states' persistent instructions in poor women's lives, serve to mask other politically expedient interests: controlling women and demanding their obedience, gerrymandering, pandering to tough-on-crime strategies, achieving electoral victories, and heightening moral panic. Rarely are the well-being and dignity of babies and children a persistent concern of those politicians who favor punitive interventions in the lives of their mothers. (191)

Surveillance and control was also a central aspect of the Window of 1,000 Days agenda in Guatemala. Alejandra Colom interviewed 120 women from seven Indigenous language groups who had participated in the intervention during the early years of the Pérez Molina and Baldetti administration. Several girls had been raped and then pressured by the mandates of the intervention to embrace their

maternity. Colom (2015, 37) illustrates how the intervention agenda advances a "mother-centric agenda" in which the rights of adolescents are eroded in favor of the rights of the fetus and girls are offered no identity outside of motherhood. Childbearing and child-raising were the only future allowed for them.

At first glance, USAID's nutrition programs might seem innocent or benign, particularly when juxtaposed to the steady stream of reports of femicide that circulate through public life in Guatemala. Seemingly apolitical drawings of women engaging in "practices of better living" may not seem comparable to *policing* or *violence*. Colom's discussion of forced motherhood helps make clear the direct linkages between patronizing maternal health campaigns and femicide. She shows how programs that position girls and women as inevitable mothers deny them reproductive autonomy, with painful consequences. As she writes, the program locks Maya women and girls into a future of motherhood, "perpetuating a moral regime that reduces women, including young adolescents, to reproductive roles" (2015, 37). If they are first victims of rape, they also become victims of state health protocols that force them to bear often-dangerous pregnancies and subsequently force them into a life they may not have wanted for themselves, sacrificing their own futures for the good of their children, husband, or country.

TAKING CHILDREN, HURTING FAMILIES

Children frequently featured in publicity advertising the Window of 1,000 Days agenda. My research coincided with a different sort of story about Guatemala children in the news. At the same time that USAID was backing a maternal nutrition program advertised as benefiting women and children, tens of thousands of young people began to migrate from Guatemala to the United States.

After the signing of Guatemala's Peace Accords in the 1990s, migration rates between Guatemala and the US began to climb, but it was predominantly men who would leave. During Obama's second administration, news reports began to document teenage migration at first and then the migration of women and younger children. In 2014, as USAID was rolling out its Window of 1,000 Days programs in Guatemala, the press began to write of a "child migration crisis." At the time, an estimated 120 Guatemalan children, many traveling unaccompanied, were being apprehended at the US border each week. As the Guatemalan Human Rights Commission (GHRC 2014) reported, "Often these children make the journey north not by choice but because they face daily violence and life-threatening poverty; some are literally running for their lives."

In 2018, six years into the Window of 1,000 Days agenda, the number of Guatemalan children and families fleeing to the US rose dramatically (Dickerson 2018). That year Trump initiated what became known as the "zero tolerance" immigration policy, introduced in this book's prologue. That policy separated thousands of migrant children from their parents or caregivers, who were often seeking

asylum on grounds that should have been protected by international law (Burnett 2019). The government held these children in what the Maryland representative Elijah Cummings called "child internment camps" (quoted in Manchester 2018). Even after the zero tolerance policy was officially rescinded, investigative journalists found that the US government was still contracting private agencies to hold Central American children in hotels, operating outside the formal detention regulations. "Parents and lawyers have no way of finding the children or monitoring their well-being while they are in custody," wrote Caitlin Dickerson (2020) for the *New York Times*. At the end of Trump's presidency, hundreds if not thousands of children taken by the US government in recent years had yet to be reunited with their parents (Katkov 2020).

Headlines that accompanied stories of child migration bore a striking resemblance to the headlines about forced adoption from decades earlier. A 2000 headline in the *Washington Post* reads: "They were one of the first families separated at the border. Two and a half years later, they're still apart" (Sieff 2020). The article details the experiences of a young Guatemalan girl who had not seen her mother since they crossed into the US to gain asylum. The US government deported the mother to Guatemala, leaving the daughter with a foster family in the United States—one of more than five thousand Central American children separated from their parents during the Trump administration (Sieff 2020). A headline in *The Guardian* announced, "Children who have been removed from their undocumented parents at the border are being claimed by foster families supported by conservative Christian groups" (Filipovic 2019).

In *Taking Children: A History of American Terror* (2020), the historian Laura Briggs describes international adoption in the second half of the twentieth century as "part of a broader effort to terrorize those who resisted regimes of dehumanization" (17). She points to an explicit US government strategy to remove children from communities that supported Guatemalan agrarian reform and rehome the children with conservative US families. Communities involved in resistance movements were not the only ones targeted. Taking children en masse was a way of destabilizing life throughout the Guatemalan countryside. Briggs explains how this destabilization would force people to migrate, thereby ensuring a steady supply of terrorized and grief-stricken workers who would accept low wages and terrible working conditions in US industries (see also Heidbrink 2020). Her argument is that the family destabilization that results from the systematic kidnapping of children is a long-standing strategy for reproducing the power of US empire.

As I was studying USAID's efforts to improve the health of women and children through supplemental nutrition, several reports circulated of Guatemalan children dying of medical neglect and abandonment at the US border. Briggs's (2020) analysis of how child suffering was a political strategy helps reframe the story of their deaths: it shows that children's deaths were not an accident born from indifference but an explicit outcome of US policy. It is common to hear policy makers

associate chronic malnutrition with abandonment or neglect. The foundation of the Window of 1,000 Days agenda was that the government had for too long overlooked poor, Indigenous children. In contrast, I want to suggest that the governments of the US and Guatemala are not neglecting these children or the communities they are from. Instead, we see how Indigenous children are actively targeted for suffering *because* the well-being, safety, and autonomy of their mothers poses a threat to a political and economic system dependent on underpaid labor. The 2018 news headlines about child separation were an echo of the stories of child abduction that incited the Todos Santos lynching two decades earlier—which were themselves reminiscent of stories told about the military strategically harming Indigenous children during the scorched earth campaigns two decades before that (CEH 1999). The same Guatemalan and US state forces that spoke about using nutrition to help Indigenous families had, for decades, willfully torn Indigenous families apart.

Most of the Guatemalan children who died in or because of US detention services during the zero tolerance policy did so from common and easily treatable illnesses (Yates-Doerr 2019). In mid-December 2018, seven-year old Jakelin Ameí Rosmery Caal Maquín, from a Guatemalan Q'eqchi' community, crossed into Texas with her father, where they were apprehended by border control and held for several hours at a border station. Jakelin died from a high fever on the bus to the detention center. Days later, eight-year-old Felipe Gómez Alonzo, from a Chuj community in Huehuetenango, also developed a high fever while in detention. He had been in US custody for roughly a week, before dying in New Mexico on Christmas Eve. On Guatemalan Mother's Day, in May 2019, nineteen-month-old Mariee Camyl Newberry Juarez died from respiratory failure, having become severely ill while in US custody. Her mother, who was seeking asylum with Mariee, described being held in very cold cages in Texas, where they were "forced to sleep on a concrete floor" (Slatton 2019). That same month, two-year-old Wilmer Josue Ramirez Vasquez, from the eastern region of Chiquimula, also died from preventable illnesses shortly after his three-day stay in border custody in Texas (Moore and Sacchetti 2019). A few days later, sixteen-year-old Carlos Gregorio Hernandez Vasquez, from Baja Verapaz in central Guatemala, died from the flu while in a small holding cell in an overcrowded processing center in Texas (Moore et al. 2019).

In June 2019, Briseyda Lisseth Chicas Perez, a hometown beauty queen from San Marcos, adjacent to Quetzaltenango, died in the brush in McAllen, Texas, with her eighteen-month-old son, Denilson, in her arms. He died, along with two other Guatemalan children, ages three and twenty months (McDonnell 2019). Three mothers, each with a baby, had successfully crossed the border but became dehydrated while trying to find a place to turn themselves in for asylum. Briseyda's mother explained to a reporter for the *Los Angeles Times* that Briseyda had traveled, despite the dangers, because her six-year-old sister back in Guatemala

needed medical care that their family could not afford. The list of Guatemalan children who have died terrible and preventable deaths near the US border goes on and on. Eventually, the news cycle turned away from these stories, but children did not stop dying at the border. As reported by the Brookings Institution, between 2010 and 2019, the rates of US migration from Guatemala grew exponentially and the casualties also continued to rise (Bermeo et al. 2022).

The Window of 1,000 Days intervention promised to support the health and development of women and children so they could live better lives in Guatemala and not end up dying at US Customs and Border Patrol or while making their way north. The nutrient and education interventions would encourage "practices for better living" so that Guatemalan women and children could "survive and thrive"—another maternal health slogan. But USAID's interventions also function as an extension of—not an antidote to—the violence against mothers and children seen at the US border. We are not seeing a contradiction in policies but another mechanism for the reproduction of power and capital.

In her ethnographic work on obesity prevention programs, Megan Warin (2020) noticed how often obesity prevention interventions are designed based on the assumption that patients are ignorant and need to be taught how to care about themselves and their health. She developed the idea of "gentle violence" to highlight the interweaving of harm and care that shapes the design of these programs. She writes, "This 'doing good' of pedagogic work is misrecognized as neutral and the legitimacy of such knowledge is taken for granted as 'caring,' 'correct,' and 'right' by those who impart it" (663). But their pedagogy is not neutral, she insists, showing how chronic illnesses will be meticulously maintained by the very structures tasked with treatment, prevention, and repair.

Naming paternalistic maternal health nutrition interventions "gentle violence" helps us bracket the question of whether those people who carry out health interventions intend to be caring to focus on how they are nonetheless complicit in harm. The discussion of systemic cruelty that I elaborated in chapter 1 reminds us that we must stay attentive to how broader structures reproduce outcomes that individuals within these structures seem to decry. In the name of "better living," maternal health interventions treat mothers as if they are responsible for their children's health, as if their bodies are the key site for intervention, and as if they do not know how to be mothers without the programs' help. Education is designed to teach women that it is their responsibility to eat better and take vitamins—their responsibility to produce, through their wombs, better babies, better lives, and, ultimately, a better world.

This framing of responsibility positions women—and, following Colom's observations, we must add girls as well—as secondary to fetal gestation, creating a pathway by which social reproduction is surveilled, monitored, and policed by health workers, who offer little in the way of structural change to better people's

FIGURE 15. A woman in San Juan Ostuncalco cooks for her extended family. Photo by author, 2016.

lives. Lenore Manderson (2016, 166), an anthropologist who studied maternal health interventions in South Africa, writes that it may be attractive from the vantage point of health workers to focus on the intrauterine environment, but women in poor communities "live in poverty and insecurity, where the idea of taking 'time out' to exercise or to purchase, store, and cook foods deemed 'healthier' by those who advise them, is fanciful." Though posed in the language of caregiving, the interventions subordinate women while also holding them responsible for any harm that befalls their children. Mothers are to blame for their children's illness and poverty, and attention is thereby shifted away from the state.

EVERYDAY ILLNESS, REVOLUTIONARY CARE

In the summer of 2019, after months of reading news about Guatemalan children being separated from their parents at the border or dying from easily preventable illnesses, I returned to Guatemala with my own children, then six and three years old. While there I acquired an infection that was treated by an elderly woman from a K'iche' family. In attending to my wound, Carla demonstrated her tremendous care work expertise. And yet her skills are ignored in the Window of 1000 Days agenda, which promotes an entirely different vision for care.

. . .

I heard a knock on my door. When I answered Carla was standing in the dim light with a bowl of hot fragrant liquid, waiting to be let in.

Earlier in the week I had cut the side of my foot on the edge of a metal door. The cut wasn't deep, but it had pulled off a sizable chunk of skin. Now the oozing wound had become a worrisome color of green and I could not step on my foot with my full weight without pain.

"Sit down," Carla motioned me toward a chair. "We need to take care of this."

I sat as she helped me slide my shoe and sock off my foot, dipping a washcloth in the hot bowl. Just after the accident, she had cautioned me to take care of the cut, gently disapproving of my decision to pack my three-year-old with me on a trip to the San Juan mountains the next day. I had dressed the wound to protect it from the dusty travel, but she thought it also required rest, and the growing infection was an indication she had been right.

We had attended a birthday party that afternoon, where she saw I was struggling to carry my son. Though years of diabetes complications had made her frail and she walked with a limp, she confidently took him from my arms and set him on his feet, putting his chubby hands in hers so I could steady myself.

I had protested at first. "We're okay," I had insisted. My husband, who was with us at the party, echoed my sentiments, telling Carla, "Emily's got it, she's tough." I think he thought he was defending me, but when Carla insisted on helping me anyway, I realized I was glad to hand my son off to someone else.

Carla pressed the washcloth over my cut, and as the heat and pressure made me wince she squeezed my knee to draw my attention from the pain. Now, in the quiet of the bedroom, she repeated what my husband had said earlier: "Emily's tough." Then she added an exasperated "Ha!" I was surprised by the undertone of anger, since she was usually the portrait of a caring housewife—always working, always doting on her husband, children, and grandchildren. Food was prepared before anyone else was awake; dishes were scrubbed, dried, and put away; the shelves were always full of fresh produce, warm tortillas waiting in the basket on the table when meals were served.

That I am able to think of all these actions in passive tense—as things that just happened—speaks to the work she put into making the household run. She did not ever complain publicly, but now, in the quiet room with just the two of us, she let loose a biting feminist critique: "This idea that women are so tough, that women can do it all? As if work comes naturally to us, as if we are not beaten down by the process? Well, the fact is that they say this because they don't care if we are suffering."

• • •

When Carla married she quit her job as a hotel cleaner and began to take occasional boarders into her home, which had two back storage rooms that she had converted into pleasant bedrooms. Some of her guests are Guatemalan students

who arrive to study at the universities in the city, but many come from outside of Guatemala: backpackers, volunteers at one of the many NGOs in her neighborhood, or travelers introduced to her through word of mouth. Caring for boarders is a way Carla, who has no other income, can gain some financial independence from her husband. And indeed, it is clearly work to care for others as she does. Still the work is not purely transactional. In part this is because she does not have a preset rate; her guests pay by donation. The logic of transactional exchange also does not apply because her work is predicated on building relations. She keeps a notebook of the names and birthdates of guests who have stayed with her so she can remember them. She has taped pictures of her guests next to pictures of her four children and five grandchildren on the walls near the table where people gather to eat.

My picture and pictures of my partner and children show up in numerous places in her home. I have known Carla since I first stayed with her family in 2008, when my sister had come to visit me and we needed a place with two rooms. I have lived with her family for months at a time over a period of many years, watching as her once-young daughters have grown, achieving awards in primary and secondary school, graduating from college, and eventually securing professional jobs. Her daughters are quick to cite their father's intellect and ingenuity for their accomplishments, and indeed their father is a wise man. Yet Carla, though uncredited, has been caring for their education in many other ways. Her shaky penmanship speaks to her lack of formal schooling; like most women her age in Guatemala, she attended school for just three years (UN Women 2023). But she runs a house with very little money, cooking and cleaning and tending to her family's needs with tremendous, albeit undervalued, expertise. Carla always spoke proudly of her daughter's accomplishments—glad they have opportunities she never had—but she frequently felt overlooked and undervalued. When her mother was her age, sisters, daughters, and other kin were around to help with the work and stave off the loneliness. Now women of Carla's generation are often on their own.

. . .

While Carla bathed my ankle in an herbal concoction made from plants grown in her windowsill garden she shared her sadness and frustration with me. She was not only healing my ankle but also helping me feel less alone in the work of mothering I found myself being asked to do. "It's okay if you're not always tough. It's okay if you need help," she wanted me to know. Her kindness to me held within it a capacity to understand others that was as sophisticated as it was unassuming. It was all I could do to chase after my kids and make it to my research meetings; I didn't seem to be able to manage the self-care that my infection and my life seem to demand. But with Carla there, I did not need to rely on self-care at all. Every day that week, she arrived

to repeat the treatment, attending to my wound in a way that I was unable to do myself. Within a few days of her care, the cut had scabbed over and no longer hurt. Ultimately, I didn't need to go to the doctor and the infection cleared.

• • •

I take the time to recount the details of this interaction to illustrate that although Carla was extremely skilled at care work, nowhere were these skills valued or amplified in the USAID model for "practices for better living" in the Window of 1,000 Days. Education programs focused on cooking and mother-work—activities women of Carla's generation have spent their lives undertaking—make no acknowledgment of their expertise. Looking at USAID's programs, it would appear that women with Carla's knowledge simply do not exist.

Carla's feeling that she was beaten down by household obligations may seem distant from the violence of femicide, but Carla clearly recognizes the link between domestic activities and the broader landscape of women's suffering. Her response offers a lesson about how gender violence works and about how to counteract it. When it comes to her practices of "better living," we can see how she explicitly focuses on building relations as a means of healing. She takes up some of the responsibilities I face, shouldering them as her own. If we take an analytic step back, we see relation building not only as a palliative practice but also as a practice of running her home. Building connections with those who are not related through marriage or birth offers some autonomy from the nuclear model of family that has been forced on women of her generation, separating them from their kinship networks and leaving them to shoulder the burden of domestic work alone. Nuclear kinship has been a key site of social control, and caring for people outside her immediate family has been a means for Carla to resist.

There are limits; Carla's health suffered, and she had no sick or disability leave or retirement benefits to draw on. Despite the work she put into building relations of support, the forces working to isolate women are strong, and there was no one to offer her the kind of care that she offered to others. But amplifying her expertise in caregiving—which USAID so blatantly dismissed—may help reimagine nutrition interventions in communities where the political systems have not just failed women, but actively sought to harm them.

Conventional history textbooks present revolution as a grand political act led by heroic individuals. But revolution also exists in less-recognized practices of mothering, in which caretaking is not women's "biological destiny" but a "liberating practice that can thwart runaway capitalism," as the reproductive justice scholar Loretta Ross (2016, xv) writes. Carla never stands in the spotlight, and her caregiving actions are, in many ways, entirely mundane. Yet though she holds no megaphone proclaiming a grand political strategy, she is engaged in world-bettering, *counterpolitical* care work. I mean by this that her "practices for better living"

both challenge existing political orders and open up an alternative to politics for the work of building worlds.

CONCLUSION: GENDER VIOLENCE AND THE VIOLENCE OF GENDER

In 2014, as USAID was first launching its Window of 1,000 Days programs in Guatemala and the rates of children abducted at the US border began to spike, the Guatemalan Human Rights Commission (2014) issued three suggestions for policy-based interventions that would give Guatemalans needed protections and support:

1) Guarantee legal representation for migrants and refugees arriving at the US border;
2) Prioritize family reunification; and
3) Halt all deportations until a system is in place to provide both legal representation and screening for international protection needs for all migrants.

Not only did the US government *not work* to improve its practices surrounding legal representation, family reunification, or the cessation of deportations, but the US borders became more rigid and more violent and more people were killed.

Instead, the US government offered nutrition supplements and education classes, implementing a series of projects targeting pregnant women and young children. A USAID report from 2018 lists sixteen USAID nutrition-related projects active in Guatemala (USAID 2018). In 2020, USAID declared a "breakthrough action" entailing almost $8 million dollars in funding for a social and behavior change project to run from 2021 to 2025. The project, which targeted the "one thousand days window of opportunity," doubled down on the importance of teaching women hygiene techniques, implementing nutrition-specific and nutrition-sensitive practices, and increasing growth monitoring to prevent stunting (USAID 2023). And still, rates of migration among women and children from Guatemala to the United States accelerated, and despair continued to grow.

In this chapter, I have described two forms of gender violence that uphold political power. The first form is the explicit gender violence of murder, rape, and kidnapped babies. This is the violence named by the Truth Commission, whose analysis of the armed conflict found that the military made a point to target women, who were "killed, tortured, and raped, sometimes because of their ideals and political or social participation, sometimes in massacres or other indiscriminate actions" (CEH 1999, 23).

The second form, alongside explicit forms of violence, is the gender violence of forcing people to inhabit narrowly defined gender roles, for example, the role of a mother who must make herself subservient to her children, her husband, and a military state. In this chapter, we can see this violence of gender in the "practices

for better living" poster that all but cuts fathers out of the work of pregnancy and child care, in maternal health interventions that value the life of the fetus above the life of the pregnant person, and in nutrition education programs that disregard mothers and grandmothers who have deep knowledge of nourishment and food. This gender violence takes a "gentler" form than the rape or murder of warfare (Warin 2020; see also Mulla 2014). It is often carried out in the name of care, or, as argued in the previous chapter, in the name of gender equality. But the violence nonetheless remains potent. It forces people who may not want to be parents into expectant motherhood where their political and legal personhood is determined by their reproductive potential. It leads women and babies who have no viable future at home to flee for asylum and then die in each other's arms.

Social reproduction theorists have pointed out that the devaluation of care work is crucial for reproducing the political status quo (Hobart and Kneese 2020). Not only are care workers not paid for the work that they do, but this work does not even count as work. Consider how this dismissal is naturalized in the very term "caregiver": care, unlike waged labor, is held to be a gift. In Carla's case, she works tirelessly without any labor protections such as sick leave, retirement benefits, or a pension scheme. At the age of sixty-seven, she was given a terminal diagnosis by her doctor. One etiology would point to diabetes as the explanation, but another might point to unpaid labor: years of unreciprocated care work for others had worn her body down.

"Much more theoretical attention needs to be paid to the relationship between the physical body in all its acts (such as 'eating, drinking and procreating') and the social relationships of capital that such a body finds itself in," writes the historian Tithi Bhattacharya (2017, 11; see also Mol 2021). This is not a straightforward celebration of care work but a recognition that domestic caregiving practices powerfully give shape to broader governmental orders. The political philosopher Patricia Owens (2015) also notes that what happens in the home is foundational to what happens in politics. She points out, for example, that homeland security is founded on a metaphor of frontier domesticity in which the father must secure his property and that this kinship metaphor helps shore up violent border-policing practices of the state.

The Window of 1,000 Days agenda, in treating the maternal body as the primary environment of reproduction, individualizes care work that could—and should—be collective, but it does not only individualize this work. It also domesticizes women, holding them responsible for their families, fostering a version of family that values children over their mothers, places fathers—when they are in the picture at all—in charge, and denies girls the possibility of a future that is not one of motherhood. "Eat better, take vitamins, wash your hands with water and soap, keep feeding your baby when he is sick, put powdered vitamins in your children's food, go to your health care visits, know when your baby is in danger, breastfeed and keep feeding them when they are sick." These lessons that I heard

repeated by educators functioned not to make lives better but to force women into domestic roles. At issue was not only individualization, but the subordination enabled by the state-sanctioned doctrine of superiority that forced people to be women, women to be mothers, then made the lives of women and mothers a site of political violence.

USAID curricula rarely engaged women who were pregnant or breastfeeding as experts. The design of the Window of 1,000 Days programs did not encourage instructors to foster meaningful connections with their students or students in the classroom to foster meaningful rapport with one another. Mothers—or fathers, or aunts, or uncles, or people who were not parents—who did not fall within the thousand-days window were not considered at all.

In contrast to the individualization and responsibilization of mothers in USAID's maternal health agenda, Carla's care work forms connections. Expertise is involved. She holds skill and wisdom in gardening, growing, cooking, and negotiating her home that I do not. Crucially, however, her expertise does not require subordination. Instead, her practice of daily living builds relationships. I am not a mother to be held accountable or at fault. Along with the care she offers, she takes over some of the responsibility for my injury and needs. Her practices of better living are part of a broader project of creating channels for solidarity between people who have been made to be women, women who have been made to be mothers, and mothers who are made to suffer and die.

The call to pay close attention to the expertise of Carla's mother work is not an argument to disregard explicit techniques of political protest. As I described in chapter 1, when roads are blocked in political action in Guatemala, it is frequently women's bodies that are—literally—on the line, and many Guatemalan women are working to create avenues for legal justice where they did not exist before. The call is rather to consider what kinds of politics different care practices make possible and to consider that sometimes the very category of politics may contribute to an erasure of their skills. Politics in Guatemala, much like nutrition lessons taught in USAID's thousand days projects, frequently relies on and reinforces women's isolation and subservience. Meanwhile, Carla's expertise in feeding and care work helps nurture relations that might eventually foster collectivities and collective action. Take my hand, let me help, we're not alone.

In *Policing the Womb*, Michele Goodwin writes, "The work of social justice—creating equitable, dignified, respectful ways of engaging with women's health generally, and reproductive health specifically—necessitates innovative approaches, which involve turning to the legislature, petitioning the courts, as well as engaging with civil society to build and incorporate a reproductive justice platform" (2020, 189).

As I learned from the Todos Santos lynching, the existing political system in Guatemala has harmed (people who are made to be) women and could not be trusted. The Truth Commission noted that women "played an exemplary role in the defense of human rights during the armed confrontation" and for that reason

became a target of the state (CEH 1999, 23). More recent accounts have reported that community workers in Guatemala are frequently marked for assassination, including midwives who are instrumental in connecting women to one another (Al-Sulaiman 2018). We might consider that it is precisely because of how skilled women are in the "practices of better living" that the legal justice system has sought to harm them. After all, in Guatemala the state has a long history of working to "destroy the cultural values that ensured cohesion and collective action in Maya communities" (CEH 1999, 23).

Guatemalan women had not necessarily given up on legal justice, but many had turned to the "innovative approaches" to community building that Goodwin flags, using cooking and nourishing to bring families and social networks, broadly and variously defined, together. These approaches foster community support, mutual aid, and collective action, but they are not necessarily the state-building work of politics. Carla, for good reason, does not have faith in the political structure of the state.

When encountering structures of harm, different tactics can be undertaken to transform them. A structure can be refused outright. It can also be enriched by adding to it or shifting it in some way. Or a third path might even combine the first two, enriching as a means of refusal. For example, when it comes to the nation-state, Leanne Betasamosake Simpson (2017), a Native Michi Saagiig Nishnaabeg theorist, notes that the concept of nation used by her people calls into question the system of nationhood brought into being under settler colonialism. For her, nationhood is a "series of radiating responsibilities" and not a claim to property (9). Nationhood is family, she explains. "Not the nuclear family that has been normalized in settler society, but big beautiful, diverse, extended multiracial families of relatives and friends that care very deeply for each other" (9). This strikes me as being a tactic of transformation in line with Carla's use of nourishment to simultaneously refuse and enrich the landscape of reproductive justice. By carefully feeding others, she remakes the conditions of possibility for a political system in which her labor is foundational but erased and where even the aspiration of its representation would not set her on the path that would serve her—or others in her life.

In closing, I want to consider one of the steps in USAID's "practices of better living" that did not fit in with the others. It is the final step in the category of everyday life practices: "Participate in community activities," showing a group of women gathering in a classroom. Educators hurried through this step or made a note to women that they were already accomplishing this step by being present at the class. "Give yourself a round of applause since you're here!" one instructor said.

My cynical analysis would be that in associating "participation in community activities" with participation in nutrition education, USAID was seizing control of women's powerful tool of kin making, circumscribing the possibilities for community-based collective action into attendance at a bureaucratic class. When I am able to muster hope, however, I like to imagine that a conscientious instructor somewhere managed to insert a step that honors the community-building skills of

care workers such as Carla into an otherwise insipid pedagogical program. I then picture someone somewhere asking the participants how to strengthen community participation and, in doing so, looking to the people who have these skills and finding an opening for change.

Focusing on the skills that go into "community participation" might help policy makers redesign nutrition interventions to center the care work of community builders. This would include people in communities without children, as well as participants who are currently dismissed by current thousand days programs as uneducated and unskilled. In valuing community action, the interventions could begin to contest the unjust "doctrine of superiority" that privileges White, male, cis, and able-bodied citizens (CEH 1999). Named by the Truth Commission as a driving force of Guatemala's genocide, the doctrine of superiority continues to shape American visions of family, in which the mother reproduces for the good of her husband and her state. To work against it, interventions might seek to change the conversation of reproduction to focus on community action, not women's bodies. They might accordingly work to tackle concerns for political representation, family separation, economic exploitation, and punitive border politics, incorporating principles of interdependence and solidarity into the field of nutrition.

Yet even as I want to make space for transformative openings in nutrition curricula, in this chapter I have asked that we take seriously how frequently nutrition education operates as a tool of violence. Suggestions made with an eye to improving the classes may not understand that the programs function to harm and alienate women, not strengthen and help them. To offer suggestions for improving nutrition classes risks ignoring that in the current political system of governance, a successful program is one that fails the women it claims to serve. Without discounting the possibility of working within cruel systems to transform them, any suggestion for improvement must be made with the caveat that "practices for better living" will not likely be found in a USAID manual or classroom—or even here in an academic text.

This is not, however, a hopeless message. Alternatives to USAID—and alternatives to state-based or academic politics—are all around us. Reproductive justice may not be loud or visible, but it is nonetheless vibrant. It happens in the food and care practices that create community. We do not need to look to state politics for this form of justice. We do not need distant experts to arrive with something that was previously lacking. "Intervention" may be entirely the wrong frame. We can find the ability to overcome gender violence and the violence of gender in the care work and survival work undertaken by those who are already experts in the work of nourishment, who undertake this work every day.

6

Window of Opportunity

The previous chapter illustrated how a Guatemalan mother used food and feeding to intervene in systemic cruelty. This chapter also explores how people worked to transform the harmful structures they operated within. I describe a "window of opportunity" in the twentieth century when nutrition scientists sought to incorporate agroecology and small-scale farming techniques in their work. In the historia that I recount, the scientists were imagining ways to collaborate with Indigenous knowledges to create better food systems, with benefits for maternal nutrition in Guatemala and internationally.

In 2012, when the Guatemalan president Otto Pérez Molina and vice president Roxana Baldetti launched the Window of 1,000 Days intervention, evidence of an earlier desire to integrate nutrition and agroecology was entirely absent from the maternal health agenda. Instead, the intervention's core technology was a polyethylene-lined sack filled with a corn-soy powder, produced from US surplus agriculture from mega-sized industrial farms and packaged thousands of miles away. The powder, with a shelf life of eighteen months at 80 degrees Fahrenheit and the ability to retain its micronutrient content for twelve months in the field (USAID 2017), was entirely divorced from Guatemalan seeds and soils. For the Pérez Molina government and its work with nutrition, community-based agricultural sovereignty was not an achievement but a threat. The promotion of local food had become the domain of food and environmental activists—not nutrition scientists.

Today American governments call for investment in nutrition in the thousand-day window as a means of producing a better future, and the prevailing model for "good nutrition" during this window is reliance on prenatal and lactation supplements and commodified foods. This chapter turns our attention away from the

body of the pregnant woman to instead provide historias of Guatemalan food systems and agroecological health. This is not a departure from the book's focus on maternal nutrition but a push to expand how we understand the relationship between health, agriculture, land, pregnancy, and the nourishment of community. The historias recounted in this chapter illuminate what went wrong with INCAP's utopian vision of nutrition, which was ultimately ill prepared to face the politics of its own practices of knowledge production. The hope in telling these historias is to cultivate a practice of science better able to respond to its own complicity in harm.

THE PACHALI FARM (2016)

The soda bottles were cut just below the neck, then attached onto large plastic tubes that had been sliced lengthwise and stuffed with soil. What resulted was a clean and contained planter bed for lettuce seeds. Rows of these beds had been placed side by side on a wooden platform built at waist height. It was ingenious, really. The elevation protected the growing leaves from pests and also made it easier to weed around them, as bending to the ground would cause backaches after not much time. It looked rather ridiculous with the lettuce sprouting from what appeared to be an extremely long bottle of coke, but the bottles increased the functionality of the design by making use of the discarded soda containers that quickly piled up in the countryside.

It was 2016, and I had traveled to a nondescript spot on a rural road roughly an hour outside of Guatemala City that was labeled by nothing but a small dot on the map, marking it as "Pachali." I was there, accompanied by the Guatemalan anthropologist Luisa Madrigal, to see what had become of the once-flourishing INCAP farm.

At the farm's entrance were two plastic containers once used for cooking oil that were now secured to a fencepost. A string tied to the lip of each container ran to a foot pedal on the ground. Stepping on the pedal would dispense soap from one container, or water from the other, the runoff collected in a bucket below. Mario, who cared for the grounds with his wife Sylvia, pointed out proudly that you could wash your hands without ever needing to touch anything, saving water and maximizing hygiene.

The farm was filled with dozens of clever inventions, like the hand-washing device or the soda-bottle irrigation system. Vegetables grew from tires painted white to cut the heat and hydroponic strawberries grew out of plastic bags suspended from wooden scaffolding. Sylvia picked a small yellow tomato from a vine growing along one of the posts and handed it to me. "You don't need to wash it. Don't worry. We don't use chemicals on anything here. It's all organic," she said proudly.

Being organic may have made the tomato safe for me, but this also made the produce precarious. Nearly all the leaves of the plants close to the ground were pockmarked with holes made by small predators. Most of the structures on the lot were in bad shape as well. Tattered strips of plastic covered the skeletons of long-abandoned

buildings. An aging sign at the entrance announced that we were at the Center for Teaching and Interchange of Knowledge. A loose corner curled over the mission statement, making it hard to read that the purpose of the farm was to "generate, adapt, and transfer eco-technologies through a participatory process that incentivizes, motivates, and promotes these technologies" (my translation from Spanish). I could make out that we were on INCAP's property, but the farm's other sponsors had faded into obscurity. Near an overgrown parking lot were the remains of a large greenhouse, its scaffolding broken and occupied by birds. The weeds around us grew strong, but most of the plants that should have been thriving were struggling.

As if sensing my concern, Mario offered an explanation: "The worms and fungus gravitate to us. Nothing for miles around is safe to eat so they all come here." "The seeds are also affected," Sylvia added, while she picked and shucked a bean pod. "We should have acres of crops to choose from when selecting the next generation of seeds to plant, but now we have just this small plot of land. It doesn't take too many cycles to see the effects." She held out the small black beans—showing me, I think, that the seeds were not as strong as they should be, though I didn't know what to look for.

No expertise was necessary, however, to see how different this farm was from the adjacent land. "INCAP owns everything here," Sylvia told me, gesturing outward, past the caretaker's home where she and Mario had lived for many years. "But it is all leased to commercial producers."

She pointed in the direction of a massive field in the process of being leveled, where workers mechanically cut into the ground, their hoes softening the dark dirt. Bags of chemical compost were piled high against two blue plastic tanks holding liquid fertilizer. Just beyond the stack of chemicals, I could see huge sheets of black plastic spreading out into the horizon, holes cut every few feet along it where the plants would grow. On the other side of the caretaker's home, rows upon rows of potatoes grew leaves a deep, vibrant color of green.

"The land as far as you can see belongs to INCAP," Sylvia said, gesturing toward the potatoes. "But we don't really have anything to do with it." The farms surrounding the plot she cared for were leased to corporations growing produce for export. Meanwhile, at the Center for Teaching and Interchange of Knowledge the produce was struggling. "It is hard to not feel that we're fighting a losing battle," Sylvia said, as she tenderly pulled a weed away from a strawberry.

NUTRITION AND AGRICULTURAL DEVELOPMENT

At the start of the 1960s, before teams of US psychologists were flown into Guatemala to study hunger, before these teams administered IQ tests to hundreds of Guatemalan children, before US anthropologists helped develop a culturally acceptable nutrient product to make these children's brains grow bigger, before the Cervercería Centro Americana stepped in as the main distributor of this product, and before nutrition became associated for most everyone in the field of public

health with nutrients, Nevin Scrimshaw, the first director of INCAP, purchased forty-seven hectares in the mountains outside of Guatemala City on which to build an experimental farm.

Scrimshaw was a US food scientist with a PhD in biochemistry, an MD with a focus on obstetrics, and a lifelong interest in holistic sciences, including anthropology. He inaugurated INCAP on Guatemalan Independence Day in 1949 with what he later described as the "utopian" goals of using nutrition to make the world better (Scrimshaw 1974, ix). World War II had just ended, and INCAP advertised itself as a multicountry, cooperative effort to explore the basic science of nutrition to improve regional and international challenges of hunger. The UN-affiliated institute received funding from its member-countries and the Pan American Health Organization, as well as grants to carry out research and train local scholars from the Kellogg Foundation and the Rockefeller Foundation.

Some years later, Patty Engle, a child development specialist from the US who worked at INCAP from 1973 to 1978, reflected in a conversation with me that the institute's scientists had been drawn to the idea that nutrition science would be key to lessening social inequality. Engle was driven by egalitarian principles and a "devotion to caring" instilled in her by her Quaker faith (Solomons and Allen 2012). She was one of many US scientists who worked at INCAP in the 1970s who have described their time at the institute to me as electrifying, finding their research exciting and urgent, with solid potential to make the world better.

Scrimshaw, who would go on to win the prestigious World Food Prize, became famous for his work on goiter, a thyroid condition that makes it difficult to swallow and breathe. Goiter, one of very few illnesses caused by malnutrition with a relatively easy cure, is treated with trace amounts of iodine, which can be cheaply added to salt. Scrimshaw had observed that the techniques to fortify salt in Europe and the US did not work on the moist salt of Central America. A new iodine compound he developed in the 1950s combined well with Guatemalan salt, quickly lessening what had once been a widespread health problem (but see Vrana 2023).

Scrimshaw had gotten lucky with the simplicity of the cure for iodine, but he was not really a magic-bullet thinker. He was a systems thinker, and from the beginning he was interested in how nutrition could be—and should be—tied to the work of producing food. The academic discipline of nutrition has clear imperial origins, emerging from a need to produce rations to keep sailors, soldiers, and laboring prisoners alive (see Carpenter 1994). But Scrimshaw saw nutrition as a diverse and interdisciplinary field, comprising scientists working cooperatively toward the shared goal of a "healthier and better nourished humanity," as his student and collaborator Noel Solomons (2013, 278), who followed Scrimshaw to Guatemala, reflected on Scrimshaw's death in 2013.

At INCAP, Scrimshaw had partnered with the Guatemalan pediatrician Moisés Béhar, whose theories of biological deficiency and colonialism I described in the book's introduction. When they started the Pachali farm together in 1961,

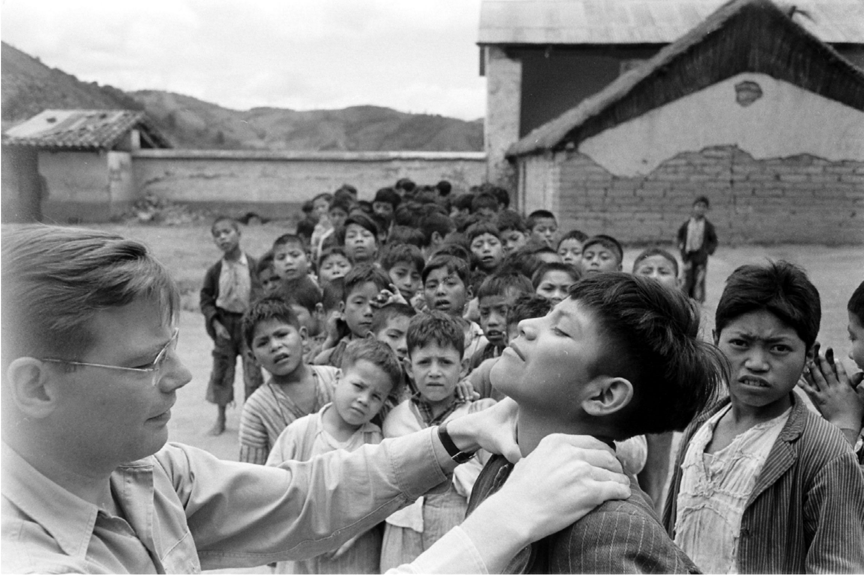

FIGURE 16. Dr. Nevin S. Scrimshaw of the Institute of Central America and Panama examining children in Guatemala for goiter. Photograph by Cornell Capa, 1953. Copyright © LIFE / Shuttershock.

the year Béhar took over the directorship of INCAP, one of their ideas was to investigate intelligent agrarian designs, not entirely unlike the soda bottle filtration system described at the opening of the chapter, that made pragmatic use of available resources. The farm's "interchange of knowledge" mission was envisioned as a way that scientists could learn from Guatemalan communities, especially Maya communities, who possessed a deep, intergenerational knowledge of agriculture, as seen in their practice of milpa cultivation.

The genius of the milpa system is far older than colonial time. *Milpa* loosely translates into English as "cornfield," but it also refers to a broader system of regenerative growth. For thousands of years, Maya people have engaged in swidden (also called "fire-to-fallow" or the more derogatory label "slash and burn") techniques of cyclical planting and harvesting to maintain rich soils while producing an ideal combination of food. Maize, beans, and squash, which grow synergistically in a milpa, were first cultivated in the Mesoamerican basin. A nutritionist can tell you that together these three plants make a complete protein, containing all of the essential amino acids humans need to survive and thrive. Scientists at the Guatemala City–based Center for Studies of Sensory Impairment, Aging and Metabolism have long shown in their research on vitamins A and D, riboflavin, zinc, and iron that Guatemala's traditional foods were superior for metabolic function to a "western" diet (e.g., Valdés-Ramos et al. 2001).

The K'iche' and Mam-Maya farmers I interviewed did not need the vocabulary of micro or macro nutrients to produce an abundant harvest. They spoke not in terms of protein and embodied fitness but interdependencies of labor and land. Growing good food, they told me, requires knowing when the rains will come, how to care for soils, discernment in selecting the right kernels to save for the coming year—and many more harvesting techniques that cannot easily be translated into an English language that did not evolve around the specificities of the milpa practice.

Béhar and Scrimshaw were fairly unusual among nutrition scientists of their time in arguing that aspects of industrialization in Guatemala had made people's lives worse, not better. A book they edited titled *Nutrition and Agricultural Development: Significance and Potential in the Tropics* (1976) made steps toward linking hunger to conquest. At a time when many policy makers framed cultural ignorance as the cause of hunger, they wrote of the harmful effects of colonialism on Indigenous diets. Scrimshaw prided his scientific work as being apolitical, but he was also interested in cultural complexities. Adding an agroecology wing to INCAP's work with nutrients was imagined to slow down the push for modernist improvement in order to embrace the many kinds of food systems expertise already in existence.

And yet, despite Béhar and Scrimshaw's good intentions, nutrition would be narrowed to a science of supplements and farming would be overtaken by the push for industrial agriculture. In the decades between INCAP's initiation of the Pachali farm and my tour through its now-archival ruins, attention to small-scale technologies that could support local food sovereignty would disappear from the institute's agenda—as well as from the agenda of the field of nutrition more broadly.

Instead, INCAP would become world-famous for its Longitudinal Study of Human Capital. This study of protein powder took place at roughly the same time that the scientists were exploring the interchange of knowledges. But whereas most nutrition scientists had dropped the theme of Indigenous agriculture from their research by the end of the twentieth century, the study of supplements continued to thrive. Researchers at INCAP in the 1960s and 1970s may have tried to integrate Indigenous ingenuity into their work, but they seemed unprepared for how nutrition science could be used as an agent of violence. Their critique of imperialism had not fully confronted the fact that imperialism in nutrition was not only a problem of the past, but something that carried on.

MONOCULTURAL CAPITALISM

The overthrow of Guatemalan president Jacobo Árbenz was a boon not only for the US-based owners of the United Fruit Company but also for the broader paradigm of monoculture farming and the monopoly corporations that would come to run these farms. As described in chapter 1, Árbenz had led a social and political land reform movement, helping small Guatemalan farmers gain land titles. After he was deposed, many of the farmers lost these titles and had no choice but to return to labor on plantations.

The coup against Árbenz in 1954 allowed for the intensification of Green Revolution technologies throughout Guatemala in the decades that followed. Globally, governments and philanthropic organizations such as the Rockefeller Foundation were funding research on high-yielding cereals, the genetic hybridization of seeds, and the production of synthetic fertilizers and pesticides. These were technologies that encouraged the mass production of crops for global markets, an entirely different model of food production from the milpa agriculture of the family farm in which different crops grew intertwined.

The backdrop to the development of seed and soil agrotechnologies in the 1960s and 1970s was a narrative that scientists had adopted about exploding population sizes in a geographic region they called "the developing world." According to this narrative, poor women were having too many babies, and without scientific intervention to increase the food supply, these babies would grow up and devour everything, and the world would run out of food. Even left-leaning advocates fueled the narrative. "The global demand for foodstuffs is outrunning the productive capacity of the world's farmers and fisherman," warned the environmentalist Lester Brown (1976, 3) at a 1974 meeting convened in Guatemala City.

The Green Revolution seems deceptively named from today's vantage, where "green" is associated with conservation and green technologies imply care for the earth (e.g., Green New Deal). Titled a *Green* Revolution to emphasize the contrast with the Soviet Communist Red Revolution, the Green Revolution promised to feed a hungry world through scientific innovation (Olsson 2017, 7). The industrial farming technologies it promoted focused on mass production of crops—not "green" environmental sustainability. In the second half of the twentieth century, US and European companies were arriving in Guatemala with seeds for produce that Guatemalans did not historically eat, such as cauliflower, cabbage, carrots, onions, and broccoli—all foods with a sizable export market (Fischer and Benson 2006). These vegetables were not adapted to Guatemalan ecologies, requiring heavy doses of fertilizers and insecticides to grow.

Green Revolution scientists positioned themselves as saviors, not aggressors. Yet the monoculture technologies they produced and marketed to alleviate global hunger wreaked havoc on Guatemala, supplanting the time-honored swidden system at the foundation of Indigenous life. Those involved claimed that monoculture agriculture would help "increase efficiency," by which they meant that more food would be produced. In fact, this push to efficiency consolidated economic profit and political power (Patel 2013, 2). As Indigenous laborers were being worked to death by wealthy landowners (Oglesby 2013), the Green Revolution's proponents were spreading a powerful rhetorical narrative that their technologies would successfully "feed the future." In Guatemala, and elsewhere, the promise of magic-bullet solutions to the perils of hunger led municipal governments to embrace industrial agriculture, setting aside concerns for unjust landholder tenure and land redistribution.

The rise of agrochemicals in Guatemala through the twentieth century is a perfect storm of what Ruth Wilson Gilmore (2020) calls "racial capitalism," referring

to how capital accumulation depends on and reproduces racial hierarchies. In Wilson Gilmore's (2020) words, "Capitalism requires inequality and racism ensures it." In Guatemala's highlands, Indigenous people are largely responsible for the everyday work of food cultivation: planting, weeding, watering, harvesting, and caring for the land. As soils became blanketed with the poisonous heavy metals used in monocrop production, it was Indigenous bodies that were forced to absorb the maladies of this poisoning: chronic headaches, rashes, gastritis, cancers, miscarriages, and birth defects. Capital accumulation was assisted by chemical accumulation, with the beneficiaries of capital separating themselves from the laborers who work the poisonous fields (see also Agard-Jones 2013; Grandia 2022). In theory, monocultures would provide food to feed the world and people would grow and thrive through better nutrition. In practice, the more profit the agrochemical corporations would make, the more Indigenous communities would be made to suffer.

At INCAP's twenty-fifth anniversary event in 1974, Scrimshaw and Béhar (1976, 4) noted that from the very beginning, a fundamental goal of INCAP was to create local capacity that would allow member countries "to determine and solve their own nutritional problems." They described the anniversary event, which brought over three hundred nutrition scientists to Guatemala, as a great opportunity for Euro-American scientists to get acquainted with Central American scientists and the innovative work they were undertaking.

Yet the project of lifting up Central American scientists was tempered by the dominance of US scientists during the meeting. The opening speaker, a US agricultural economist, characterized developing countries as "the world's principal unrealized potential for expanding food production," emphasizing that Guatemala was useful to the rest of the world because of how it might help with the project of "replenishing depleted global food reserves" (Scrimshaw and Béhar 1976, 4). Many of the talks critiqued the manual cultivation techniques commonly used on small-scale Guatemalan farms. "These relatively slow systems do not allow the use of technology as designed by the agricultural scientist," one set of speakers complained, praising the technologies of the Green Revolution for giving "the world new hope" (128–29). In hindsight the very goal to develop Guatemalan capacity in nutrition and agriculture worked to reinforce the belief, prevalent since times of conquest, that Guatemala's material resources were a "window of opportunity" for the global elite.

FROM UNITED FRUIT TO USAID

To explain how a focus on nutrients came to dominate the field of international nutrition, we need to return to the year that INCAP acquired the Pachali farm, 1961. One year into a war that would last for the next three decades, this was also the year that USAID set up a base in Guatemala City. Despite the success of the coup against Árbenz, which the United Fruit Company's US shareholders had helped facilitate, the company could not maintain its presence in Guatemala.

By the early 1970s, after a decade of financial losses, it pulled out of the country. The United Fruit Company's demise would not, however, signal the end of US influence. Instead, as United Fruit withdrew, USAID moved in.

USAID's predecessor, the International Cooperation Administration, had helped fund and direct the building of the Pan-American Highway in the 1950s, eventually connecting Alaska to the Panama Canal. At the time of writing, civic protests or landslides frequently block passage along the Guatemalan stretch of the highway, but on an uneventful day it can take a mere ten hours to travel across some of Central America's roughest terrain from Mexico to El Salvador—a huge advantage for companies exporting produce at risk of spoiling. USAID advertises itself as a "good neighbor," whose interventions are motivated by the moral, economic, and political mission to help other countries. A website banner reads that US generosity in the countries where USAID operates "promotes a path to recipient self-reliance and resilience." But it is telling that its initial work focused on enhancing commodity chains so that goods grown in Guatemala could be sold—at considerable profit for a few select US shareholders—throughout the world.

Today the headquarters of USAID in Guatemala City are a well-fenced fortress, requiring more security checks to visit than any other building I have ever entered. Phones, computers, and passport identification must be given to security at the metal detector at the building's entrance. Visitors can carry but a single field notebook and pencil—nothing electronic. Upon passing an initial screening, they are escorted by an armed guard to another unwelcoming checkpoint where another guard sits behind a barred window flanked by official photographs of the US president, vice president, and secretary of state.

The several visits I made between 2016 and 2019 gave me a chance to notice that while the lobby artwork spoke of peace, it was a militarized peace that valorized industrialization. One motivational poster announced, "La primera condición para la Paz es la voluntad de lograrlo" (The first condition of Peace is the will to achieve it), oddly framing peace as a matter of individual volition. Another poster showed images of snow peas, reporting that nontraditional vegetables "bring peace and development." Magazines on the coffee table had titles such as "Guatemala Beyond Expectations" and "Guatemala: The Most Attractive Business Destination of All of Central America." The peace and development advertised here was used to sell Guatemalan resources to global investors.

Just inside the lobby, visitors pass a huge triptych mural depicting the inauguration of USAID's Guatemala headquarters. The mural's four corners feature important national symbols from both countries, including the White House, the quetzal, and the US and Guatemalan flags flying side by side. In the center, a blond US farmer works with a man in Maya clothing to turn a large wheel bearing USAID's logo, which the Guatemalan artist Maugdo Vasquez described in publicity about the mural as the "gear of development." President John F. Kennedy sits behind a podium on the left side of the mural, flanked by White men in suits and

ties. Maya farmers harvest produce on the right. Maya children sit studiously over textbooks at the bottom of the mural. Behind them is a crystal-clear lake set beneath volcanoes. Yet, rather than feature the Maya milpa system, the artist had drawn a scene of monoculture agriculture, each plot of land growing a distinct commercial product. The depiction of the farm is almost pretty. The colors are brilliant; the crops look healthy. But at one side of the mural, women wearing protective masks bend over boxes of produce that appear to be on a conveyor belt, while a vehicle in the background shows men unloading heavy bags of packaged fertilizers—a hint at how the promised interchange of knowledge between the US and Guatemala may be enticing but deadly.

Maya cultures in the mural are celebrated but only to a point. Ultimately, this vision of multicultural harmony leaves monocultural capitalism untouched.[1] The "gear of development" spins the country along a track in which Indigenous farmers grow plots of single-crop vegetables with the aid of US-produced chemicals and seeds. This vision of progress is one that rejects the time-honored milpa system of integrated crop production. USAID may speak of peace and economic development, but it is clear that this comes at a cost to many. As the sociologist Hannah Landecker summarizes the cycle, "It is striking that the changes in agriculture produce the deficiency diseases that drive the nutrition science that drives the supplementation theory that enables the continued production and promulgation of monocultured cheap foods" (pers. comm. 2023).

GARDEN OF THE AMERICAS

Beti Gonzalez, a K'iche' Maya schoolteacher I met when doing my research on obesity, remembered when she was a young girl and would travel to her mother's small plot in the fields outside of Xela's city center. Generations ago, much of the regional land was managed collectively, but now families—even poor families like Beti's—owned small individual plots. As the K'iche' anthropologist and former mayor of Quetzaltenango, Rigoberto Quemé Chay (2020), explains this transition, the nineteenth-century Guatemalan government, in cooperation with the Catholic Church, forced its vision of landownership on communities in the vertiginous mountain terrain of western Guatemala. In the twentieth century, collective farming practices in the region had almost entirely disappeared, and most of the territory around Xela was divided into private plots.[2]

Xela is home to urban Maya elites who are chemists, doctors, or lawyers with advanced university degrees. These professional obligations notwithstanding, I regularly heard that every Maya person needed to maintain their connection to land—that Indigeneity in Guatemala was, in a fundamental way, associated with food production. Wealthy K'iche' families—los Mejilla, los Coyoy, los Citalan, los Racancoj—control large tracts of land in the region, but even poor Indigenous households have tried to hold onto small plots on which to grow corn, broad or black beans, and

squash. Owning some land didn't make families rich, or even middle class. It simply helped ensure they had food of their own to eat each year.

Beti's best guess was that fewer than a quarter of Indigenous families in Xela own land today. Her own family had recently sold all 18 cuerdas of their father's property. Her parents were aging, and her siblings were worried about what would happen to the land after her father died. They decided it was safer to sell than navigate the complexities of Guatemala's inheritance law. Besides, they all worked city jobs, and none of them had the time or inclination to maintain the property.

Beti's father's land had become money in the bank, but her mother still owns her 1,500-square-meter plot where she carries out a routine that she can trace back to her great-great-grandparents. Sundays are for the church, but Saturdays are for the earth. In March, her family would sow maize that they would cut come November.[3] First they would divide the land into sections that were five rows and four columns deep. In every place where they would eventually plant maize, they would make a mound of dirt—a small volcano that would protect the seedlings from the wind and rain as they grew. The Mexican ethnologist Margarita Warnholz Locht (2012), frequently cited in Guatemalan newspapers, says this about the process: "Maize is a human-cultural plant in the deepest sense of the term because it does not exist without the intelligent and timely intervention of human hands; it is not capable of reproducing itself. More than domestic, the corn plant is the creation of human labor. By cultivating maize, humankind is also cultivated."

Preparing the mounds for the kernels of maize is laborious, beginning long before people arrive at the fields. In their homes, families would save all their scraps of food: coffee grounds, eggshells, and vegetable peels. On Saturdays they would carry the scraps with them in buckets to fertilize the soil volcanoes. They would also bring sacks of *cal*—ground limestone, sold cheaply at city markets—and ash from their fires, which would neutralize the smell and help the foodscraps decompose faster. The cal had the added benefit of repelling animals like birds or rats that would eat the maize.

Years ago, Beti's mother built a pen for animals—at one point up to eight pigs and sixty chickens, both laying hens and hens to eat. On Saturdays, Beti and her mother would clean the cages, recycling the manure they collected into compost. They would spend the day with their hands in dirt, caring for the growing plants or eventually cutting them and collecting the harvest. In winter was the *raspa*—the time for cleaning away the weeds and letting the soil lie fallow. Often in January and February, there is no rain, so they would bring water by hand to keep the earth moist and allow the land to heal. For decades now, development experts have taught people in the community that swidden agriculture is harmful to the land and air, and it has mostly been abandoned. Only recently has there been talk of how the ash from the burning might be good for crops.

Beti's mother, whose house is at the edge of the city, has the fortune of living eight long blocks from her property—close enough that she can easily carry her

kitchen scraps. Like most people in Guatemala, she does not own a car. Still she had to stop keeping animals years ago because robbers would steal them, taking both the source of meat and the supply of fertilizer their excrement provided. Today no one in the region can maintain animals unless they happen to live on their land or are wealthy enough to hire someone to keep guard. Beti's mother had been resolved to not use chemical fertilizers, but her leftover food didn't always stretch far enough, and she has watched her friends and neighbors rely on the convenience of agrochemicals that come in easy-to-store plastic packaging and can be delivered at scale.

For now, the land produces enough maize to feed her family the corn tortillas, or *tamalitos*, that are customarily eaten with every meal, but its value is not only in the food. Five years earlier, Beti gave birth to a stillborn child, who was born close to the due date. For more than a year afterward Beti couldn't function, her body overwhelmed by the confluence of hormones and grief. To heal herself, she would go to her mother's land and sit, slowly taking the air of the fields into her lungs, watching the seasons change as time washed over her, in her words, like the afternoon rain. She does not blame anyone for her child's death. For her it is a medical mystery that is not to be solved, much like a sibling's facial paralysis or the stillborn death of a niece just a few years before. But she nonetheless worries about the chemicals in her city, wondering what they have done to the soil and her community.

Pesticides present a vexing problem for experimental science, given that the long duration between exposure and illness makes causality difficult to prove. But if experimental scientists have been hesitant to label agrochemicals as poisonous, many people in Guatemala's highlands confidently link synthetic chemicals to birth defects and cancer. Marketgoers will steer clear of produce from nearby Almolonga, a town known widely as "la Hortaliza de América," the Garden of the Americas (Alvizurez and Longo 2017). Almolonga produces carrots, celery, beets, spinach, and cabbage for export to Central America (the produce has been deemed too toxic for European and US markets; see also Galt 2014). Pesticide shops line Almolonga's main square, and farmers walk through the fields with spray buckets hooked to their backs at all times of day. Residents thank agrochemicals and God—evangelical churches have a strong presence in the area—for being able to produce up to five harvests in a year when twenty years ago they produced just two (see Goldín 2009). Yet the bounty comes at a significant cost.

Epidemiologists working in Almolonga have reported exceptionally high rates of stomach cancer and miscarriage since they began looking for anomalies in the 1990s (Arbona 1998; Goldín 1996). When I traveled to Almolonga regularly in 2008 and 2009, people were willing to talk with me about the high levels of toxins in their soils, but when I asked people about pesticides in 2016 and 2017, my questions were greeted with either silence or reassurance that everything was now fine, as if the empty plastic pesticide bottles floating in the rivers or stacked up

throughout the alleys of the town simply were not there. I didn't push this; I am not an investigative journalist and almost always adjust my line of inquiry if it makes people uncomfortable. In this case, the finding was not in people's expressed concern but in the fact that the topic had become taboo. After all, awareness of toxicity might not lead to a change in pesticide use but to market losses for their produce or to a decline in tourists who are drawn to the town's medicinal thermal baths that form from fissures in the volcanic earth.

Residents of Almolonga's neighboring communities who relied less on agricultural export markets or tourism remained quick to share their concerns about the chemicals. One farmer told me that the widespread use of insecticides had created superbugs that tore through plants grown without chemical protection. Another farmer had observed that the indiscriminate effects of synthetic toxins had killed desirable local predators that had previously protected the plants, throwing the ecological rhythm of the landscape off balance. Many who tried, and failed, to grow food without agrochemicals blamed the chemicals in adjacent plots for their failure. Bugs traveling through a sea of insecticide-covered plants would be drawn to their clean produce like bees to honey, they explained.

Whatever the cause, it was clear that many farmers were struggling. Some farmers told me that after pesticides had been introduced, plants could no longer grow without them. As seeds sprouted increasingly smaller and weaker plants, farmers would apply more pesticides. They reported that once the ecology of the farmland became accustomed to synthetic fertilizers it would take years of growing poor crops without these fertilizers to rejuvenate the soil—something most people could ill afford. Plants and farmers alike were caught in a loop, where the more chemicals they used, the more they needed. Today collapsing soils demand ever more agrochemicals and farmers across the country are sick with cancer and mysterious ailments. According to the Guatemalan economic theorist Bernardo López (2013), what was marketed by food scientists as a virtuous circle had become a vicious cycle.

López is thinking about agricultural cycles, but there are vicious cycles happening in reproductive health as well. The US and Guatemalan governments give nutrition supplements derived from the surplus of mass-produced produce to pregnant women who have deep expertise in plant cultivation. Governments, along with commercial industries that sell prenatal supplements for profit, tell women these supplements are crucial for their children's health. Meanwhile, to grow produce that can compete on global markets with mass-produced, monocultural agriculture, these same farming women will spray their gardens with pesticides and insecticides, whose heavy metals are rumored to have an impact on their own reproduction through cancers and cellular damage.

In summer 2017, I walked with Beti to her mother's farmland. As we drew close, she pointed out an experiment being run by a neighboring farmer who was trying to return to nonsynthetic techniques. The neighbor had traveled throughout

ditches in the regions collecting hundreds of plastic soda bottles, then placing them over the outside of each ear of maize in a protective sheath. The image reminded me of the same ingenuity seen at the Pachali farm: to keep the predators away, Beti's neighbor had covered the milpa in soda bottles as far as the eye could see.

A REVOLUTIONARY ACT (1980)

When I have asked scientists who worked at INCAP in the 1970s how the concern for agroecology and intercultural exchange that was present in Scrimshaw and Béhar's ambitions for nutrition disappeared from the institute's agenda, they told me a story about how once-utopian dreams were interrupted by the violence of war. As remembered by scientists who were present and as described in court documents, the story I have reassembled goes like this: Since first opening its doors, the Tuesday morning meeting at INCAP had become a weekly tradition. All staff members were required to attend, and most of the central auditorium's fifty-plus seats would be filled. Lead scientists would sit as far in the back as they could, using the meetings to proofread reports or catch up on articles they might have missed. Junior scientists would sit in the front, paying attention to the latest discussions of scientific findings and research advancements.

The tradition would be forever changed one June morning in 1980. The day began like any other summer day in Guatemala City, with cotton candy clouds lining the edges of the volcanoes on the city's horizon. Bob Klein, recruited from the US to INCAP to study the relationship between nutrition and cognition, spent this particular morning's meeting buried in reports. Klein had completed his PhD in psychology at the University of Minnesota and had carried out a recent Harvard fellowship in a cold Cambridge winter. In comparison, he thought Guatemala, with its blue skies and consistently perfect temperatures, was a paradise—though, given his research focused on malnutrition, he knew it was a paradise denied to many.[4] As INCAP had become the face of nutrition science among international scientists, Guatemala had become known throughout the world for its high rates of malnutrition.

When the staff meeting that day was finally called to a close, Klein moved quickly to the door, his mind already on the mock trials and IQ tests that his research team would soon be carrying out. Then time stopped. A man in a stained white T-shirt stepped in front of him, blocking his exit by putting an assault rifle to his face. "Hands up! This is a revolutionary act!"

Klein remembered the man shouting this message at him as four or five other assailants entered the auditorium, easily taking control of the room. Armed conflict in Guatemala had been escalating rapidly, and stories of people who had gone missing ran in the news every day. In the coming months, entire villages would be destroyed and people everywhere would be seized by terror. But while Klein was very scared, he was also struck by an absurdity. Years later, he chuckled at this

point in telling me the story. "Hands up!" the assailant commanded him. But he couldn't put his hands up because his hands were full of paperwork.

The men with the guns had paperwork too: a list with four names, Carlos (Pilo) Tejada, Samuelo Arévalo, Miguel Guzmán, and Richard Newman.

Confusion ensued after they called out for the four men. Arévalo and Guzmán were out of the country, leaving only Tejada, INCAP's director at the time, and Newman, a high-level administrator, in the room. As the assailants blindfolded Tejada and Newman, they began to argue among themselves over what to do about the absences. Klein took advantage of the confusion to move toward the back of the auditorium. At the same time, Julisa Gallego moved toward the podium in the front.

Then a young secretary, Gallego would spend the next forty years working as a nutrition science administrator in Guatemala. Many credit her for saving their lives that day. Reflecting on the event, she told me with characteristic modesty that anyone in her position would have done the same. She grabbed the microphone and broadcasted the warning, "The police have been notified and are on their way."

The kidnappers became spooked. Klein heard the assailant closest to him begin to hyperventilate and noticed, for the first time, sweat running down the gunmen's faces. They were scared too, he could see. Gallego's announcement rang over the loudspeakers again. The men with guns grabbed the two unlucky INCAP professionals and made a run for it. Police were not, in fact, on the way, but they would be shortly as the international scandal began to unfold.

Tejada and Newman were held from June 24 to August 11, 1980. The official story documented in the US government's weekly report on international terrorism states that the Central American Workers Revolutionary Party (PRTC) kidnapped the scientists in the hope of pressuring newspapers to publish their political manifesto and receiving a large ransom. Neither request came to pass. The terrorism report notes that the kidnappers "lacked training and professionalism in terrorist tactics" (CIA 1980).

Scientists who were in the INCAP auditorium remain skeptical about who was responsible for the events that transpired, but there is doubt that the PRTC was to blame. The head of this Marxist-Leninist party, who was based in El Salvador, disappeared that same month, and the party, which was already at the point of being dissolved, never reconvened. It is common knowledge in Guatemala today that the cry "Marxism" was frequently used as a government foil. The two sides fighting in Guatemala were anything but even, with the military responsible for most of the war's violence. While there was well-organized resistance to the military throughout Guatemala (see McAllister forthcoming), many people labeled as guerrillas were primarily involved in the project of survival, not insurgency. One nutritionist speculated in an interview with me years later, "It seems more probable than not that this was state authorities dressed up in revolutionary clothes."

Newman, a US American who served in Vietnam, had learned how to respond to kidnapping during his military training. Right away, he asked the kidnappers for a pen and paper and began to write down the story of his life to keep his mind occupied. Tejada, a Guatemalan who had assumed the directorship of INCAP because of his expertise in nutritional pathology, had no such preparation. The weeks alone in a dark room, waiting through uncertainty, took a lasting toll. Following his eventual release, Tejada fled the country—as did his friend Fernando Viteri, previously tapped to be his successor, who would instead spend his life as a nutrition professor at Berkeley. Unable to find a qualified replacement for Tejada, the Pan American Health Organization (PAHO) eventually stepped in to oversee administrative matters.

INCAP's scientists had once prided the institute on its focus on basic, cutting-edge nutrition science. The center was not indifferent to health policy; after all, its research on protein aimed to not only understand, but eliminate protein malnutrition, and Scrimshaw and Béhar had started the Pachali farm with the belief that there were social benefits to nutrition to be found in the interchange of cultural knowledge. But the scientists saw themselves as primarily answering to their peers through the process of peer review and not to political agendas of the moment. As INCAP came to be managed by PAHO after the kidnapping, many of the scientists felt overburdened by the bureaucratic turn, and several of INCAP's key researchers left the institution shortly afterward.

Noel Solomons, a Harvard-trained chemist who arrived at INCAP in the late 1970s, had been in the audience during the event. He worked for the institute for a few more years before breaking away to start a small, independently run Guatemala City–based research center of his own. Reflecting on the chain of events that would come to transpire following the revolutionary act, he quipped, "In the end, no one died that day but INCAP."

Of course, INCAP did not die, though the event did shape the trajectory of its future. Agroecology, the interchange of cultural knowledge, systems thinking, and anything that might appear to advocate for the possibilities of organized collectives or land and labor reform disappeared quickly from the institute's agenda. Through the 1980s and 1990s, the discipline of nutrition in Guatemala became narrowed and solidified into the science of supplements. The institute became famous for its promotion of human capital through protein powders. Foods became equated to nutrients, the broader political and cultural ecosystems cut from view.

Some of the scientists who worked at INCAP have presented the shift as one in which science became replaced by politics, but a different framing strikes me as more useful. Several of the scientists, including the founding director, Nevin Scrimshaw, held science to be an apolitical pursuit of knowledge, but it is clear that politics was integral to INCAP's work from its beginnings, shaping the questions scientists asked and the methods they used to explore their answers. The kidnapping—along with the broader war and violence that surrounded

FIGURE 17. The view of fields of drying maize from a nutrition supplement hand-off point in San Juan Ostuncalco. Photo by author, 2009.

it—did not cause their research to become political but, rather, changed the kinds of questions that were acceptable to ask. The critical tension was not science versus politics but whose sciences and whose politics the institute would have to follow. From my vantage today, the problem was not that INCAP became political but that its scientists were ill equipped to defend its noncorporate commitments and its engagement with Indigenous knowledges of farming, agriculture, and feeding communities.

In hindsight, this appears to be a chronicle foretold. By Scrimshaw's own admission, it was a fallacy to think that an institute run by a US scientist and funded in large part by US corporations would challenge the forces of monocultural capitalism in the way the founders of the Center for Teaching and Interchange of Knowledge at the Pachali farm may have hoped. Scrimshaw and Béhar had wanted to gain a better understanding of Guatemala's nutritional problems so they could produce better solutions. They did not seem to anticipate how the solutions ultimately offered by nutrition science could exacerbate poor health and hunger. They saw early on that hunger was linked to American imperialism, but

they did not seem to grasp how addressing hunger would require confronting the imperial legacies in and of their own academic field.

CONCLUSION: FEEDING THE FUTURE

In 2010, US secretary of state Hillary Clinton convened a New York City event titled "1,000 Days: Feed a Life, Feed the Future." Several Guatemalan scientists have told me that this was where the phrasing "the first 1,000 days" gained international traction and began to stick. "It was catchy," one Guatemalan scientist told me.

Clinton began her introductions with acknowledgments, thanking governmental representatives, UN organizations, and members of the private and nonprofit sectors. In specific, she named Coca-Cola, noting, "Coca-Cola has a global reach and has demonstrated a real commitment to corporate responsibility . . . serving as a catalyst for creating alliances and partnerships, and we thank you and Coca-Cola very much" (Clinton 2010). She then turned to address the importance of intervening during the critical window of early life—the agenda of the day. On offer was a teleological vision of anatomical development in which the body forms in a predictable way. When the critical window has ended, the opportunity for development is over.

Clinton's language would be directly taken up by the Guatemalan president and vice president, Pérez Molina and Baldetti, in their Window of 1,000 Days agenda, which promised to improve nutrition in early life to expand Guatemala's economic opportunities. At a launch event held at the Museum of Archaeology and Ethnology in Guatemala City in 2012, Baldetti gathered with nutrition experts from Mexico and Bangladesh to announce that her agenda would be investing 90 million quetzales (roughly US$11.5 million) in the intervention. They would bring targeted investment to poor, rural Guatemalan communities "where no one has ever arrived," she declared—as if people had not lived there all along.

Baldetti's cruel statement of territorial conquest, with its history in the Doctrine of Discovery used by colonizers to justify stealing Indigenous people's lands and "modernize" the landscape, was made worse by the kind of help they would offer (Quemé Chay 2020). The investment she called for would go almost exclusively toward vitamin and mineral supplementation to improve deficient bodies and nutrition education to change ignorant minds. This was colonial, corporate profit-making masquerading as structural change.

Whereas robust developmentalism had accompanied the military-style violence of United Fruit, Pérez Molina and Baldetti began to dismantle state funding for health and education programs, including those in the department of Quetzaltenango. As described in previous chapters, the narrow focus on the Window of 1,000 Days helped authorize a neoliberal evisceration of state services. The concern for fetal development placed the responsibility for the future on pregnant

women, all while turning development into a project for international aid. Rather than build out health care infrastructures from taxpayer-supported funding or draw from the wisdom of Guatemala's Indigenous communities who had been growing crops sustainably for generations, the president put USAID in charge of maternal nutrition in rural communities. By 2014, it was clear that President Pérez Molina would not actually provide the money for services he had promised. At the time, he and Vice President Baldetti were busy embezzling all funds they could find, eventually being so egregious in their greed that they were caught and after five months of intense citizen uprising removed from their governmental positions and imprisoned for their crimes.

I met with Oswaldo Francisco Perez, a project specialist for maternal and child health programs run by USAID, several times in the years following their arrest. Francisco Perez was proud of the fact that USAID's offices in Guatemala, unlike those in other countries, primarily employed local workers and not US expats. He regretted that massive political turnover limited his work—reminding me that he had to attune his projects to the demands of four presidential administrations in the five years between 2012 and 2016. Still he was unfailingly optimistic about the possibilities of working within these limits, harnessing what he could from USAID's infrastructure to improve Guatemalan futures. (Perhaps this optimism is a precondition to institutional survival. I have thought this about his work with USAID—and about my own work in the academy as well.)

I always left our meetings armed with pamphlets and infographics detailing Window of 1,000 Days priorities, many printed in English—a sign, perhaps, that their real audience may have been US donors and political advocates who held control of the coffers of USAID. But if local funding was limited, local talent was not. Francisco Perez had thoughtful teams working to design cultural sensitivity training programs that could navigate the complexities of family planning in a pro-church, antiabortion state. For example, he pointed me to research suggesting that making contraception widely available is one of the most important steps to improve children's nutrition. He had even advocated for an innovative "new masculinity" family planning campaign that would involve "men and other gender roles" in childrearing.

Francisco Perez and I share an interest in drawing attention to the neglected field of reproductive health when it comes to food security. Yet his work continued to define reproduction in narrow terms, through a focus on family planning, pregnancy, and childbirth. What remained absent from USAID's maternal and child nutrition programs was the topic of land and labor, in the economic sense of the term. The "affordable solutions" to malnutrition that Clinton's first thousand days campaign highlighted were found in products that could be marketed to pregnant people such as vitamins or fortified foods, not in Indigenous sovereignty. USAID's efforts to assure "equitable access"—the title of one of the posters—centered on access to new commodity goods, not the means of production. The agency

produced calendars for "healthy living" and recipes for "healthy eating" focused on nutrients and vitamins. It taught rural mothers how to eat and how to prepare supplement-based pancakes and oatmeal for their children. It was certainly not in the business of teaching people to organize collectively to reclaim their land.

Meanwhile, in highland communities where USAID has operated for decades, storefronts are painted with the word *toxic*. This is not, in fact, a warning of danger to health but marketing. Toxicity, in the paradigm of development that highlanders are living through, is needed to kill invasive predators and superbugs to help plants grow. Of course, many farmers like Beti's mother still try to avoid synthetic chemicals, but they have the forces of colonial development working against them. Pesticides are everywhere, while INCAP's agroecological farm is in ruins.

Today a new research hypothesis for chronic malnutrition in Guatemala is emerging in the news. This research, funded by corporations such as Nestlé and the Feed the Future Innovation Lab of USAID, overlooks the heavy metals in the soils and the insecticides on the leaves. It focuses instead on maize, one of the world's most powerful foods, first domesticated from the grass species teosinte that grew wild in Mesoamerica roughly nine thousand years ago. According to the hypothesis advanced by this research, maize grows symbiotically with a naturally occurring fungus. When ingested, the fungus produces a harmful aflatoxin or myotoxin that can pass from the gut into breast milk, stunting the development of the fetus-child (Voth-Gaeddert 2017). This fungus, according to the hypothesis, is not a side effect of current environmental degradation but intrinsic to the growth of maize. Were this hypothesis to be true, the result—almost too ugly to write—would be that the food that lies at the foundation of both culture and agriculture in Guatemala would be intrinsically damaging to both human and global development.

It comes as no surprise that corporations such as Nestlé are interested in funding this line of research on aflatoxins, since linking toxicity to breast milk would be a tremendous boon for their infant formula. Without much governmental investment in research, very often the only kind of research carried out in Guatemala is research with the promise of commercial profit. In this case, there are significant commercial possibilities in showing that breast milk from women who consume maize is harmful, not protective. Green Revolution scientists, who championed factory-produced chemicals, would have loved these results, since they would indicate that investing in synthetic baby formula and supplemental nutrition over breast milk would be a good way of investing in future life.

Conclusions often end with a single unified message. Challenging this narrative structure, however, I would like to close this chapter with two divergent threads.

One of these threads resolutely refuses optimism to make clear what Guatemala's Indigenous communities are up against. Looking at the historia of Pachali's interchange of knowledge program, we can observe a time when the field of nutrition in Guatemala could have grown to encompass agroecology, when nutritionists

might have learned to think deeply about Indigenous agriculture or wondered how nutrition was tied up in systems of exploitation. They might have even begun to follow Indigenous leaders by connecting the theme of agricultural sovereignty to reproductive autonomy. And they might have brought this knowledge about how to produce good food environments directly to the topic of maternal/child health that was animating the design of the Oriente Study in another part of the country.

That window of opportunity slammed shut. It did so through the military force of genocide meant to put an end to land reform and insurgency. That window was also closed by the smaller and quieter actions of replacing the handmade ash volcanoes with synthetic chemicals and the sacred maize atole with an industrially produced protein drink. We see clear violence in a kidnapping by gunpoint that led to INCAP scientists being held hostage in the dark for months. But nutrition scientists were not only victims; they were also complicit in building a food system in which profit-driven toxins now cover plants that were once a source of life. In this historia of INCAP, we can see how violence does not only happen through obvious warfare, but also through acts of care. Throughout the highlands today, US-financed development projects deliver fertilizers and protein powders, all while claiming to help. As Vandana Shiva (1988, 11) has written, "At no point has the global marketing of agricultural commodities been assessed against the background of the new conditions of scarcity and poverty that it has induced."

The second thread of my conclusion pauses at the idea that the "window of opportunity" has ended, making political transformation and agricultural revolution impossible. The logic of human development offered up by the Window of 1,000 Days agenda follows a linear teleology: There is a critical window that must be acted upon. If we don't act in this window, we lose our chance. But the development of bodies, economies, and societies need not follow this vision: it can happen along other trajectories and in other ways.

Take, for example, research on aflatoxins. According to research funded by the USAID's Feed the Future Innovation Lab for Nutrition, aflatoxins are a "naturally occurring" result of the symbiosis of maize and fungus (Andrews-Trevino et al. 2021). Because they pass through the breast milk of people who eat corn, they are being discussed as a natural cause of stunting. But historical research into their history also suggests that even though aflatoxins are classified as natural, their prevalence is heavily influenced by human actions and interventions such as crop choice, agricultural practices, and storage conditions (Mueller 2019). In addition, whereas some aflatoxin research paints fungus as harmful, other research shows that fungus can enhance the micronutrient content of crops and that it may also keep crops strong through drought or disease and minimize reliance on pesticides. Some fungal-plant relations appear to have a protective effect against heavy metals (Hachani et al. 2020), or even to help reduce the nitrogen emissions that contribute to climate change (Bender et al. 2014). It is certainly imaginable that if research were premised on Mayan ingenuity and not Mayan

deficiency, nutrition scientists could engage with aflatoxins in ways that would allow landscapes to flourish and people to be well fed.

What else might be learned from approaching Indigenous knowledge of cultivation as a carefully developed science? Nutrition and agricultural sciences in Guatemala still have not fully reckoned with their mischaracterization of swidden cultivation as ignorant and harmful. Nonetheless, a substantial body of research is affirming the merits of swidden practices, which have long recognized burning as an act of regeneration (Zeng et al. 2017). To draw a lesson from swidden cultivation: destruction is not a given. As Micha Rahder (2020, 169) observed while doing ethnographic research on Indigenous forestry stewardship in Guatemala, life emerges, phoenix-like, after fire. Instead of thinking in terms of critical windows where opportunities are finite, we might think of life as persistently in formation and ash as protective of subsequent growth.

While highland soils today may be full of plastics and chemicals, seeds may also be germinating in fallow soil, ready to sprout. Plastics, despite their toxicity, may also be drawn in to protect these seeds and help them survive. The violence of monocultural capitalism may compel us to open a window to another kind of science—one built from collective practices, supporting collective actions, encouraging the production of foods from collective lands, and helping foster reproductive cycles in which women, children, and their entire communities can flourish. A lesson from the milpa is that under certain conditions, we can grow and burn, and grow and burn—repeating the process as a means of finding ourselves on a more nourishing path.

7

Historias of Co-Laboration

NUTRITION FOR SUSTAINABLE DEVELOPMENT

"Sustainability is an English word."[1] This statement is so obvious that the problem of translation it poses is often ignored, but that problem is exactly what Dr. María de las Nieves García-Casal, president of the Latin American Society of Nutrition, wanted her audience to face. It was November 2015, and the society's annual meeting, held that year in the Dominican Republic, focused on the topic "Nutrition for Sustainable Development" (Nutrición para el Desarrollo Sostenible). The UN's Sustainable Development Goals had just launched, and they resonated with the field of nutrition's interest in generations, life cycles, and futures.

The UN's newly codified goals, formally titled "Transforming Our World: The 2030 Agenda for Sustainable Development," promised to incorporate the global challenges of climate change into the agenda to improve health metrics and economic growth. Policy leaders were making calls to bring science and action together to inspire global transformation. The field of public health nutrition held that nutrition would play an integral role in the development goals' success. Improving maternal nutrition, in particular, would improve physiological and, thus, global development: by making better babies, the field would make better countries, better economies, and a better world.

But *sustainable* translates into Spanish as both *sostenible* and *sustentable*, the former connoting a capacity to be maintained over time, the latter a sense of being reasonable. "Which meaning is it?" Dr. de las Nieves García-Casal asked, setting off a debate at the Spanish-language conference about what the organization's orientation to sustainable development should be. Endurance? Coherence?

FIGURE 18. María García Maldonado stands in front of a mural painted by Jaime Mastranzo (Instagram: mastranzo_art) in front of a Maya midwife center in Xela. Photo by author, 2017.

Rationality? Something else? As Dr. Noel Solomons, who was in the audience at the conference reflected, "The connotation of the Congress's agenda will differ profoundly depending on the chosen translation."

Not long after the conference concluded, I reached out to Solomons to discuss research ideas. We had been looking for a topic that we could work on together for a while, and he suggested that we take up this vexing challenge of how to translate and back-translate the term "sustainability."

. . .

Much of this book has focused on systemic cruelty in the field of nutrition science and policy. I have analyzed UN, US, and broader American narratives of maternal nutrition that sound well intentioned to show how they frequently ignore that hunger has been actively produced by profit-driven politicians, their business associates, and the knowledge systems that support them. I have considered how contraception and abortion care are persistently excluded from discussions of hunger policy, despite evidence that hunger and reproductive autonomy are closely tied. I have also considered how the field of nutrition has cleaved land, agricultural, and border-crossing sovereignty from its work to produce "better nutrition." I have suggested that these elisions systemically

reproduce the very problems that global health and development experts frequently claim to solve.

In this chapter, I consider how to challenge and change this reproduction of harm. I turn my attention to the space of sustainability policy, taking my own work with Solomons and our scientific collaborators as a case study in the possibilities of using science to “transform the world.” The anthropologist Savannah Shange (2019) has highlighted the importance of cultivating a wide range of intellectual and activist strategies to interrupt systemic cruelty. She writes, “Because the late liberal state is an unruly set of overlapping processes, our attendant modes of intellectual and political practice must also be agile as they target civil society and the free market as cognates of the state” (10–11). This chapter is an experiment in developing this agility.

I begin with an in-depth analysis of Solomons’s work and his influence on my own. Whereas anthropologists often focus on experts’ practices less than their everyday lives, I work to contextualize Solomons’s scientific practice through both his personal and his professional commitments. I do this to add richness to the critique of nutrition science that I have built up in the previous chapters—to make clear, as I explain below, that critique is not the only way to approach the field. I then turn to an overview of a collaboration I developed with Solomons and other nutrition scientists I met through his work. The chapter describes our engagement with different modalities of scientific representation—from conference presentations to ethnographic narrative—to examine what they afford or foreclose. I draw from our fieldwork together to make a clear argument: ending hurtful border policies must be included in the agenda to end hunger. But instead of advocating for a single pathway of action to achieve this end, I call for the development of a range of methods for science and activism alike. Rather than settle on a universal, shared definition for a term such as sustainability, I highlight a need to cultivate skills in working well amid different—and changing—kinds of differences.

A DISRUPTIVE THINKER

I first met Solomons in 2006, when I spent a summer at his nutrition center in Guatemala City through a fellowship from the US-based Social Science Research Council. The fellowship encouraged cross-disciplinary and international work, offering the opportunity for junior social scientists to work with senior scientists from a field different from their own. I was, at the time, a graduate student studying anthropology at New York University. Marion Nestle, a professor in the university’s food studies department, knew I had carried out work in Guatemala and introduced me to Solomons—an old friend of hers from their postgraduate days. She described him to me as an “extremely smart scientist with an extremely good sense of humor,” both of which I found to be true.

Nevin Scrimshaw first recruited Solomons to Guatemala in the 1970s to help INCAP scientists develop a noninvasive method for detecting poor digestion. Like Scrimshaw, Solomons was trained in both medicine and chemistry. An online biography at the Hildegard Grunow Foundation in Munich, with which he had a long-standing affiliation, highlights his many academic accolades, including a residency in international medicine and infectious disease at the University of Pennsylvania and specialization in gastroenterology and clinical nutrition at the University of Chicago. The biography also notes, "In his young adulthood, he would participate in the civil rights and anti-war movements, only to become disillusioned by the intractable nature of the injustice elements in the fabric of [US] society" (HGF 2023). Many of his colleagues back at Harvard, where he received his undergraduate and medical degrees, would have found Guatemala in the 1970s and 1980s to be dangerous. After just a few years of working in the country, Solomons decided that he would "rather die in Guatemala than live in the US," as he was fond of saying.

Today Solomons is widely considered an academic giant in international nutrition. In a field that has traditionally focused on the study of individual elements, Solomons is known for his inquiry into metabolic pathways. Influenced deeply by his Tufts University mentor and friend, Dr. Irwin Rosenberg, a progenitor of the field of gastroenterology, he spent his career analyzing how nutrient absorption is influenced by systems-level interactions, asking questions about how immunological and cardiovascular systems work in concert with food systems. He devoted himself to the study of how environmental toxicity shapes the fetal origins of disease long before the topic was in vogue among health scientists. As the field grew in popularity, he also became skeptical of the burden it placed on mothers and he distanced himself from it at the end of his life.

Though committed to Guatemala—he frequently wore articles of Maya clothing to the prestigious international meetings he attended to signal his dedication to the country—there was never doubt that Solomons was a Black man from Boston. He followed US news fastidiously, was well versed in W. E. B. Du Bois's theories of race and racism, and during basketball season could be found reading and editing scientific papers while a Knicks game played on the radio in the background. Reflecting his care for the people around him, he employed the same secretary, building guard, and taxi driver who worked for him when I first met him in 2006 until his death in 2024. Though he studied the chemical properties and benefits of breast milk for decades, he was quick to discourage people from being too sanctimonious about the topic of infant feeding, routinely pointing out that he and his older brother, a famous Broadway dancer, were both formula fed.

In 1985, Solomons left INCAP to found the Center for Studies of Sensory Impairment, Aging and Metabolism, or CeSSIAM. It was just a few years earlier that Guatemalan universities began to admit women to medical school. He had

FIGURE 19. Dr. Noel Solomons reviewing a photograph he has just taken of guests at a scientific conference. As a nutrition scientist with deeply reflexive attention to the social world, he, much like an anthropologist, often took pictures of the people with whom he interacted. Photo by author, 2016.

observed that many brilliant women were graduating with degrees in medicine, but social distrust of women doctors left them underemployed. He decided to build his center's research team from this pool of available doctors, and the center has been staffed almost entirely by women ever since. He helped many Guatemalan scientists obtain advanced degrees in scientific fields that Guatemalan universities do not offer by leveraging his connections to create international educational opportunities for his staff. In 2010, the Guatemalan government awarded him the National Medal of Science and Technology—the first time the prize had ever been given to a foreigner. He had high expectations of the CeSSIAM scientists and at times pushed them tirelessly, but he was also beloved. Many women who worked with him have described him to me as "the wisest, kindest person I know."

When I first came to CeSSIAM in 2006, I didn't have to ask where the center's funding came from. Solomons told me that he knew that anthropologists are generally interested in "following the money." He said this with air quotes and the wry grin of someone sympathetic to the work of making trouble. Knowing that anthropologists often see economic flows as a driving force of world

systems, he addressed the question of finances head-on shortly after we met. He explained that he received some support from his work editing journals, such as the *Food and Nutrition Bulletin*, which he had managed for more than a decade, or from academic projects on which he was a coinvestigator. The biggest source of funding came from grants issued by the philanthropic wings of corporations. Nestlé, Dannon, Hormel Foods, and even soda companies such as PepsiCo have foundations that fund research in nutrition science to which he would apply. Again, anticipating my question—this one about conflict of interest—he insisted that the philanthropic wings of companies are separate from their corporate wings. "I know Marion wouldn't approve," he conceded, referring to Marion Nestle (2018), who was at the time carrying out research on the conflict of interest between food scientists and the food industry. But working within the food industry was one of the hurdles he had accepted when splitting from both INCAP and the US.

Solomons felt that he frequently had more autonomy over his scientific practice drawing on funding from the food industry than he had when working with UN-affiliated agencies or within the US academy. I knew he rejected funding from any source—even if it would have helped support his research and staff—when he doubted industry motives, and there was, ultimately, a lot of funding to reject. Solomons had built his scientific reputation on his critique of poorly conceived food aid. As much as he was known for his unique and sharp intellect, he was also widely known as a "disruptive thinker," as he once characterized himself in an interview about his work. In the last half of the twentieth century, when scientists everywhere were jumping on the protein-supplement bandwagon, he argued that there was no major protein malnutrition in Guatemala and that protein products were largely unnecessary (Solomons et al. 1993).

"If you have a false hypothesis and you act on it, you're doing public health harm and not good," he warned his colleagues from the podium of large international nutrition meetings, disapproving of how frequently the field of nutrition has intervened only to solve the wrong problem. He also took the supplement industry to task for their work to grow babies in utero. Countering the public health gospel that a bigger newborn is a healthier newborn, Solomons's research on prenatal growth has linked the common aim to help the fetus grow larger to obstetric violence. In the Guatemalan context, where small mothers will give birth far from hospital settings and often without trained support, a "big baby may equate to a dead mother," I have heard him say bluntly, then reminding his audiences, "Dying in labor is one of the most painful ways to die."

Before the COVID-19 era of online meetings, Solomons would typically fly around the world to attend a dozen or more conferences a year—frequently as a keynote speaker or guest of one of the major food companies with whom he collaborates. A Nestlé representative told me that he would charge them for a

first-class ticket even though he flies so much he gets a free upgrade, then would use the extra funds to subsidize the travel of one of the scientists on his staff. "We don't really mind this," the representative added. "He may not follow our rules, but we respect his scientific integrity." Viewing international exchange as a linchpin of good nutrition science, Solomons prioritized helping his staff attend the major conferences in his field, hoping that they would find their research challenged, debated, and improved and that others might learn from them. I was a direct beneficiary of his commitment to mentorship. Even when he was critical of my analyses, he ardently supported me and my work in graduate school and beyond. He introduced me to many of the scientists I have interviewed over the previous twenty years, and when it comes to this book, he read and commented on every chapter.

One of the people he introduced me to was Rosario García Meza, a Guatemalan researcher with degrees in nutrition science and social anthropology from the San Carlos University in Guatemala City and from the "Power, Participation and Social Change" master's program at Sussex University in the UK. Whereas many nutrition scientists were comfortable bracketing "culture" as irrelevant to their science, Solomons had inherited Scrimshaw's interest in anthropology, finding it imperative to be simultaneously attentive to matters of calculation and matters of culture. He was passionate about chemistry's physical principles—it is no exaggeration to say that the intricate details of protein's methylation kept him up at night—but part of this passion extended to vociferous debate about scientific methods and the broader question of how we know what we know. Much of his research focused explicitly on procedural matters: how to assay iron or measure bodies in ways that are technically precise and culturally sensitive. García Meza has expertise in cultural analysis and reads widely in anthropology. He hired her onto his staff to ensure that culture would remain integral to CeSSIAM's science. Though he never admitted this to me directly, I think he kept anthropologists close because he appreciated the field's commitment to the analysis of politics and power.

It was, I believe, this attentiveness to politics and power that drove Solomons's interest in the growing rhetoric of sustainable development among his global health colleagues. "People in Latin America practically invented the idea of sustainability," he said with measured exasperation, pointing to the audacity of plans in the works to teach "sustainable nutrition" to Indigenous Guatemalans. Over the previous decade, we had not found a topic where coauthorship made sense. Typically, he was in a position to teach me about the nutrition landscape of Guatemala—an informant, not a collaborator. Though I have presented my research at his center a dozen times, our scientific methods did not easily align, with my ethnographic work relying on situated analysis and his quantitative work relying on independent, replicable measurement. And yet on the topic of sustainable development in Guatemala we were in agreement: the so-called global health

experts should be learning about the concept of sustainability from people living it—not the other way around.

CO-LABORATIVE RESEARCH

In 2017, Solomons linked García Meza into our conversation about sustainability. We decided to work together on a small research project exploring various translations of the term. We would present our results at the upcoming International Congress of Nutrition (ICN), held that year in Argentina. I had first spent time with García Meza at the previous ICN, held four years earlier in Granada. She had left her still-nursing infant with her partner in Guatemala, and I had brought my still-nursing one-year-old with me. We both needed to take frequent breaks to nurse or pump milk. Nutrition science was a field still full of men, as reflected in the keynotes and plenaries around us. As others drank wine in the shadow of the Alhambra, we produced milk from our bodies in cold hotel rooms and bonded over the challenges of conferencing and care work—though García Meza insisted that these experiences would also attune us to the everyday life challenges that people faced, which would make us better scientists in the end. On my next two trips to Guatemala, these without my children, she assuaged my guilt about leaving them behind, reminding me that our time away would strengthen our children's relationships with our partners. Her intimate familiarity with Guatemalan mothers who travel long—and frequently international—distances for employment had given her insight into how sometimes leaving can be the caring thing to do (see also Yarris 2017). At CeSSIAM's seminars, I came to know her as a generous, incisive thinker. Whether discussing the history of iron fortification in Guatemala or the history of civil rights in the US (two of Solomons's favorite subjects), she never missed a beat.

Solomons, García Meza, and I decided that the goal of our collaboration would be to map the "semantics of sustainable development" as used among different groups of Guatemalans. With Solomons serving as a consultant and editor, García Meza and I would interview three groups of people with connections to the San Juan communities about sostenible and sustentable: Maya-Mam midwives, mothers, and health or development professionals. The broader aim of the research was to better understand what the anthropologist Sally Merry (2006) calls the "vernacularization" of sustainability, in reference to how local actors will take up and translate so-called global terms in ways that make local sense.[2]

The prompt for our work seemed simple enough: we would talk with people about how the UN's recent mission on "nutrition for sustainable development" affected them, ask what they thought about this mission, and learn about what goals for "sustainability" they might have for themselves. We would then compare the major themes that arose in our interviews to answer the question of how the English-language phrase "sustainable development" traveled to Guatemala and whether "nutrition for sustainable development" was an appropriate goal. Yet we had scarcely begun our interviews when it became clear the term "sustainability"

was used and refused in so many different ways that our comparative method would have to be reworked.

Spanish-speaking health professionals would easily answer our question of what sustainable development meant to them, sometimes making explicit reference to the UN's goals. As one NGO employee explained, "Sustainable development pertains to actions that satisfy the sustainable development goals." Health professionals told us about the development of eco-conscious and fair trade products, such as a Unilever brand of "rainforest-friendly ice cream" that was "good for people and the planet." Evoking UN rhetoric, they explained that sustainable development implied an orientation to the future. Sustainable development for nutrition might emphasize, for example, food fortification in pregnancy and infancy to give babies the correct foundation from which to grow.

Maya-Mam women and midwives could not—or would not—answer us so directly. García Meza and I saw ample evidence of sustainable development projects in San Juan in the form of USAID-sponsored goat pens, chicken coops, or greenhouses. We knew women had opinions about these initiatives. Having spent time in the communities, we also knew that San Juan women were skilled in caring for their communities and land over long periods of time—what I thought of when I thought about the term "sustainable development" in generous terms. But the method of question-and-answer interviews that worked for health scientists who were well practiced in formulating their thoughts about sustainable development to strangers was not effective here. Sustainability may have been an integral fact of living, but "tell us what sustainable development means to you" was a nonstarter.

Part of the challenge was that *sustainability* is an English word, as the scientists gathering in the Dominican Republic had pointed out. But it wouldn't much matter if we alternated between *sostenible* and *sustentable*. San Juan women are first-language Mam speakers and generally not invested in the divergent definitions of these Spanish-language terms. The projects that I might call "sustainable development projects" were, to them, the "egg project" or the "pig project." Corporations were commodifying sustainability into a flashy brand to market their products. Meanwhile, though the women we interviewed lived a "green," "low-impact," and "carbon-neutral" lifestyle, they didn't dwell on this in conversation. Although we had planned to compare how different communities of people conceptualized sustainability, it turned out this would not be possible since San Juan women were not invested in defining the concept. In our case, different communities also required different methods, messing with the mechanics of comparative research and causing us to adjust.

To help with the work we wanted to do with San Juan's Maya-Mam women, we brought another person into the project. María García Maldonado is a Maya-Mam lawyer who has carried out interpretation and translation work for health and development projects in San Juan for more than a decade. She knows many of the women who live in San Juan's communities well and has expertise in the challenges of translation we were interested in learning more about. We became

FIGURE 20. García Maldonado and García Meza peel potatoes at the home of a woman in San Juan. Photo by author, 2017.

a team of three. Looking at us from a distance, it might appear that I was the anthropologist on the team, García Meza the nutrition scientist, and García Maldonado the Maya-Mam translator. In fact, each of us contributed expertise in anthropology, nutrition science, Guatemala, and knowledge of Mam culture and history.

Our method of working both together and with other women in the community moved from one of collaboration to co-laboration, drawing on the anthropologist Marisol de la Cadena's (2015) term for the collective effort of attending explicitly to spaces of difference. As de la Cadena explains this, to "co-labor" is to keep focus on the frictions, tensions, or dissimilarities in collaborative work; it is the labor of not collapsing variation into a unity. The point was not (at least not only) to better understand the women in San Juan but to better understand how much we could *not* understand.

García Maldonado was careful to explain to the women that we came as researchers, and we received their oral consent for participation in the conversations following the protocol of my institutional ethics review. But there was also a reformulation of "fieldwork" that happened in our practice. We were not treating the woman as objects (or 'human subjects') to be examined by us but learning from them, and with them. Accordingly, García Maldonado, García Meza, and I talked explicitly with San Juan women about the challenges we encountered

when trying to put the UN's "sustainable development" agenda into words in another language, and we asked them to think through these challenges with us.

"The United Nations defines sustainable development as development for the present that does not compromise the future. Does this make sense to you?" we would ask. As bilingual speakers with considerable experience moving between Guatemala's colonial and Maya-Mam systems of law and governance, they were experts in intercultural translation. We were aware of how conventional political-economic asymmetries structured our conversations. They knew I was a professor with a US passport, an especially powerful object in highland Guatemala. But it was also the case, when it came to the topic of sustainability in their communities, that they were the experts. We were committed to honoring their expertise and to recognizing all the ways we would not capture in English or Spanish their knowledge of sustainability on their own terms.

A lot of the time, we didn't ask anything at all. The anthropologist Stacy Pigg (2013, 127) advocates the ethnographic method of *sitting as doing*, in which knowledge is doubled and folded back through the labor-intensive and often joyful work of being with people as they go about the particular details of everyday life. This strategy made sense to us, since what we wanted was insight into the process of translating and back-translating between global sustainable development agendas and life in San Juan. So we sat with the women, drinking their thick, unsweetened atole with them, while they told us what they were up to, how their families were doing, and about their everyday triumphs and concerns. When we finished our drinks, we played with one another's children or toured gardens, listening to stories as women showed us the greenhouses and the goat pens that USAID had helped them build. We talked with women about "sustainable development," but we were also interested in the spaces around the term—those spaces where it was active but unspoken.

The next two sections draw from this time together to present two versions of what we learned. The first describes how we formulated our research on sustainability into a scientific presentation for a large nutrition conference. The second presents our research in the form of an ethnographic vignette. I then reflect on what kinds of knowledge these different methods of analysis and authorship produce: how they differ, how they complement each other, and, finally, what approach to knowledge production might allow various methods of scientific research and writing to coexist.

THE INTERNATIONAL CONGRESS OF NUTRITION

From the start, Solomons, García Meza, and I had planned to translate our research in San Juan into a presentation for the International Congress of Nutrition, one of the world's largest nutrition conferences. Though García Maldonado had been involved in our fieldwork, her name was not on this presentation. International nutrition conferences are an industry, with registration alone routinely

costing north of $500 for professionals.[3] Researchers must pay for their name to be included in scientific events, and since García Maldonado would not attend the English-language conference or benefit much professionally from having her name on the paper, we decided this would not be the best use of my limited funds.

In addition to academic and industry scientists, the UN has a strong presence at the conference, with many presenters listing affiliations with the Food and Agriculture Organization (FAO), the WHO, UNICEF, or the UN University—among others. All the major nutrition conferences, typically held in large hotels and exhibition halls, have industry sponsors. Multinational food and drug companies use the gathering to promote their products. As described in chapter 3, advertisements cover the conference program, and industry-sponsored side events fuse scientific presentations with product marketing. Nestlé, Dannon, and Abbott Nutrition have large booths centrally located in the exhibition hall that display advertisement pamphlets and research articles side by side. Smaller businesses and NGOs feature their work along the conference's quieter peripheries.

Scientists give papers in windowless rooms from dawn to dusk, but the talks are only part of why people attend. Conferences are also a time for people to network and for industry representatives to woo presenters—or vice versa. During the breaks, attendees tour the exhibition hall to learn about the latest products in the field. Over dinners and in the backroom meetings, research and policy agendas are discussed and set.

The conference, initiated by the British Nutrition Society in 1946, meets over eight days, every four years. The program is a several-hundred-page tome. The 2017 gathering included more than 2,000 papers, 40 keynote lectures, and roughly 200 symposia, drawing participants from ninety-seven countries (Carrera et al. 2017). Several months before the meeting, a scientific committee reviewed the submitted abstracts. Although the methods of nutrition and anthropology differ considerably, the principles of conference submission are the same: successful abstracts articulate a question or problem, explain the methods used in the research, showcase results, and often nod to large-scale implications. In both fields, committees are busy, and the point of the research should be made clear and concise.

To create our presentation for the meeting in Buenos Aires, García Meza and I set aside the methodological complexity of working with different groups of people in different ways. We instead coded our data to identify key themes. I do not usually use a formalized coding practice. Typically my method of ethnography consists of recording everything I have permission to record and attuning my attention to striking moments or exceptional stories that I think warrant further analysis and then writing these up. It's an intentionally interpretive and nonreproducible practice, with the goal of shifting taken-for-granted assumptions or generating different sorts of questions—not the goal of producing definitive or universal knowledge about how the world works.

My usual methods for research and writing would not work for the ICN presentation, however. Instead, we needed to translate the intricacies of our fieldwork into generalizable, diagrammable conclusions that scientists running between talks could quickly understand. We wanted to clearly answer the question of whether the English-language concept "sustainable development" traveled smoothly to Guatemala, and we wanted our results to be intelligible to an audience of impatient policy makers. In this case, we needed a schema, and coding would help.

With García Meza working as first author, we turned the time we had spent learning from people about sustainable nutrition into distinct and discernible categories. Or to be more precise, García Meza identified these themes from her fieldnotes, translated them from Spanish to English, and made a visual color-coded infographic that included example quotes from our interviews in each category we had identified. I then reviewed my notes and added ideas to hers. Finally, Solomons edited the presentation, adding insights about the broader implications and stakes for the field of nutrition science, and we all signed off.

The semantics of sustainability we initially thought people might debate based on Spanish translations of the word—endurance/persistence on one hand (*sostenible*), logical coherence on the other (*sustentable*)—did not emerge as especially relevant in our notes. What we found instead fitted loosely under three headings: Harm Reduction, Normative Definitions, and Holistic Uses. Harm reduction related to peaceful coexistence between people and land, such as a lesson given from grandparent to grandchild to ask permission from the mountain before cutting a tree. The second category, "Normative Definitions," was where we placed the frequently tautological use of sustainability and most references to international development agendas. Finally, "Holistic Uses" named the commonly expressed idea that "sustainable" resource management must be attuned to ecosystem equilibrium.

We reflected on the uses of "sustainable development" we had encountered in our research to conclude for our audience in Argentina that this English-language phrase does not translate well into Spanish-language Latin American nutrition policies. We further suggested that "the concept of sustainability can break down completely when translated into Guatemala's many Indigenous languages," where it would become confusing or even set development projects up to do work that conflicted with community values. Addressing Dr. de las Nieves García-Casal's provocation in the Dominican Republic in 2015, we finished the presentation with the observation that our research "illustrates a clear challenge when projecting from global goals into local community actions and a need to further understand potential semantic confusions."

García, Solomons, and I felt good about our research. It had been, we thought, a useful collaboration. But the conference was also busy with people running back and forth to hear about the latest scientific discoveries. The WHO was announcing changes in its guidelines for optimal blood folate concentrations, Nestlé was presenting its findings on the health impacts of sugar consumption; biotech

companies were showcasing their new glucose monitors. "Semantic analysis" wasn't really an area of interest for most people in attendance, and, truth be told, we didn't draw much of a crowd.

Solomons himself didn't seem dissuaded. He saw the project as a success, albeit a small one, and encouraged us to propose a larger scientific symposium for the next meeting (described in the conclusion). We had brought some anthropological ideas to a venue at the conference and had been able to participate in intellectual discussions ourselves. Start small, keep expectations modest, keep working at it. These were all lessons I drew from our efforts to make our research intelligible to nutrition scientists.

TANQ'IBELA

The international nutrition congress required us to represent our research in an easily digestible schematic form. In contrast, ethnography tends to encourage narrative practice as a method to interpret and share research findings. Consider the story that follows. Drawn from the time that García Meza, García Maldonado, and I had spent with Maya-Mam women in San Juan, this representation of our research makes an argument similar to the one we made in Argentina: global health discourse of sustainability does not map easily onto life in San Juan. Yet it makes this argument through narrative rather than through the coded schemas, conveying findings in a way that makes space for other concerns about what sustainability is and to whom it matters.

• • •

When we asked Juana to talk with us about sustainable development, she began with a story of the sky. She used to feel the air, and would know, with certainty, how many days would pass until rain began to fall. A calendar with the face of Jesus gifted from a mechanic's store hung on her stove, but she didn't need it to know when she was in time. She could know this from the feel of the air.

In our conversation she used the Mam word tanq'ibela*—never sostenible or sustentable. María García Maldonado back-translated this to Rosario García Meza and me as "el ser en la vida; de vivir; de sobrevivencia," which I then translated to English as, "being in life, of living, of survival." Juana was a midwife who had spent her life helping her community nurture their precious babies and their mothers. Being a midwife meant she was a gardener and a farmer, since caring for women in labor required knowledge of how to use medicinal plants as well as knowledge about how to sow, grow, and harvest them. These inseparable occupations of midwifery, gardening, and farming all required tanq'ibela, which implied an orientation to living that would produce knowledge about life as it was, granting insight into when soils were ready for seeds, when rains would come, or when bodies would be ready for birth. "Being in life" was foundational knowledge to living in and with her community since flooding could destroy a crop and, with it, food for the coming year. Women*

FIGURE 21. Families in San Juan Ostuncalco transform used tires into rooftop vegetable gardens. Photo by author, 2023.

also needed tanq'ibela to withstand the enormity of childbirth's pain. Tanq'ibela, *the closest word to* sustainability *that we could come up with, connected hunger, land, mobility, and kin. It was knowledge of how to survive.*

Tanq'ibela was also increasingly unstable. Warming climates were causing unpredictable rain and drought that damaged the land, making it harder than it used to be

to read time in the texture and smell of the air. An effort to produce foods in erratic weather has snared many Guatemalan farmers in the devil's bargain between the slow poison of synthetic agrochemicals and starvation. As we walked through Juana's fields, the effects of the bargain were clear. Maize was dying, no matter how many chemicals were used.

In the years following our work with women in San Juan, drought-related crop failures would affect one in ten Guatemalans, resulting in extreme food shortages for an estimated 840,000 people, or roughly 1 in 20 Guatemalans (Lakhani 2019). Many of Juana's neighbors have sold their land, moving into cities in search of work, although it remains impossible for most people in this part of the world to find a job that pays a living wage. Families from Juana's community are moving north, in what is being called "the Great Climate Migration" (Lustgarten 2020)—itself an extension of a survival exodus already undertaken by Guatemalans for decades. Since time immemorial Maya people have enjoyed the intercultural exchange and learning associated with travel (Velásquez Nimatuj 2020). But all around Juana, the joy of travel has been overtaken by the painful pressure of forced migration. People leave not only for their own survival. Remittances sent home by Guatemalans working in the US are estimated to be equivalent to two-thirds of the country's exports and one-tenth of its GDP (CIA 2023). People leave to give their families back in Guatemala a fighting chance.

For good reason, the emigrant is a folk hero in the region. In 2010, a nearby town commissioned the construction of a giant sculpture of a young person with a backpack slung over his left shoulder, his right arm raised to the sky. Built at the center of a busy roundabout, everyone passing along the highway must face and circle the statue. Etched into its base is the prayer of the migrant and a poem. The prayer reads:

> *As I now must go to other lands to seek a decent life for my family, I ask your protection and intercession before God, for those who are on the road, since you did not abandon the Migrant People, help us to achieve our purpose. Amen."*

And the poem reads:

> *"You left your mother crying, as were your father and your siblings, they are together, longing to shake your sweet hands."*

Juana's home is a few miles west of the statue. At the age of sixty-five she has worked as a midwife in San Juan for more than half a century. She is a builder and visionary, both risky things to be in Guatemala. In 2018, the UN released a report confirming that killings of community leaders were orchestrated by powerful interests with ties to the Guatemalan military (Vidal 2018). Midwives are among those routinely targeted—another reason for tanq'ibela's fragility. Important grassroots revivals to support midwifery are under way, such as the Acam midwifery clinic in a city adjacent

FIGURE 22. An image of the Homenaje al Emigrante Salcajense, at the center of a busy roundabout. Photo by author, 2017.

to San Juan and Codecot in Xela. But knowledge about surviving childbirth has not just been lost; it has been willfully destroyed.

Juana lives with her son Juan and his wife, Lucinda, who had been lucky to find modest employment running sustainability projects with local NGOs. A program funded and coordinated by USAID had contracted with the family to distribute a nutrient supplement made from US surplus corn to neighbors along with metal silos for storing homegrown maize throughout the year. Another project supported her family to raise goats for milk and fertilizer and chickens for their valuable eggs. Juana, Juan, and Lucinda make use of every single thing they are given. The bags holding the supplements featured USAID's logo, alongside the words, "NOT TO BE SOLD OR EXCHANGED," written in English in capital letters. They had turned the empty packaging into insulation that today covers their house. Their property appears as a shrine to the development organization, although really this is just the family being resourceful with limited supplies.

Wallace, Juana's teenage grandson, was not so lucky when it came to securing a job. The only work he could find in Guatemala left him in a heartless situation where he would spend more on transportation getting to work than he could make in a

day. Knowing his family would not give him permission to go to the US, he left in the middle of a summer night in 2015. When they awoke, he was gone.

Many weeks later, a US attorney contacted the family. Wallace had made it across the border and had found his way to the Arlington Juvenile and Domestic Relations Court in Virginia. The attorney asked Juan and Lucinda to send a notarized fax, which was hard to do from the mountains. Harder still was the truth of the content they had to write. The fax they sent relinquished their rights as his parents, granting sole custody of their son to the US court. "We are unable to protect our son or provide him with the care necessary for his well-being," Juan and Lucinda affirmed on the court document.

They had a phone number of a youth center in New York, and the attorney told them they could contact him there. But they had attempted to call many times without success. Months had passed without connection. On one of my visits, we dialed the number together from my phone. It rang with no answer.

Afterward, Lucinda took to me the edge of their property where she had planted a garden in worn-out tires—an experiment in recycling initiated by one of the "nutrition for sustainable development" projects in the region that was going well. She plucked a few small orange peppers and offered them to me. "Cook these with your meal tonight," she said gently, handing me the gift. "You seem so sad. They're strong peppers. They'll help you feel better." I knew her heart had broken into countless pieces over her missing child, yet she was worried about me.

. . .

As with the schematic diagram from coded interviews, this narrative analysis of sustainability makes the failure of global health discourses of "sustainable development" evident. It also helps point to a strategy for sustainability—or at least "for living, for survival"—that is deeply tied to community building and not to individual bodies. "Nutrition for sustainable development" does not really fit into the languages of San Juan, but if we were to attempt a translation it might mean something akin to "caring for and between relations with a commitment to tending to the people who make them possible."

Likewise *tanq'ibela* does not really translate into English—not even when the translation takes the form of an extended ethnographic narrative. As the geographers Max Liboiron (Michif-settler) and Edward Allen (Kablunangajuk) note, "You cannot come to a full understanding of Indigenous concepts" in written, academic texts (Allen, cited in Liboiron 2021, 22). The point in writing this historia of tanq'ibela is not to make Maya-Mam knowledge accessible to broader audiences but rather to destabilize English-language assumptions that definitions of sustainability could ever be universally shared (see Mol 2024). In writing with a Maya-Mam term, I am not signaling Indigenous understanding but rather how much colonial languages and their policies get wrong. Making space for co-laborative *not-understanding* is a way of slowing down the authority that often accompanies

FIGURE 23. A family in San Juan has repurposed the wrapping of USAID supplement packaging, using it as insulation for their animals. Photo by author, 2016.

American science, with the hope of cultivating a different foundation on which knowledge can grow.

STUDYING ASKANCE

Solomons and I met at a busy diner in Guatemala City. The modest restaurant was not far from the CeSSIAM office, and he spent enough time there that he had a table on permanent reserve. He liked the staff—and he liked the food. He was in the middle of work when I arrived, so I sat down and started up the voice recorder on my phone. Years earlier, I had received approval to record all our conversations. As he put it, "I've nothing to hide." Sensing my presence, he began to narrate what he was doing without looking up from the computer. "I'm writing up the "six S's of science" for our bulletin," he explained, and began to tell me what they were (in English):

1—**systematicity.** Science should be hypothesis driven. You start with a question or problem that you want to study, and you should study this systematically.
2—**skeptical.** According to this principle, you should doubt even your own findings, being curious and open to being proved wrong.
3—**social.** When science is basic, it's basic, but you should also think about the possible benefits to society and the ethical dimensions of both doing research and the application of the research to society.

4—sacrifice. Scientists are not going to have a lot of money, especially now, with the cuts to science funding that we're seeing. You must have a mindset of sacrifice.
5—selflessness. This one is about mentoring. You need to set aside your ego and get to the point where you aren't jealous of the people around you (he added with a wink that he had recently won a mentoring prize, but rather than keep it all for himself, he had taken García Meza to Boston with him, and they had accepted the prize together).
6—sustainability. Especially in the nutrition era of the Sustainable Development Goals, sustainability means taking a systems-level approach.

Having laid out the principles for me, he circled back to critique the final point. "Everyone is all about systems right now," he explained. "Systems thinking is at the heart of the sustainability paradigm. But there's nothing wrong with reductionism, except the fact that it is incomplete. Still, it has an internal method to itself."

Solomons's endorsement of reductionism initially surprised me, since he, like his mentors Scrimshaw and Rosenberg, was interested in the complex pathways through which metabolic, immunological, cardiovascular, and gastroenterological systems interconnect. But he continued to explain his thinking in a way that I understood.

> The opposite of reductionism, holism, adopts the tactic of encompassing everything—the more you encompass, the more you approximate a holistic approach. This has the advantage of capturing a lot of social context, or history, etcetera. But it has the disadvantage of generating data that is impossible to analyze by virtue of its huge volume and by virtue of all the interactions between the data that you would find.

He pointed to the advantages of reductionism, explaining:

> In a reductionist approach, you can present interactions within a manageable framework limited to a certain number of variables. You can study these to ask which ones will be reproducible over time and in other settings. This is principle one—systematicity. What you're missing is the relationship between all of the other variables—the holistic issues.

He wanted me to see that the methods of reductionism and holism were not in competition but differentially suited for different sorts of research problems, although he offered another virtue of reductionist methods.

> People who tend to aspire to holism often have a paralysis of an overwhelming amount of data and ambition within the data. People who are trained in reductionism select a chewable, biteable, digestible fraction of information. They don't take on everything all at once but go through the steps, and applications, and they can learn a little bit and then build from there.

The waiter came to clear our plates, and then Don Chepé—CeSSIAM's longtime taxi driver—arrived to pick me up. We were interrupted that day, but I knew I would have a chance to explain in writing that I agreed with Solomons more than he might know. The version of feminist anthropology I have been trained in, after all, is critical of holism in science (Mol 2002; Martin 1998; Rapp 1978; Haraway 1988; Strathern 2004). Solomons is right that the kind of anthropological research I do is expansive. To carry out an ethnography of a policy requires moving in a lot of directions, working to hold together various and sometimes baffling connections. But doing ethnography well requires not only presenting life's infinite complexities, but knowing which parts of these complexities to emphasize. Running counter to the aspiration to holism (in which everything is endlessly connected), my version of feminist anthropology considers the position of the researcher alongside those with whom we work and develops actions and knowledge accordingly, as described in chapter 4. This is not a reduction in the sense of simplification, taking parts away from a broader whole. It is rather a reduction that attends to complexities to develop insights into how to best act (think, for example, of the reduction that happens in cooking in which the volume reduces but tastes become richer).

Consider that the work of tracing along the various uses of sustainability that I have undertaken in this chapter can be done with any term. Anthropologists spend time with people, getting to know them, and gaining (always partial) access into their languages and worlds to understand which terms are important to unsettle. We then use this insight to craft an analysis that will matter for the people we work with and the worlds we want to build. Whose stories should be listened to and amplified? What details should we focus on, and what bits of our interviews or fieldnotes should we use? How can we piece the infinite expansion of possible historias together to shift something that needs to be moved? In a world of endless and unfolding systems, within systems, within systems, this method of science is one that uses the experience of "being in time" with people during fieldwork to gain insight into which reductionisms—and which arguments—to make.

But if Solomons and I are in agreement about the need for reductionism, our practices of reduction diverge. In composing the ethnographic vignette of Juana's experience with tanq'ibela above, I never coded my fieldnotes for key terms. The phrase "sustainable development" was written on USAID packaging and posters all around me, but I was looking less for repetition than for moments when my understanding was shifted—moments, for example, when I asked about nutrition while thinking of food and people would instead point to the sky. I didn't seek systematicity or replicability but friction and rupture. I carried out fieldwork to learn from others to look elsewhere, to see what I did not expect. My undergraduate adviser, Renato Rosaldo, explained the method I would eventually put into practice as "looking askance." I didn't know what this meant, so he held up his yellow pencil and turned his head, so he was squinting at it from the side. "Don't look head-on, but study things sideways," he advocated, as a way of insisting on the

importance of rigorously unpacking so-called commonsense assertions about how the world works that frequently turn out to be wrong.

Studying sideways has come to have another meaning for me as well. The anthropologist Laura Nader's method of "studying up" encourages the study of people with more institutional power than we have; rather than study the weak or disenfranchised, we might study bankers, lawyers, doctors, or businessmen. As Nader (1972, 284, 288) notes, there is much to be gained by understanding "those who shape attitudes and actually control institutional structures," using ethnographic methods "to get behind the facelessness of a bureaucratic society, to get at the mechanisms whereby far away corporations and large-scale industries are directing the everyday aspects of our lives."

In situations of studying sideways, however, asymmetries are less certain. Rather than know in advance who is powerful, researchers can be more curious about where power in relationships resides and how this power works. I have found this method of not-knowing—looking askance—to be a good practice in situations when the power structures at the table are not pre-given: for example, in my work with Solomons. I was not studying him because he was powerful, although he could be. I was studying with him because he was a good ally, had much to teach me, the willingness to help me understand what I could not, and respect that sometimes a shared understanding would never be reached. This was one of the lessons of our research with sustainable development: we may be using the same terms in different ways, and it would be good practice to learn how to recognize and work with these occurrences of difference.

CONCLUSION: TRANSFORMING OUR WORLD BY 2030

When it comes to sustainability, nutrition policy makers emphasize preserving life for the future. They speak about "dieting for planetary health," a catchphrase used by the EAT-Lancet Commission, formed shortly after the launch of the Sustainable Development Goals, which promotes a "global diet" of whole grains and plant-sourced proteins as a route toward "future health" (EAT-Lancet Commission 2023). Policy makers occasionally recognize that Indigenous communities have labored to produce American food for centuries and deserve food security. When discussing food security, they frequently mention that it is necessary for sustaining economic profit over time, to borrow language from the UN's Food and Agriculture Organization (FAO 2018).

In San Juan, people instead spoke about making connections across time and place and between people and land. "Sustainability," if we were to use the term, would be akin to "being in time" while also being connected with others. As we learned about sustainability in San Juan, it became clear that a primary obstacle to sustainability was the closed national borders preventing these connections to exist. The work of enforcing territorial boundaries—through policing,

imprisonment or confinement, bail bonds that trap people in tremendous debt, deportation, disappearance, or murder—produces many forms of harm and hunger that shape community life.

There is no "sustainability" in a world with closed borders, where families are torn apart as people are dispossessed of their land. And yet, in all the talk about "nutrition for sustainable development" I have heard in nutrition policy boardrooms and scientific conference centers, I have never heard discussion of abolishing borders, which would facilitate easy travel across international lines. Hunger would clearly be lessened by allowing for—even encouraging—mobility, but nutrition policy makers never address the need to grant Indigenous people sovereign passage across the land. The direct and unquestionable impediment that closed borders present to living (and maintaining, and enduring, and being reasonable, and surviving) for people in San Juan simply does not arise in conversations about "nutrition for sustainable development."

This chapter could have focused on the systemic cruelty that allows a community of sustainability experts to disregard the domain of policy that is the most painful in San Juan. The absence of discussion of opening borders among policy makers claiming to care about Guatemalan futures is clear evidence of the "orchestrated abandonment" detailed in previous chapters (Wilson Gilmore 2015). These are experts with "a solution in search of a problem," as Solomons was fond of saying. They had their products, brands, and ideas. They weren't concerned with listening to, learning from, or responding to the problems Maya-Mam people were actively struggling with in their lives.

This book highlights the systemic cruelty in nutrition science and policy, showing that people involved in the field of nutrition separate the stated intention to help from the often-punishing effects of their work in a way that reproduces harm. Yet in the space of this chapter, I also want to do what García Meza, García Maldonado, and I did in San Juan in my own form of analysis: slowing everything down, to make evident that the story of the cruelty of nutrition is itself not the only story to be told. Within the cruel spaces of maternal health science there are also "disruptive" thinkers attempting to transform the field: an old Black scientist-physician who has many times put his life on the line, a Guatemalan mother-scientist whose travels around the world have given her insight into care at home, a White anthropologist with US settler ancestry funded by a generous grant from Dutch taxpayers in the Netherlands who often sits with her own complicity in the same systems she critiques. We are all, in different ways, attempting to rework the conditions of cruelty and transform the foundations of power.

Solomons and I are both drawn to his second "S" of science, skepticism, and, with this, to critique. We are attentive to egos and imperialist irony and systemic cruelty and want to work to take away their force. But critique-of-critique also puts us in a place of seeking tools other than critique to take up in the fight-work and the care work of dismantling mal-nutrition's harmful effects. This chapter has

taken a step back from critique to detail how scientific methods and processes amplify some activities while foreclosing others, producing some kind of knowledge and expertise as "robust" and others as mere description. I have hoped to illuminate how people navigate these various possibilities for science—sometimes participating in cruel systems not because these people are cruel but because they are caught up in systems that have come into existence because these systems are good at reproducing themselves.

At the end of Solomons's speech on reductionism, he pointed to a nutrition scientist who had let activism take over her life. Swept into political advocacy, she had stopped publishing research, he said with disappointment. I interjected to recount some of the stories about sickness, missing partners, and suffering children I had recently heard from people in San Juan. Just the day before, I had been with a mother whose disabled child was starving because of a lack of dental care that would help him eat. As she watched him waste away, she was devising a plan to move north, in the hope that somewhere she could find the anesthesia he needed for the surgery that would save his life. I asked Solomons as sincerely as I could how he could possibly stand by and not engage in advocacy given what people in Guatemala were forced to endure.

He explained that he was committed to nutrition science precisely because of how people were harmed. Years later, listening to our conversation on my voice recorder, I hear this:

EY-D: Do you consider yourself to be an activist?

Solomons: Yes! But I don't consider myself an activist when I do science. I can separate the two, because of S 1 and S 2. Activism cannot pass for science. Advocacy should be based on science. But in and of itself it is not academic. I would advocate. But I wouldn't publish about it. I wouldn't let this become part of my science.

Solomons's science asked for a separation between science and activism that allowed him to engage in science with skepticism and activism with moral clarity. Meanwhile, ethnographic research—whether in spaces of policy or in kitchens—asks that we not separate ourselves from the objects of our attention. To write ethnographically is to write in a way that cares for the messy processes of research's production. Solomons and I are not in alignment in our methods here.

But I have also never wanted to engage in a research encounter in Guatemala, or elsewhere, thinking that I know better than those I'm with. That would undermine learning and, with this, the purpose of my work. Ultimately, both of us might be right, and we might not need to pick one or the other but can keep multiple versions of both science and activism on offer. Sometimes Solomons's skepticism in science and moral clarity in activism might be the right approach. And sometimes we might need science driven by commitments and activism that is responsive to complexity. Knowing when this is the case cannot be decided in general terms but through engagement with

the specificities of the conditions at hand. One might find oneself asking whether this commitment to situating knowledge makes for a strong foundation on which to bring about transformation. Indeed, I sometimes find myself wondering if telling nuanced historias of violence might undermine our ability to act against this violence, making events complex when clarity is called for. Yet it is my hope that responding to and working with this complexity is a step toward transformative change.

This theory of how to transform the world is not my own but one I learned in conversation with García Maldonado, García Meza, and the women who spoke with us about tanq'ibela and its translations. In the languages of sustainable development given to us by the UN, the world is in peril and we must come up with solutions for a better tomorrow. Foisted on us is what the anthropologist Lamia Karim (2014, 52) calls the great modernist question: "What should I do?" The question demands heroism: the problem is urgent; we must act to save the future.

The historias of tanq'ibela I have told set us on a rather different path for both science and politics—not of speeding up to save what has not yet come to pass, but of being in life, however uneasily. Its action, its activism, lies in presence, not futures. In the face of development's devastating promise of a better, happier, richer tomorrow, it asks instead to be in time. Lest my description sound romantic, I assure you it often is not. It is fingers-in-the-soil, bloody childbirth, pungent, vibrant, messy, effervescent, and difficult. At least, this is how I might uneasily translate it—though I have already moved it through multiple languages.

Historias of tanq'ibela offer a provocation to sustainable development: against the momentum of ever-more-urgent future perils, these historias embrace the space of being in time. As others rush by, they turn askance to make space for difficult, sideways knowledges. "Transforming our world? Really?" they ask skeptically. They then respond with clarity: We cannot start this work in a meaningful way without recognizing the gaps and fissures between different and sometimes irreconcilable agendas. In the place of asking for a unified theory of change, they embrace many theories of transformation.

"Which definition of sustainability do we want?" the president of the Latin American Society of Nutrition had asked the Spanish-speaking audience of the nutrition congress discussed at the start of this chapter. To that, I respond here that we should not pick a definition but find better ways to work among the numerous, unstable definitions we have among us. This response asks for a different kind of policy than that requiring a single heroic leader or a single path of action, both of which frequently dominate American politics in both the US and Guatemala. Instead of requiring that people speak, think, and translate to and from English, it recognizes that if we are not incorporating languages other than English into sustainability policy, we are already missing out on a lot. This is a politics that asks for the agility of being with multiple languages, sciences, and activisms, a politics willing to do the difficult, painful—and sometimes joyful—work of confronting, refusing, working within and against, and transforming the harms of nutrition science.

Conclusion

Break and Revolution

There is no resistance without tears,
but neither is there resistance without laughter.
If there is no laughter
there is no possibility of resistance.

RICARDO FALLA, AUGUST 4, 2021, CITED IN TATIANA PAZ LEMUS (@TATIANAPL_ 2021)

I did not travel to Guatemala in 2020 or 2021 as the coronavirus pandemic swept through the country, devastating medical and public health infrastructures.[1] When I returned in the summer of 2022, Julia, who has worked with maternal health projects in San Juan Ostuncalco since I first met her in 2008, told me I should have come sooner. She would have invited me to her Casa Alegria (House of Joy), which she had hosted for women from San Juan a few weeks before my visit. The pandemic prevented women's circles from meeting face-to-face, but at the height of it all, when people were isolated in their homes, women in San Juan had used phones to send each other voice messages. As the daily case count began to drop and people were again permitted to be together, Julia decided to invite roughly one hundred women to the outdoor event to sing and feel comradery in one another's company. The gathering that she described, with its celebration and reverie, had a clear evangelical resonance. But Julia explained that the purpose was to gather strength in community and not in the power of God.

Her family had survived. The cemetery was pushing up against its capacity, the pandemic taking its toll on her community. The months of isolation had been challenging, but she also said that the hardship had caused her to shift her priorities to ask for less. This narrative surprised me—Julia had so few material possessions as it was—but she said she had found happiness in her garden, becoming more connected to her plants and food than she had been in the preceding years. Indeed, the garden plots around her house were exploding with abundant produce, and

FIGURE 24. A community health leader walks in her garden, which flourished during the COVID-19 quarantine. Photo by author, 2022.

her family's plot of maize and beans on the other side of the valley had served them well, lifting her through the fear and mourning while also providing her family with good food.

Another silver lining of the pandemic that Julia pointed out was that her daughters did not have to spend their days at school. At the time of my visit, her youngest daughter was being punished by a strict primary school teacher who used corporal punishment to keep the class in line. The eight-year-old would return home with bruises, begging her mother to not send her back. Her older daughter, now thirteen, was also withering under the school's discipline. Julia was not against education, but she saw how their school literally and figuratively crushed her daughters and knew they deserved far better schooling than they were getting. International organizations working in San Juan Ostuncalco had spent so much energy talking about the need to help babies to achieve their potential through good nutrition. They were largely indifferent to how children the age of Julia's daughters were required to spend their days in austere classrooms with angry and sometimes violent teachers.

Rosario García Meza and I also visited Juana, the midwife whose grandson had left for the United States in the middle of the night, who lived in a San Juan

community near Julia. Juana's house was now unrecognizable to me. A three-story block house still under construction, it covered a large space of land that had served as a key site of USAID's development projects three years before. No longer was there a goat pen where urine was recycled into an organic insecticide, or a pepper garden built from recycled tires, or a chicken coop, or a greenhouse lovingly covered in empty burlap USAID supplement bags that would help to keep the thin tendrils of growing tomato vines from freezing. The hand-painted signs nailed along the path to guide neighbors on a tour of organic gardening had been taken down. The dreams of the future of sustainable development they had promised were gone, replaced instead by a towering half-built structure of cement.

With Julia's comments about finding joy in gardening still fresh in my mind, the disappearance of animals and produce on Juana's land struck me as devastating. Still, I understood. In 2021, relentless rain in another part of Guatemala had soaked into the mountains, causing landslides that buried entire communities. The earthen *barro* adobe-style houses traditional to the region are surely more sustainable than the cement block homes from the perspective of the resources required to build them, but they are hardly sustainable when considering the increasingly erratic rain. Given how rising global temperatures are saturating soils, houses made of mud and earth are not as safe—or sustainable—as they once were. The cement houses that are replacing them are, perhaps, a predictable outcome of sustainable development projects run by NGOs and USAID, which were always going to eventually leave families fending for themselves. Journalists were reporting that migrants, primarily to the US, had sent roughly $18 billion home to Guatemala that year (@palabrasdeabajo 2022), most of which was spent on food, clothing, shelter, health care, and other basic services to help families in rural communities survive (Ortiz 2022). When it came to "financing for development," most funds were coming from remittances, not from development aid, NGOs, or governmental support.

Juana told me that one of her neighbors had returned from a failed attempt to reach the United States and was not doing well. The neighbor had served as a health vigilante in 2008–9 and then as a promotora during Pérez Molina and Baldetti's Window of 1,000 Days initiative from 2012 to 2015. She had distributed supplements to other women, following the USAID model of maternal health even while her own family had been falling apart. All her children but one daughter had migrated to the US, and although her husband, still in Guatemala, had forbidden her to follow them, she attempted the journey anyway. The story told to me around a cup of warm atole in Juana's courtyard was that the woman was caught while attempting to cross into the US and deported, losing both the opportunity to see her children and the $10,000 she had "stolen" from her family to make the trip.

I asked about her whereabouts now, worried about what happens to women who travel without permission from their husbands when they are caught and deported. Juana gestured toward the family's property up the hill, warning me that

the woman had not been seen for days and never left her house. The woman and I had exchanged a few text messages throughout the pandemic, although eventually her number stopped working, and I could see it was no longer hers. In the last message she sent, a few months earlier, she included no text but instead a single photograph of herself. In it, she is standing in her garden in handwoven Indigenous clothing, her hands in her pockets looking directly at the camera with an expression that was neither happy nor sad. Looking back, it must have been shortly before she left.

When our visit with Juana had concluded and we began to walk back toward Rosario's car, a teenage girl whom I recognized as the recently deported woman's daughter came running after me. "Can you help me get a visa to the United States?" the daughter asked expectantly. I explained I didn't have this kind of power, and she nodded and quickly turned away. As we walked in opposite directions, I wondered if she believed me and if I should have had a better answer for her.

Our last stop in San Juan that day was at the cemetery. A modest tombstone, painted green, had been laid for Victoria Méndez Carreto since my last visit. "We will guard your beautiful smile in our thoughts and you will live forever in our hearts," it read. The nearby grave of Claudia Gómez González was adorned with freshly cut flowers—the same yellow dahlias that had been there three years earlier as if they had survived all this time. Four kids who were playing together had seen me walking to Claudia's grave and followed me. As they looked at me looking at the tomb, I heard the oldest child say to the others, "I don't know why she got so much attention. People were dying before her, and they're still dying." This generation of San Juan children, all born to mothers targeted by the Window of 1,000 Days nutrition intervention, had their own critical window on the impact of American violence on their communities and lives.

On this same trip, I also met with a group of scholars who straddle the fields of anthropology and nutrition—Rosario García, Eileen Rivera, and Miguel Cuj—to discuss a symposium we had organized, along with Ted Fischer, Meghan Farley Webb, and Gabriela Montenegro, for the upcoming International Congress of Nutrition, to be held in Tokyo, Japan. The symposium was Dr. Solomons's idea. I had budgeted a collaborative workshop with scientists into my research grant, and he saw how presenting at Tokyo could help me meet this obligation while also providing the means for two of his center's scientists—Rosario García and Eileen Rivera—to attend the conference, a boon for their scholarship and careers. The $3,500 fee to host the ninety-minute symposium at the conference (on top of participants' other registration and travel costs) seemed unfathomably expensive to me, although these costs are built into the funding structures of the European Research Council that supported my work. "Wouldn't this money surely be better spent in Guatemala?" I asked. But Dr. Solomons was a steadfast believer in international scholarly exchange, and he countered with the suggestion that I take a longer view: having a prominent panel so squarely focused on what anthropology

can offer to nutrition science would be especially useful there at the congress, in the belly of the beast.

When we met in Guatemala to discuss the symposium, our conversation was full of optimism about the possibilities of bringing the fields of anthropology and nutrition together. Rosario is a feminist mestizo Guatemalan with advanced training in social justice who teaches nutrition courses at one of Xela's most respected universities; Miguel is Kaqchikel-Maya with an undergraduate degree in nutrition from the San Carlos University in Guatemala City, whose PhD, from Vanderbilt, analyzes how K'iche' Maya women use food to help build their communities; Eileen is a mestizo Guatemalan researcher, also with a degree in nutrition from the San Carlos University in Guatemala City, who loves the part of ethnographic fieldwork where you learn from others why they do what they do. We saw clear benefit in centering Guatemalan sciences and scientists at this historically Euro-American-focused venue. We thought the added step of amplifying anthropological approaches would enable an important conversation about how and what the two disciplines of nutrition and anthropology might learn from each other. As both fields can be deeply feminist and deeply patriarchal, we could not just compare them, but we could also think about how to form new alliances and reorient our professional obligations and research.

Still, I was skeptical about whether the collaboration would result in meaningful change. Nutrition policy makers are frequently masters of the nonperformative, making reference to the importance of cultural diversity and local knowledge without any accompanying willingness to challenge the foundations of their field. "I like anthropology," I have heard from countless maternal health professionals who are disinterested in facing how racism and white supremacy are embedded in their own theories of knowledge. For them, anthropology is a field that romanticizes culture, not a field whose methodological introspection helps produce exacting and unsettling insight into the reproduction of privilege and power. I wanted to celebrate the inclusion of our panel on the program, but I also worried that this would do little more than check a box of "interdisciplinarity" in a way that would, as Sara Ahmed (2006) warns us in her theory on nonperformativity, prevent substantive change. Even before the pandemic, I had become concerned about the shortcomings of the mega-conference model: the carbon footprint, the unspoken expectations that someone else can handle care at home (and funding bodies that refuse to compensate for additional childcare costs), the speakers standing on podiums lecturing in a way that amplifies the style of colonial expertise, the inequity of access among disabled scholars or people unable to get visas to sponsor their travel, the sheer lack of creativity in format, and so on. After the pandemic, the literal and epistemic costs of large conferences seemed that they would never balance out.

And yet, in December 2022, when the nutrition conference was over, we all thought it had been worthwhile. We could be critical and also pragmatic. It didn't

have to be either/or but both/and, as Ted Fischer, with whom I organized the panel in Tokyo, was fond of saying. We could work on the outside and also from within.

On the stage in Tokyo, Miguel Cuj gave a powerful research acknowledgment in the K'iche' language, also raising the topics of informed consent and unethical extraction of knowledge from community members that had relevance for everyone at the conference. Rosario García and Eileen Rivera each presented about their efforts to incorporate nursing women's perspectives into research on breastfeeding. Gabriela Montenegro described how her nutrition research on vitamins had benefited from collaboration with the anthropologist Meghan Farley Webb, who was, in turn, able to stress the merits of long-term community engagement. We did not come close to filling the seven-hundred-person-capacity ballroom where we spoke, but the people who did attend asked thoughtful questions. A USAID employee shared that she had been working to advocate for local collaborations in her programs and wanted our feedback about her process. An Indigenous graduate student from a different field shared that she felt inspiration from seeing us there. An audience member commented that hearing the tensions between nutrition and anthropology spelled out explicitly was useful for understanding what has gone wrong in projects he had worked for in the past. Several people waited to meet with us afterward to share their appreciation for our presence at the conference.

At the panels I attended, I heard well-respected scientists questioning linear growth metrics for many of the same reasons that I critique them in this book, finding them stigmatizing and misdirected. Edward Frongillo, from the University of South Carolina, and Jef Leroy, from the International Food Policy Research Institute, presented research suggesting that the Window of 1,000 Days paradigm is far too narrow, with children "developing" long past the point that others have marked as a critical developmental window. Their analysis (2019) further indicated that although poor linear growth—also called stunting—may be *associated* with delayed childhood development, reduced human capital, and chronic disease, it was not a *cause* of these problems.

Frongillo and Leroy are among a growing group of scientists who have become vocally critical of stunting. The physical anthropologist Barry Bogin (2022), cited in chapter 2, had recently published a paper challenging the association of stunting and nutrient deficiency, instead linking linear growth failure to fear, violence, and toxic stress. He had worked with a group of twenty-seven other scientists to publish an article critiquing the WHO titled bluntly, "Stunting is not a synonym of malnutrition." Published in the prestigious *European Journal of Clinical Nutrition*, the article demonstrated there was no correlation between nutritional status and height (Scheffler et al. 2020). Building on this work, several scientists in Tokyo were calling on the field of public health nutrition to stop using stunting as a proxy for undernutrition, which, they suggested, led to "blurred thinking" and damaging actions (Fongillo and LeRoy 2019).

In addition to questioning the historical focus on maternal undernutrition, others were questioning the way the WHO assesses child development. I came across a movement to develop a multidimensional index of child growth advocated by global health scholars such as Hinke Haisma and Sridhar Venkatapuram, who were trying to bring a health justice perspective to the conversation about children's growth. Reflecting on her decades-long collaboration with microbiologists, the anthropologist Amber Benezra (2023, 207) writes that she didn't anticipate "that a new generation of scientists would ask more of their disciplines and transform them in kind." I likewise found that even while my own field, anthropology, could add valuable critique, nutrition scientists were themselves demanding profound changes in their field.

The push for transformation was perhaps most obvious in a growing movement to end corporate sponsorship of the conference and conflict of interest (COI) in presentations, by disallowing researchers who were paid by industry for their research to present their findings. The nutritionist Jane Badham had produced buttons with the hashtag #EndCOIatIUNS that many people wore proudly. Carlos Monteiro, an esteemed epidemiologist from São Paulo, declared during a large standing-room-only lecture that no one with a commercial conflict of interest should be given a platform. When the UN's Special Rapporteur for the Right to Food, Michael Fakhri, presented, he noted that he would not attend the conference in the future if the policy enabling corporate partnerships did not change.

A decade earlier, at the meetings held in Granada in 2013, Coca-Cola had a massive presence, with a large stall featuring the slogan "Boost Your Life" adjacent to the main entrance of the conference. Under banners declaring that Coke had been "hydrating the world since 1886," conference-goers could have all of their biomarkers measured to receive a printout from Coca-Cola about how to improve their health. In contrast, industry presence was much more hidden in Tokyo, with the corporate booths in the basement and many of the industry-sponsored programs held in the evenings. Corporations were still everywhere along the margins of the conference, but several people were loudly calling this into question. I heard animated discussions of what it would take to end COI in a way that would not further exclude scholars from marginalized countries, who were unable to draw on governmental funding because it did not exist. At the conclusion of the conference, when the organizers announced that the ICN had taken a serious financial hit by losing corporate sponsorship, many people were sitting with the fact that the field as they knew it was thoroughly dependent on these partnerships and facing all it would take to genuinely change.

Attending the conference was not only useful for interjecting anthropological voices and a concern for corporate power into the agenda. It was also useful for me to have exposure to presentations that unsettled my own assumptions and arguments about what anthropology might have to offer. Ethnographic methods attune us to listen to people's stories, and we frequently draw on these stories to emphasize

nuance and variation in lived experience, illustrating outliers, exceptions, and places where patterns break. When it comes to the design of global health policy, anthropologists frequently argue for the importance of cultural specificity and adaptability, showing the fallacy of the "one size fits all" model of policy. I know I have made this argument before.

This impulse was challenged by several public health scholars at the conference, who expressed concern about the parallels between "cultural specificity" and "personalized nutrition," which they saw as a neoliberal market ploy. Walter Willett, a giant in nutritional epidemiology, did not mince words. "Precision public health is the enemy of public health; if you think that everything has to be individualized, you disarm the most effective ways to do public health," he told his audience. This extra warp and weft of complexity seemed especially useful given a clear need for robust public health measures during the COVID-19 pandemic. How can policy makers attend to ways that experiences vary while maintaining awareness of how personalization, and even cultural attentiveness, can become a profit-making strategy?

The answer that this book has offered is to pay attention to the cultures and practices of policy making. To create strong public health programs while respecting life in the communities in San Juan Ostuncalco necessitates looking carefully at all the ways that policies do not do what they appear at first glance to do. Time and again policy makers and politicians claim to care about women and Indigenous communities while saying little about self-determination. Their concern is with bodies and behavior changes that individuals can undertake to be healthier—not on the deep structures of violence that reproduce this harm.

As we saw in chapter 1, the narrative framing of the Window of 1,000 Days agenda, with its focus on the body and diet of the pregnant mother, ignores interventions in reproductive autonomy that might actually improve women's lives. In chapter 2, we saw how the bio-logics of fetal and childhood stunting stigmatize Mam-Maya women, holding them responsible for histories of violence in a way that makes that violence worse. Chapter 3 explored the Guatemalan roots of global health interest in the first thousand days of life to show how the act of making height a proxy for health and intelligence that was integral to the US "war on poverty" ignored the literal war on poor, Indigenous communities taking place in Guatemala at the time. We saw in chapters 4 and 5 how interventions to end gender inequality and gender violence by targeting maternal nutrition frequently further stratify communities, exacerbating inequality and violence while also ignoring women's own desires for their lives. Chapters 6 and 7 address how nutrition policies directed at maternal health and sustainability development rarely mention land sovereignty and labor environments, even though these are central to eating and living well. And as we have seen throughout the book, the US government has created supplement- and education-based nutrition programs to

ostensibly better the lives of people in Guatemala but has refused to make it easier for Guatemalans to travel between Guatemala and the US, something obvious and within its capacity to address that would have a clear benefit for the Indigenous Guatemalans who have been, for centuries, migrating to produce America's food and who have been a target of American war. The field of nutrition frequently claims to be working to end structures of poverty. It has not adequately faced how poverty is an outcome of pushing nutrients as a solution to poverty.

When I write of *mal-, or harmful*, nutrition, this fundamental misdirection that surrounds nutrition is what I mean. The common understanding of "malnutrition" in public health nutrition is that people face a problem of inadequate nutrients and that improving nutrition will improve their lives. Policy makers will then act to make nutrition better—distributing supplements, creating nutrition education programs that teach people to eat well—but because the problem was never principally one of nutrients, these actions will not lessen hunger. Nutrition will not become "better," because nutrition was not the source of the problem. The "revolution" that improving nutrition inspires is much more akin to a wheel revolving around an orbit, returning to where it began and upholding the status quo, than to a break in the cycle that brings about transformative change.

Throughout this book I have critiqued nutrition for its nonperformativity, but is anthropology any different? I raised this concern with my fellow panelists over dinner at a cozy restaurant under a metro line in downtown Tokyo. We had collectively spent thousands of dollars in grant funding to attend the conference and present our work to an audience of nutritionists, arguing for the merits of incorporating local and Indigenous perspectives, grounded long-term engagement with communities, and attentiveness to structures of power and privilege into nutrition research and policies. Would this gathering of ours help make any lasting difference? I was thinking of the daughter from San Juan who had approached me wanting my help to cross the US border and the powerlessness I felt as we walked away from one another. Was my work in Tokyo—my work writing this book or sharing my research experiences with my students in my classrooms—helping build a better world for people in San Juan?

The Guatemalan anthropologist Tatiana Paz Lemus had been in the audience at my panel and now joined us for dinner. Her own research was on youth mobilizations (2019), and the years she had spent learning about organizing led her to kindly reframe the problem of efficacy I was posing. Sitting side by side on a wooden bench in front of delicious Japanese food, she gently pointed out that my aspiration to improve the world for people in San Juan reproduces the same flawed theory of change that I have critiqued in nutrition. In the larger scheme there is very little I could do for San Juan. I could find a way to give money to the daughter, maybe even enough to help her cross the border, but then what? Even a lot of money will eventually run out. And would my academic panel help? Her answer again was no, not really. "For life in San Juan to change it's the structure of the state

that needs to change. Academic panels won't do much to change the structure of the state, and I think it's important to be upfront about this," she said.

This was not, however, a fatalistic message. She went on to explain, "It is okay that *you* are not changing the structure of the state. *You* are not responsible for political change because that is not how political change works. Individuals do not cause change. Change is brought about by collectives."

Mal-nutrition responsibilizes the problem of nutrition onto mothers. It teaches women with children that we are individually responsible for our children's futures—through our cooking and feeding, our childrearing, our bodies, and the bad decisions surrounding nutrition that we make. The pressure that women in San Juan face is particularly acute: American political systems force their families into conditions of hunger and then tell women that this hunger is their fault. If they behaved correctly or were better educated their children would not suffer. The solution this focus on nutrition offers—more nutrients, more education, more behavior change, all targeting individual bodies as responsible for their actions—entrenches women further into this trap. When people speak of "systemically marginalized" communities, this is an example of how systemic marginalization works in practice. The promised cure of better nutrition furthers the malady. Marginalization, much like malnutrition, reproduces itself, as a cycle of disadvantage forms.

Paz Lemus's point was that breaking this cycle is not something that is my individual responsibility—or the responsibility of any other individual on their own. Countering the premise of liberal politics, along with the premise of most nutrition advice and policy, I will not achieve change by acting differently myself. Systems will not be transformed by individual actors. If I want to make political or cultural change, a good place to start would be to become involved in community with others—replacing individuality with collectivity.

The last thing I did before leaving Guatemala in summer 2022 was to take my friend Carla to lunch for her birthday. She was at the time living with and dying from diabetes—or to offer another explanation of affliction, living with and dying from a lifetime of oppression stratified along hierarchies of capital: race, gender, income, ability, and so on. Now her body was failing and hurt, and she had not left her immediate neighborhood in several weeks. Over the years she had spent mothering others, she had experienced poor medical treatment. Doctors told her to eat better, writing prescriptions for medications and supplements that she could not afford that left her reliant on a cocktail of assorted and intermittently taken pills that may have done more harm than good. The field of public health had largely left women her age for dead, directing its attention to their pregnant daughters and their babies, as if these daughters and their babies would not irreparably suffer from losing their mothers and grandmothers far sooner than they should.

Her husband and older daughter were traveling to attend her youngest daughter's baby shower in the mountains a few hours away. Carla, too weak to join them, had planned to spend her birthday alone. Instead, her husband helped me pick a

place we could go together for a meal that she would appreciate: the regal Hotel Bonifaz, just off the city's downtown square. Carla had passed this restaurant almost every day of her life, but it catered to a rich clientele—women used to having, not being, domestic workers—and she had never had the financial opportunity to enter. As we walked there, I was not sure if she could make it. But we moved slowly, arm in arm, and before long we arrived.

A few months earlier I had been in pain and had undergone surgery. I was acutely anemic and needed a hysterectomy to stem the monthly loss of iron in my blood. Menstruation-related anemia is another example of a reproductive affliction where "nutrition" doesn't pertain directly to eating. In my case—as with many others—my iron deficiency was only marginally connected to what I did, or did not, consume. Even high-dose iron supplements made no difference in the overall iron stores in my blood.

Carla called me while I was in the hospital and every day for a week following the surgery to make sure I was okay. In a series of recorded messages I have saved so I can hear her voice, she recites a recipe for soup that she wants me to give to my mother to make for me. "Boil liver, onion, and tomato together, blend the mixture with a food processor, strain it into a broth to be consumed three times a week. Two cups per serving. Add some watercress if you can," her message specified. She followed up with a warning: "One thing that is certain is that the midwives and ancestors (*viejitas de antes*) know that you have to follow a bit of a diet so as to not suffer when you're older, like I do."

In this book I have argued that the field of maternal nutrition's focus on bodies and education misdirects attention toward individual choices of pregnant and nursing women and away from the patterned inequities shaping the systems in which people live. I have shown how this focus on fetal development is stigmatizing and misplaced, asking women to take personal responsibility for maladies whose origins lie in social structures. With this critique in mind, what are we to make of the practice, organized and administered by women across generations, of caring for people through food?

I might dismiss Carla's offering of broth, arguing that anemia is related to structures of violence and not my dietary choices about what to eat. Indeed, "eat better" can be the advice of racial capitalism, blaming one's inability to change on the self and framing the affliction as rooted in bodies and nutrients and not political-economic structures such as the inhumane conditions of labor or the dispossession of land. Yet the care for diet that happens when my friend passes along a family recipe to my mother is substantively unlike the care for diet that happens with the distribution of an anonymous iron supplement. "The diet" of the supplement is aimed at deficient bodies, doing nothing to care for toxic landscapes. It is a diet that strengthens corporate interests, causing relations between people to dissolve.

Meanwhile, Carla's broth strengthens interpersonal connections. Whatever is eaten is but a part of the recipe, which also offers a thread to stitch fragmented

communities together. What the midwives and viejitas de antes were saying was not only that you must follow a diet, but that you must let others in—to put yourself in the position of receiving care. It may seem as if their offering does not address the broader political landscape, but to make good soup can be healing and not harmful, precisely because of how it strengthens bonds between people over profit.

This is the kind of approach that Paz Lemus was also advocating. Just as "you" are not responsible for changing the structures of state politics, you do not need to—and moreover cannot—change nutrition on your own. Nourishment is not, ultimately, a property of a body and its nutrients to be transformed by individuals. To nourish entails a collective commitment to caring for connections between bodies, people, and their worlds.

As we ate at Hotel Bonifaz, I could see Carla was having trouble with the meal's main course. Her teeth were not strong any longer, and the meat was too tough for her to chew. The mandate to "eat less" that had accompanied her diagnosis of diabetes more than two decades earlier no longer made sense. She was gaunt and frail and had trouble holding on to any weight.

After we had eaten as much as we could, the waiter cleared our plates and brought us two slices of rich white cake glistening with frosting. I had not known this was included in the meal, and almost instantly I began to moralize the dessert in front of us. I could not help it. For all I knew about and understood the dangers of the logic of dieting—for all my arguments about how "nutrition" should not be directed toward individual bodies and what they do or do not eat—nutrition's socialization is strong, and there I was, suddenly doubting that the lunch was a wise idea. "Don't feel pressured to eat this on my account," I told Carla. I was thinking of her diabetes and what the sugar in this decadent dessert might do to her blood and body, as well as of the longer histories of colonialism and exploitation that made a white sugary cake at a pretentious restaurant an object of desire and celebration.

But Carla did not hesitate. She grinned at me. "It is my birthday. I haven't eaten cake in months, and it's looking like I may not have another chance. Plus, I want to enjoy this time together," she said, her delight radiant as she took a bite.

Appendix

Timeline of Key Dates

1949 Nevin Scrimshaw arrives from the US to Guatemala to serve as the founding director of the Institute of Nutrition of Central America and Panama (INCAP).

1954 Guatemalan president Jacobo Árbenz is overthrown in a violent coup supported by the US government.

1961 USAID establishes a base in Guatemala. This same year Moisés Béhar takes over the directorship of INCAP, and he and Nevin Scrimshaw initiate the Pachali farm.

1969–77 INCAP runs its Oriente Study on maternal nutrition in four Guatemalan communities.

1980s General Efraín Ríos Montt orchestrates a genocidal "scorched earth" campaign throughout highland Guatemala. Commander Otto Pérez Molina is stationed at an especially violent site of the war.

1996 The signing of the Peace Accords officially ends three decades of armed conflict.

1999 The UN's Commission for Historical Clarification releases its report documenting the violence during the armed conflict.

2002–4 After a series of follow-up studies, INCAP scientists rename the Oriente Study the Longitudinal Study of Human Capital.

2010 US secretary of state Hillary Clinton's Feed the Future Summit launches the "First 1,000 Days of Life" nutrition agenda.

2012 Guatemalan president Otto Pérez Molina and vice president Roxana Baldetti initiate the Window of 1,000 Days maternal nutrition intervention in Guatemala as part of their Zero Hunger Pact. This same year they end government-funded health extension services in San Juan Ostuncalco, and USAID starts its Paisano

(Programa de Acciones Integradas de Seguridad Alimentaria y Nutricional del Occidente) food insecurity prevention project in the region.

2015 The UN announces its Sustainable Development Goals, naming "zero hunger" the second goal and declaring the first ten years of the Sustainable Development agenda the Decade of Action on Nutrition.

2015 Guatemalan president Otto Pérez Molina and vice president Roxana Baldetti are arrested and imprisoned on corruption charges.

2016 Guatemalan president Jimmy Morales initiates the Grow Healthy program with funding from the World Bank.

2017 World Bank president and anthropologist Jim Yong Kim announces the Human Capital Project.

2018 Claudia Gómez González, from San Juan Ostuncalco, is murdered by a US Border Patrol agent while crossing into the United States just weeks after the launch of US president Donald Trump's zero tolerance border policy.

2020 Guatemalan president Alejando Giammattei initiates the Grand National Crusade for Nutrition, aiming to reduce malnutrition.

NOTES

INTRODUCTION: FETAL DEVELOPMENT AS GLOBAL DEVELOPMENT

1. Decades later, Ríos Montt was convicted for genocide and crimes against humanity, but this conviction was overturned on a technicality. He died while still on trial in 2018, before he could be held accountable for his crimes (Oglesby and Nelson 2018).

2. Conventionally, anthropologists use pseudonyms to name the people with whom we work. My institutional review board protocol allowed me to make exceptions in this convention when it came to scientific experts, but who counts as a scientific expert is highly interpretive. When and how to name the people we work with is a vexing challenge for anthropologists; I recommend Goldstein 2023 for an especially engaging elaboration of these challenges.

1. REPRODUCING CRUELTY

1. Not long after the court's decision, the anticorruption commission that helped imprison Otto Pérez Molina and Roxana Baldetti was disbanded. Though the commission was widely popular in Guatemala, Trump administration officials and Republican members of Congress withdrew their support (WOLA 2019).

2. The Cold War theorist and anthropologist David Price (2016, 231–32) reports that Adams's findings—that the prisoners knew little about communism—irritated the CIA and that Adams eventually worked to reform the AAA to encourage separation from the military. Still, his work with the State Department limited his access to work and travel in Central America for the rest of his career.

2. BIO-LOGICS OF POVERTY

1. Using the scene of a traffic accident to explain intersectionality, Crenshaw (1989) has brought the harms of sex discrimination and race discrimination into conversations about

how accidents unfold. For more on traffic accidents, see Solomon 2022. For more on the materiality of race, see M'charek 2013.

2. See "The Relationship between Physical Growth and Infant Behavioral Development in Rural Guatemala" for the observation that "physical growth cannot be meaningfully expressed by any single variable" (Lasky et al. 1981, 221).

3. I appreciate Barry Bogin pointing out that Galton was incorrect, and, contrary to his alarmist rhetoric, the rich had more surviving children than the poor (personal correspondence).

4. But see Benn Torres and Torres Colón 2020 for the observation that Anténor Fermin's vision of an antiracist social science predates the work of Boas by at least a generation and that US anthropology might consider an alternative antiracist genealogy for itself.

5. Advocates for disabilities rights have objected to the reproduction of the "r-word," which has been used as a hurtful slur against disabled people. In nutrition, the word has a technical meaning of "slowing down," but I have chosen to reproduce it in an edited form to draw attention to its shameful scientific history.

6. For a cultural history of the medical construction of prematurity and its relation to racism and "reproductive injustice," see Davis 2019.

3. PROXY

1. Many places in Guatemala are named San Juan. I am referring to this community as Aldea San Juan to distinguish it from the San Juan Ostuncalco communities discussed throughout the book.

2. Marx's discussion of equivalence is an important theme throughout anthropology. For notable recent examples, see Li 2015; West 2016; Hayden 2023. See also Weiner 1983; Martin 2014.

3. See chapter 2, note 9, for an explanation of my writing of this term.

4. Joaquín Cravioto, a Mexican physician with a background in biochemistry and psychology, served as INCAP's associate director in 1962–65. He had earlier dedicated himself to the study of how childhood malnutrition affected brain development, or what he called "neurointegrative functioning" (Cravioto, DeLicardie, and Birch 1966, 319). In his research, he assessed malnutrition through height and neurointegrative functioning through tests in which children identified shapes such as squares or stars. Cravioto's finding that "decreased body size was correlated with lower intelligence scores" (Arroyo and Mandujano 2000, 2868) profoundly influenced the design and ambitions of the four-village study. For more on anthropology's involvement in these early theories of cognition and growth, see Lakoff 1996.

4. CIRCLES OF IN/EQUALITY

1. For a more extensive study of weaving practices, see Carol Hendrickson's *Weaving Identities: Construction of Dress and Self in a Highland Maya Town* (1995).

2. One of my favorite examples is the YouTube channel of "MCFuneral Juarez," who experiments with rap and hip hop in Mam and Spanish as he chronicles his journey from his adobe home in San Juan to New York City, where he spent the cold, isolated winters in the shadow of the Statue of Liberty (2011, 2012, 2014).

3. This was titled "Food Security Focused on the First 1,000 Days" (Seguridad Alimentaria Enfocada en los Primeros 1,000 Días [SEGAMIL]).

5. GENDER VIOLENCE AND THE VIOLENCE OF GENDER

1. A nonexhaustive list of academics who have written about the Todos Santos lynching includes Sitler 2001; Snodgrass Godoy 2002; Fernández García 2004; Burrell 2005, 2013; Sharp 2014; and Weston 2020.

2. The image of studying abroad is a romantic one, but my reasons were also pragmatic. I was funded on a Pell Grant for low-income students, and I was struggling to pay tuition. I arrived at college as a monolingual English speaker, and my college had a second-language requirement for graduation. Guatemala's Spanish-language schools, which frequently include meals and housing, are some of the most affordable in the world, and I calculated that it would be less expensive to travel to Guatemala for three months of immersion while studying to pass the Spanish proficiency exam than to pay for the required 15 language credits. My time in Guatemala would also offer me a study abroad experience that I desired but could not afford to pay for through my institution.

3. I thank Malini Sur for the stories of how poor people along the India-Bangladesh border treated eggs as precious, because they were. For ethnographic studies that demonstrate the importance of taste in conditions of scarcity, see Hardin 2018; Mendenhall 2019; Carruth 2021.

6. WINDOW OF OPPORTUNITY

1. The anthropologist Charles Hale (2005) writes about the nefarious underbelly of multiculturalism, in which a superficial celebration of cultural differences undermines calls for substantive political and legal representation. The mural that hangs in the USAID office in Guatemala City is emblematic of the simultaneous recognition and erasure of diversity that he critiques.

2. Grandin (2000, 113) writes that in response to political pressure, the state gave 790 K'iche' heads of household title to land in the department center of Quetzaltenango between 1877 and 1889.

3. In recent centuries, Guatemala has been culturally and economically divided into *tierra caliente* and *tierra frio*. "Tierra caliente" refers to the hot regions, where plantation agriculture is common and there are two seasons for maize: one in June or July, the other in late fall. "Tierra frio," the cold regions where I have spent most of my time and where Beti lives, has just a single harvest. Global warming is changing the stability of these classifications.

4. The geographer Beatriz Manz (2005) would later describe it as a "paradise in ashes" in reference to the scorched earth campaigns of Guatemala's armed conflict.

7. HISTORIAS OF CO-LABORATION

1. This phrase no doubt caught my attention because at the time I was working closely with Annemarie Mol, whose extensive writings on language and translation were being collected for a book titled *Eating Is an English Word* (2024).

2. Though Marion Nestle first introduced me to Solomons, it was the case that we had another connection through one of my doctoral advisers, Sally Merry, whose identical twin sister, Patrice Engle, worked at INCAP with Solomons in the 1970s and had remained a lifelong friend.

3. Full-time faculty typically have an institutional budget that supports these costs—as do industry scientists, who will often be paid for their time. A few precious scholarships may allow researchers from the Global South to participate. Many junior scientists make significant financial sacrifices to attend.

CONCLUSION: BREAK AND REVOLUTION

1. Guatemala's first COVID-19 cases were associated with deportees from the US, many of whom were held in mass quarantines that allowed infections to spread (Dupraz-Dobias 2020). Meanwhile, as the US government sent Guatemalans living in the United States back to Guatemala, it closed its own borders—invoking an old public health rule to shut down asylum claims. They kept this ruling in effect for more than three years, long after all restrictions for US citizens were lifted.

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INDEX

abduction of Maya children, 73, 131–32, 134, 141–42
abortion, 46–47; exclusion from hunger policy, 49–50, 176; in the United States, 48
Acam midwifery clinic, 190
Adams, Richard, 52, 68, 93, 215n2 (chap. 1)
adoption, illegal, 134, 141. *See also* abduction of Maya children
aflatoxins, 172–74
Africa, 40, 64, 102
agrarian reform, 34, 78, 132, 141, 159, 168; Árbenz presidency, 6, 42, 45, 97, 100, 112, 158
agriculture, 34–35, 54, 154, 172–73, 217n3 (chap. 6); industrial, 99, 153, 158–61; and labor, 112; Maya, 22, 157–59, 162–63, 166 174; monocultural, 42, 158–60, 162, 165; toxic chemicals in, 16, 155, 164–65
agrochemicals, 16, 159–60, 164–65, 172, 190, 202
agroecology, 153–54, 158, 166, 168, 172
Ahmed, Sara, 28–29, 117, 204
Aldea San Juan, 80, 99, 104, 216n1 (chap. 1). *See also* Longitudinal Study of Human Capital (INCAP)
Allen, Edward, 192
Almolonga, 164–65
America, definition, 17–19
American Anthropological Association (AAA), 52, 215n2 (chap. 1)
Americas, the, 18, 27, 51, 65, 66, 134
Amsterdam, 31
anemia, 19, 33, 210
animals, nutritional research on, 81, 85–87
anthropology, 9, 30, 35, 52, 133, 179, 216n4 (chap. 2), 216n4 (chap. 3); and anthropometry, 67–68; feminist, 195; methods, 29, 32, 177, 196, 215n2 (intro); and nutrition science, 93, 98, 139, 181, 184–88, 203–7; race in, 56–57; and transformation, 11, 28, 30–31, 208
anthropometry, 12, 22, 55, 69, 76, 78, 82, 83fig., 114–15; and anthropology, 67–68; mothers' discomfort with, 72–73; and racism, 57–58, 65–66
antiabortion politics, 17, 48–49, 54, 118, 134, 171
antivagrancy laws, 112, 115, 126
Arévalo, Samuelo, 167
armed conflict, Guatemalan, 5, 36, 53, 104, 160, 166, 213; civil self-defense patrols (*Patrullas de Autodefensa Civil*), 7–8; as "civil war," 41; disappearance during, 5–6, 9, 21, 44, 50, 101, 113, 135; gender violence in, 44, 50, 135, 148; peace accords, 213; scorched earth campaigns, 6, 113, 132, 142, 213, 217n4; US role in, 41–45; war crimes, prosecution of, 50–51, 132, 215n1 (intro). *See also* United Nations Commission for Historical Clarification (CEH)
army, Guatemalan, 21, 44, 50, 109, 132
asylum, in US, 3, 27, 141–42, 149, 218n1
atole (INCAP protein supplement), 12, 23, 80–82, 85, 92, 95

atole (traditional), 85, 93–94, 101, 116, 139, 173
Austin, John L., 28

baby snatching, 73, 131–32, 134, 141–42
Badham, Jane, 206
Baker, Lee, 30
Béhar, Moisés, 22–25, 86, 156–58, 160, 166, 168–69, 213
Beltrán, Cristina, 51
Benezra, Amber, 206
Bernays, Edward, 41–42, 44–45, 52
Berry, Nicole, 74
Bhattacharya, Tithi, 149
bio-logics, 61, 67–68, 72, 74, 76–77, 79; definition, 56; and racism, 57–58, 64–65, 69, 79
biologies of poverty, 56
biology: and anthropology, 67–68; as investment in future, 64, 82; and poverty, 22–25, 33, 35, 56–60, 76–77, 104, 144; universalism *vs.* relativism, 70. *See also* growth, biological
biopolitics, 56
birth control, 47–49, 74, 134, 138, 171, 176
birth spacing, control of, 47, 74, 138. *See also* abortion; contraception
Boas, Franz, 67, 69, 78, 216n4 (chap. 2)
Bogado, Aura, 78
Bogin, Barry, 70–71, 205, 216n3 (chap. 2)
border-crossing sovereignty, 34, 176, 197
border patrol, US, 3, 5, 96, 143, 214
border policy, US, 49, 54, 140–42, 148, 177, 214, 218n1
border reform, 49, 54, 78
borders: asylum law and, 3; as barrier to sustainability, 196–97; safe passage across, 17, 34, 208. *See also* migration to US
border, US-Mexico, 3–5, 18, 48, 51, 141–43, 148
border violence, 10, 149. *See also* migration, death during; migration, death during, children
breastfeeding, 1, 13, 49, 96, 101, 172, 178, 205; control over, under nutrition programs, 17, 25; recommendations for, 19, 137, 149
Briggs, Laura, 141
Brown, Lester, 159
Buffon, George-Louis Leclerc, Comte de, 65

Caal Maquín, Jakelin Ameí Rosmery, 142
Calderón, César, 53
Canada, 20, 100
cancer, 160, 164–65
capitalism, 25, 31, 42, 45, 78, 83–84, 100; care work and, 147, 149; and equality, 109–11, 129; monocultural, 158, 162, 169, 174; and race, 56–58, 159–60, 209–10
Capital Volume 1 (Marx), 83
CARE, 13, 26
care work, 96, 144–47, 149–50, 152, 182, 197
Carey, David, 15
Carla (skilled care worker), 144–47, 149–52, 209–11
Carney, Megan, 27
Castellanos, Edgar, 131, 133
Castillo Armas, Carlos, 43
Castillo family, 94
Castro, Hector David, 43
Catholic church, 17, 27, 113, 133, 162
Catholic Relief, 116
census, national (Guatemala), 20, 74, 113
Center for Studies of Sensory Impairment, Aging and Metabolism (CeSSIAM), 18, 73, 75, 157, 168, 177–79, 181–82, 195
Center for Teaching and Interchange of Knowledge (Pachali), 154–58, 160, 166, 168–69, 172, 213
Central America, 71, 106–7, 156, 161, 164, 215n2 (chap. 1)
Central American Workers Revolutionary Party (PRTC), 167
Cervecería Centro Americana, 94, 155
Chan, Margaret, 31, 100
Cházaro, Laura, 66
Chepé (CeSSIAM driver), 195
Chicas Perez, Briseyda Lisseth, 142
childbirth, 9, 73, 114, 115, 117, 124–26, 171, 188–89, 191, 199; control over, 17, 67, 137; death during, 3, 74, 180; premature, 76; stillbirth, 164. *See also* midwifery; midwives
Chiquita Brands International. *See* United Fruit Company
chronic illness, 39, 143, 160, 205
chronicity, 60
chronic malnutrition, 3, 19, 26–27, 60, 62, 108, 111, 142, 172
church, 47, 109, 162, 171; Catholic, 17, 27, 113, 133, 162; evangelical, 113, 164
CIA (Central Intelligence Agency of the United States), 41–42, 52, 97, 215n2 (chap. 1)
civil patrols (*Patrullas de Autodefensa Civil*), 7–8
Civil Rights Act (US), 68, 81
civil war. *See* armed conflict, Guatemalan
Clayton, Aubrey, 65
climate change, 124, 173, 175, 189, 190, 202, 217n3 (chap. 6)
Clinton, Hillary, 13, 17–18, 170–71, 213

cognitive development, 25, 39, 86, 92, 100; and anthropology, 216n4 (chap. 3); concerns over, 38, 41, 89; and stunting, 40, 60, 65, 70, 75, 77, 91, 98–99; testing, 69. *See also* intelligence
co-laboration, 182–85, 192
cold war, 41–45, 215n2 (chap. 1)
collaboration, 62–63, 177, 181–88, 203–6; in Indigenous communities, 44; with Indigenous communities, nutrition research, 119, 124, 153
Colom, Alejandra, 16, 47–48, 139–40, 143
colonialism, 3, 22–23, 37, 78, 156, 158, 211
communism, 41–45, 50, 159, 215n2 (chap. 1)
Conacaste, 80, 100, 104. *See also* Longitudinal Study of Human Capital (INCAP)
conferences, nutrition & health, 13, 17, 31, 32fig., 88, 179fig., 180–81, 197, 204; annual meeting of the Latin American Society of Nutrition, 175–76; International Conference on Nutrition and Growth, 88; International Congress of Nutrition (ICN), 182, 185–88, 203, 205–8; Nestle Nutrition & Growth Symposium, 64; World Congress of Public Heath Nutrition, 32fig.; World Health Assembly, 31
conquest, 3, 22–23, 25, 127, 158, 160, 170
contraception, 47–49, 74, 134, 138, 171, 176
corn. *See* maize
corporate funding for nutrition science, 102, 169, 172, 180, 186, 206
corporations: Abbott Nutrition, 88, 186; Coca-Cola, 170, 206; Dannon, 180, 186; Harvest Plus, 49; Hormel Foods, 180; Nestlé, 172, 180, 186, 187; PepsiCo, 180; Unilever, 59, 183. *See also* United Fruit Company
corruption, 21, 28, 46, 53, 214, 215n1 (chap. 1)
Cosminsky, Sheila, 74
Cottom, Tressie McMillan, 77
coup, US-backed, 42–45, 97, 159, 160, 213. *See also* presidents of Guatemala; Árbenz
courts, Guatemalan, 50–51, 215n1 (chap. 1), 215n1 (intro)
courts, US, 27, 48, 192
COVID-19 pandemic, 9, 35, 53, 76, 200–201, 203–4, 207, 218n1
Craven, Crista, 29
Craving for Nutritional Knowledge, A (Thurow podcast), 36, 39–40, 49, 51
Cravioto, Joaquín, 216n4 (chap. 3)
Crecer Sano (Grow Healthy) program, 26, 62, 214
Crenshaw, Kimberlé, 215n1 (chap. 2)
critique, alternatives to, 177, 197–98
Cromer, Risa, 48
Crosby, Alison, 50
cruelty, systemic, 37–38, 41, 46–47, 50–52, 54, 126, 134, 143, 153, 176–77, 197
Cuj, Miguel, 203–5
cultures of poverty thesis, 68–69
Cummings, Elijah, 140
Curtis, Adam, 41–42

damage narratives, 109, 111, 127
Davis, Dána-Ain, 29, 77
Decade of Action on Nutrition, 59, 214
de la Cadena, Marisol, 184
de Landa, Diego, 22
de la Nieves García-Casal, María, 175, 187, 199
De León, Jason, 5–6
democracy, 21, 42, 45–46
departments of Guatemala: Baja Verapaz, 142; Chiquimula, 142; Huehuetenango, 19, 23, 62, 67, 131–32, 142; Quetzaltenango, 23, 48–49, 94fig., 111–12, 170, 217n2 (chap. 6); San Marcos, 23, 142
deportation from US, 3, 141, 148, 197, 202–3, 218n1
Dickerson, Caitlin, 141
Diener, Paul, 30, 102
difference: erased by equality, 110, 122; value of, 111, 125–26, 128–29; working with, 177, 183–85, 196
disappearance, during armed conflict, 5–6, 9, 21, 44, 50, 101, 113, 135
disinformation, 41–44
dispossession, land, 15–16, 21–22, 52, 104, 126, 197, 210
doctrine of superiority, 44, 135, 150, 152
drought, 124, 173, 189–90
Dr. Z, 118–22, 125–27, 129
Du Bois, W. E. B., 178
Dulles, Allen, 41
Dulles, John, 41
Dutch Science Foundation, 25, 40, 197

Eating is an English Word (Mol), 217n1 (chap. 7)
ecology of practice, 128–29
economization of life, 82
education: funding, disincentivized by nutrition science, 87, 100–101, 105, 170–71; and gender, in Guatemala, 3–4, 9, 77, 96, 103, 109, 146, 178, 201; and human capital, 90–91; outcomes, as measure of early nutrition, 12, 39, 88

education programs, health & nutrition, 7, 10, 13, 17, 49, 64, 111; Paisano program, 111, 115–17; as systemic cruelty, 36–38, 152, 207, 209–10; Window of 1,000 Days program, 136–38, 143, 147–49, 151, 170
Ejército Guerrillero de los Pobres (Guerrilla Army of the Poor), 132
Eliza (US American traveler), 106–8
Eloida (Maya-Mam maternal nutrition participant), 95–97, 101
El Salvador, 43, 51, 98, 161, 167
embodiment, of structural violence, 22–25, 35
Emory University, 88
empire, American, 11, 141
empowerment, women's, 107–8, 119
empowerment circles, 118–27, 129–30, 200
Engle, Patrice, 81, 100, 156, 218n2
environment: and biological development, 23–24, 67–70, 76, 178; women's bodies as, 34, 56, 61, 64, 71–72, 144, 149
epigenetics, 89, 103
equality, gender, 107–8, 112, 125; critique of, 109–11, 127, 129–30, 149; projects, failures of, 115, 117–18, 126
Escobar, Arturo, 15–16
Espíritu Santo, 80, 99, 104. *See also* Longitudinal Study of Human Capital (INCAP)
ethics, research, 27, 92–93, 184
Ethiopia, 39–40
eugenics, 56–57, 65–66, 68–70
Europe, 65
expertise, 111, 118, 126, 129, 158, 168, 181, 183–84, 198, 204; devaluing of, 53, 109, 117, 124, 147; Maya women's, 17, 34, 144, 146, 150, 165, 185; of midwives, 74, 78, 125
Exposition of Propaganda, 43–45

Fakhri Michael, 206
family planning, 47, 137–38, 171. *See also* abortion; contraception
famine, 39, 138
farm, experimental, of INCAP, 154–58, 160, 166, 168–69, 172, 213
Farmer, Paul, 23, 24
farming, small-scale, 16, 124, 153–66, 169, 172, 188–90. *See also* agriculture
fathers, 74, 118, 138, 149–50
Feder Kittay, Eva, 110
Feed the Future summit (2010), 13, 18, 170, 213
femicide, 22, 46, 129, 140, 147
Fermin, Anténor, 216n4 (chap. 2)
fertilizer, 155, 159, 162, 165, 173; nonsynthetic, 163–64, 191
Few, Martha, 7
First 1,000 Days, The (Thurow), 36, 39–40, 45–46, 49
Fischer, Ted, 203, 205
fitness, biological, 57, 62, 64, 66, 69–70, 76, 82, 135, 158
Food and Agriculture Organization (FAO), 39, 186, 196
Food and Nutrition Bulletin, 180
food insecurity, 33, 41, 47, 214
food security, 54, 111, 114, 171, 196, 217n3 (chap. 4)
food sovereignty, 34, 58, 153, 158, 173
food systems, 153–54, 156, 158–60, 178; capitalist, 21, 25, 173; Maya, 22, 157, 162
forced motherhood, 28, 48, 126, 135, 140, 150
four-village nutrition study. *See* Longitudinal Study of Human Capital (INCAP)
Francisco Perez, Oswaldo, 171
Franco, Jean, 37
Freire, Paulo, 120
Frenk, Julio, 58–60
Freud, Sigmund, 41
Frongillo, Edward, 205
Fuentes y Guzmán, Francisco Antonio de, 112
funding, corporate, for nutrition science, 102, 169, 172, 180, 186, 206
future life, economization of, 82, 101

Gallego, Julisa, 167
Galton, Francis, 66–67, 69–70, 72, 216n3 (chap. 2)
Galtung, Johan, 23
Garcia Cabrera, Marvin, 96
García Maldonado, Maria, 22, 73, 110, 176fig., 183–86, 188, 197, 199
García Meza, Rosario, 72, 181–88, 194, 197, 199, 201, 203–5
gardening, 150, 165, 188, 189fig., 192, 200–202
Garden of the Americas, 164
Gates Foundation, 59, 63, 74, 90
gender equality. *See* equality, gender
gender inequality. *See* inequality
gender violence. *See* armed conflict, Guatemalan; rape
genetics, 61, 67–71, 86, 89
genocide, 6, 37, 57, 78, 124, 135, 152, 215n1 (intro); and nutrition, 46, 52, 103, 173; ongoing, 37; Pérez Molina's role in, 20, 46, 97. *See also* armed conflict, Guatemalan

gentle violence, 143, 149
Girón Luna, Miriam Estefany, 48
Gleijeses, Piero, 42
Global Burden of Disease Study, 60
Goff, Charles Weer, 67
Goldman, Francisco, 21
Gómez Alonzo, Felipe, 142
Gómez González, Claudia Patricia, 2fig., 3–5, 10, 35, 77–78, 96, 101, 203, 214
Gonzalez, Beti, 162–66, 172, 217n3 (chap. 6)
González, Lidia, 4
Good Road, The (McAllister), 45
Goodwin, Michele, 139, 150–51
Grandin, Greg, 217n2 (chap. 6)
Great Climate Migration, 190
Green Revolution, 159–60, 172
Grow Healthy (Crecer Sano) program, 26, 62, 214
growth, biological, 78; in early human development, 1, 19, 25, 33, 67, 180; and economic growth, 16, 59, 61–62, 82, 88, 90–91. *See also* stunting
growth, economic, 16, 59, 61–62, 82, 88, 90–91, 175
growth standards, 55–56, 59–61, 63–65, 78; contestation of, 70–71, 205–6, 216n2 (chap. 2); as ideals, 61, 68; as measure of health, 72, 97
Guatemala City, 18, 23, 71, 74, 80, 99–100, 113, 121, 159–61, 166, 177, 193
Guatemalan Human Rights Commission, 140, 148
Guerrilla Army of the Poor (Ejército Guerrillero de los Pobres), 132
Guzmán, Miguel, 167

Hagirso (Ethiopian boy in Thurow narratives), 39–40
Haisma, Hinke, 206
Hale, Charles, 217n1 (chap. 6)
Hall, Tony, 39, 47
Harvard University, 23, 58, 166, 168, 178
head circumference, 56, 62, 68–69, 72–74, 77–78, 98; microcephaly, San Juan study, 55, 58, 65, 75–76; WHO guidelines, 61
Head Start, 81–82, 103
health centers, 7, 113, 137–38
health extension programs, rural, 1, 7, 115, 120; discontinuation of, 8, 213
health promoters (*promotoras de salud*), 7–8, 114–15, 117, 119–22, 124, 126, 129, 202
health vigilantes (*vigilantes de salud*), 7–9, 129, 202
height, 12, 22, 61–63, 68, 71–72, 82, 95, 98, 205; and discrimination, 74–75, 77, 97, 99, 100, 105; and intelligence, 75, 97–98, 207, 216n4 (chap. 3). *See also* stunting
Hendrickson, Carol, 216n1 (chap. 4)
Hernandez Vasquez, Carlos Gregorio, 142
Hildegard Grunow Foundation, 178
historia: alternative, 41, 54, 78, 103, 105, 154; as method, 30–34; transformative potential of, 195, 199
holism, 127, 156, 194–95
Homanaje al Emigrante Salcajense, 190, 191fig.
hostile terrain, 5
Huitan (municipality), 53
human capital, 27, 81–82, 88, 90–92, 97, 100, 103–5, 134, 168, 205. *See also* Longitudinal Study of Human Capital (INCAP)
Human Capital Index, 90
Human Capital Project, 90, 214
Human Capital study (INCAP). *See* Longitudinal Study of Human Capital (INCAP)
human rights, 48, 118; violations during armed conflict, 6–7, 20, 50, 53, 150
Hunt, Howard, 97

immigrant detention, in the US, 78; of children, 140–42, 148
immigration policy, US: family separation, 3, 135, 141, 144, 152; Prevention Through Deterrence, 5–6; zero tolerance, 3, 10, 140–42, 214
immigration politics, in US, 4, 37, 49, 78, 140–41
imperialism, 15, 37, 45, 51, 54, 65, 158, 169
INCAP (Institute of Nutrition of Central American and Panama), 22, 92, 124, 178, 180, 213, 216n4 (chap. 3), 218n2; anthropometric research, 68–69, 82, 83fig.; corporate funding, 93–94, 102; directors, 22–23, 86; influence of, 17, 98; kidnapping during armed conflict, 166–68, 173; Pachali farm, 154–58, 160, 166, 168–69, 172, 213. *See also* Longitudinal Study of Human Capital (INCAP)
inequality: and bio-logics, 56, 70–72; economic, in Guatemala, 36, 126–27; embodiment of, 24–25, 35; gender-based, in Guatemala, 108–13, 119, 207; nutrition as solution for, 59, 116, 158
in/equality narratives, 109–11, 117–19, 127–29
insecticides, 113, 159, 164–65, 172–73, 202

Institute of Health Metrics and Evaluation (IHME), 59–60, 90
Institute of Nutrition of Central American and Panama (INCAP). *See* INCAP (Institute of Nutrition of Central American and Panama)
intelligence: biologization of, 25; and body size, 75, 97, 99, 207, 216n4 (chap. 3); definition of, 77; and eugenics, 66, 69; and human capital, 88; and nutrition, 6, 24, 25, 89; reduced, concerns over, 41, 60, 70, 89, 91–92, 100; testing, 87, 100. *See also* cognitive development
International Cooperation Administration, 161
International Food Policy Research Institute, 88, 205
Interrogating Racism (Mullings), 57
iodized salt, 19, 156
iron fortification, 49, 182
irony, imperialist, 36–39, 51–54, 197
Ixil triangle, 20

Johns Hopkins University, 92
journalists, US American: and imperialist irony, 37–38, 54; role in 1954 coup, 42–43; systemic cruelty of, 41, 51–52
Juan (Juana's son), 191–92
Juana (Maya-Mam midwife), 188, 190–91, 195, 201–3

Karim, Lamia, 199
Kellogg Foundation, 156
K'iche' (language), 205
K'iche' (Maya group), 22, 36, 121, 124, 158, 162–63, 204, 217n2 (chap. 6)
King, Martin Luther, Jr., 104–5
Klein, Bob, 166–67
knowledge: ethnography of, 31–33; Indigenous, 35, 74, 78, 192; interchange of, 153, 158, 162, 169, 172–74
Kowal, Emma, 52
Kwashiorkor, 81, 85, 102

Lackey, Richard, 39
Lamarck, Jean-Baptiste, 65
Lampl, Michelle, 64
Landecker, Hannah, 162
landownership, in Guatemala, 15, 40–42, 45, 126, 162–63, 217n2 (chap. 6); and labor, 99, 110, 112, 127, 132, 159
land reform. *See* agrarian reform
landslides, 161, 202
land sovereignty, 17, 34, 52, 58, 176, 207
language, as health barrier, 9–10, 57
Lasco, Gideon, 74–75
Latin America, 15, 17, 26, 60, 65, 92, 108, 112, 132, 181
Latin American Society of Nutrition, 175, 199
La Ventana de los Mil Días (Window of 1,000 Days) program. *See* Window of 1,000 Days (La Ventana de los Mil Días) program
Leroy, Jef, 205
Lewis, Oscar, 69
Liboiron, Max, 192
life, start of, at conception, 17, 46, 54
Lloyd, E. Scott, 48
Locke, John, 110
Longitudinal Study of Human Capital (INCAP), 12–13, 34, 80–82, 86–88, 213; in context of war, 97–98, 103; critiques of, 85, 99–104; and human capital, 84, 88–91; and interchange of knowledge research, 116, 158, 173; lasting influence, 12, 15, 91–95, 101, 105; participant experiences, 101; precursors to, 155, 216n4 (chap. 3); researchers, 18, 24, 70; research ethics, 92
López, Bernardo, 165
Lopez, Julia, 1–4, 6–9, 200–202
Lopez, Julie, 76
Los Círculos, 118–27, 129–30, 200
Lucinda (Juana's daughter-in-law), 191–92
Lykes, M. Brinton, 50
lynchings, 132–35, 142, 150, 217n1 (chap. 5)

Madrigal, Luisa, 154
Magda (Maya-Mam midwife), 124–25, 128
maize, 46, 85, 94, 112–13, 116, 133, 157, 162–64, 166, 169fig., 173, 190, 217n3 (chap. 6); fungus, as malnutrition hypothesis, 172–74. *See also* atole (traditional); milpa agriculture
mal-nutrition, definition, 16
Mam (language), 7, 9–10, 22, 106, 114, 125, 138, 183–85, 216n2 (chap. 4)
Manderson, Lenore, 144
Manz, Beatriz, 217n4 (chap. 6)
Mario (Pachali farm caretaker), 154–55
Martin, Emily, 32
Martínez, Diana, 27
Martinez Ramirez, Óscar Alberto, 51
Martorell, Reynaldo, 70
Marx, Karl, 83–84, 216n2 (chap. 3)
Mastranzo, Jaime, 176fig.
materiality, of theory, 24
maternal environment, 34, 56, 61, 64, 71–72, 144, 149

maternal mortality, 3, 47
Maya-Mam communities, 1, 3, 15, 18, 53, 97, 121, 133, 182, 185, 197. *See also* women, Maya-Mam
Maya peoples, 3, 6, 15, 24, 44, 63, 78, 89, 96, 98, 161–62, 173, 190; children, removal of, 132; Chuj, 142; height of, 22, 67–68, 70–71, 75, 99; Kaqchikel, 204; K'iche', 22, 36, 121, 124, 158, 162–63, 204, 217n2 (chap. 6); Q'eqchi', 50, 142. *See also* Maya-Mam communities; racism, anti-Maya; women, Maya-Mam
McAllister, Carlota, 45
MCFuneral Juarez, 216n1 (chap. 4)
McLaren, Donald, 102
Méndez Carreto, Victoria, 4–5, 9–10, 48, 101, 203
Mendoza, Carlos, 132
Merry, Sally, 182, 218n2
Mesoamerica, 157, 172
methods, 30–35, 186–88, 194–96, 198; coding, 186–87; crossdisciplinary, 181; as goal of research, 35, 177, 183–85; in nutrition research, 63, 168, 178, 181; participatory, in nutrition research, 76, 120; rebellious, 29
Mexico, 5, 8, 66, 69, 96, 107, 112–13, 161
microcephaly, San Juan study, 55, 58, 65, 75–76
Middle American Information Bureau, 42
midwifery, 58, 67, 74, 176fig., 188, 190
midwives, 5, 35, 48, 73, 114, 124, 182–83, 201, 210–11; devaluation of, 74; expertise of, 125, 188; persecution of, 78, 151, 190–91; perspective on hunger, 47, 49
migration, climate, 190
migration, death during, 5, 9; Garcia Cabrera, Marvin, 96; Girón Luna, Miriam Estefany, 48; Gómez González, Claudia Patricia, 2fig., 3–5, 10, 35, 77–78, 96, 101, 203, 214; Martinez Ramirez, Óscar Alberto, 51; Méndez Carreto, Victoria, 4–5, 9–10, 48, 101, 203; Vásquez Romero, Darwin Ovidio, 96
migration, death during, children, 141–44; Caal Maquín, Jakelin Ameí Rosmery, 142; Chicas Perez, Briseyda Lisseth, 142; Gómez Alonzo, Felipe, 142; Hernandez Vasquez, Carlos Gregorio, 142; Newberry Juarez, Mariee Camyl, 142; Ramirez Vasquez, Wilmer Josue, 142; Valeria (Óscar Alberto Martinez Ramirez's daughter), 51
migration, forced, 27, 113, 126, 134, 141, 190
migration to US, 3–5, 77, 96, 113; children, 140–42, 148, 191–92; and cross-border families, 18, 96, 107–8, 113, 124, 202; demographics of, 3; failed, 202–3; and international asylum law, 3; as last resort, 9, 27, 116, 128, 198; rates from Guatemala, 27, 140, 143, 148; as response to forced motherhood, 48
Millennium Development Goals, 59
milpa agriculture, 157–59, 162–63, 166 174
Ministry of Health, Guatemalan, 26
miscarriage, 160, 164
misogyny, 22, 54, 109
modernity, 15–16, 199
Mohanty, Chanda Talpade, 128
Mol, Annemarie, 217n1 (chap. 7)
monoculture, 42, 158–60, 162, 165
Monteiro, Carlos, 206
Montenegro, Gabriela, 203, 205
Moscow, 42–43, 45
motherhood, 16, 18, 25, 28, 138, 149; forced, 28, 48, 126, 135, 140, 150
Moynihan, Daniel, 68–69
Moynihan Report, 68–69
Mulla, Sameena, 28–29, 31
Mullings, Leith, 57
Murphy, Michelle, 82

Nader, Laura, 196
National Association of Hispanic Journalists (NAHJ), 51
National Crusade for Nutrition, 26, 33, 135, 214
National Institute of Child Health and Development (US), 82
National Medal of Science and Technology (Guatemala), 179
National Strategy for the Prevention of Chronic Malnutrition, 26
neoliberalism, 129, 170, 207
Nestle, Marion, 177, 218n2
Netherlands, 4, 63, 197
Newberry Juarez, Mariee Camyl, 142
Newman, James, 102
Newman, Richard, 167–68
newspapers, international: *Al Jazeera*, 4; complicity in armed conflict, 37; *Guardian*, 4, 132, 134, 141; *Los Angeles Times*, 142; *Nation*, 4; *New York Times*, 4, 43, 45, 133, 141; *Teen Vogue*, 4; *Wall Street Journal*, 36; *Washington Post*, 141
New York City, 88, 216n2 (chap. 4)
Nolan, Rachel, 134
No More Deaths, 5
nonperformativity, 28, 34, 117, 129, 204, 208
nostalgia, imperialist, 37
nourishment, transformative, 11, 34–35, 118, 151–52, 154, 174, 211; as alternative to nutrition, 16
Nuremberg Code, 92

Nutrition and Agricultural Development (Scrimshaw & Béhar), 158
Nutrition International, 100

Oakes, Maud, 133
obesity: author's research on, 1, 29; and malnutrition, 39, 89, 92
Orientalism, 86
Oriente Study. *See* Longitudinal Study of Human Capital (INCAP)
Ortega, Teresa, 77
Owens, Patricia, 149

Pachali (INCAP farm), 154–58, 160, 166, 168–69, 172, 213
Pacto Hambre Cero (Zero Hunger Pact), 19–20, 46, 61, 2012
Paisano (Programa de Acciones Integradas de Seguridad Alimentaria Nutricional del Occidente/Western Program of Integrated Food and Nutrition Security Actions), 111–21, 127–30, 213
Pan American Health Organization (PAHO), 22, 156, 168
Parsons, William, 112
participatory action research, 120, 124
patriarchy, 22, 47, 68, 74, 109, 119, 135, 204
Paz Lemus, Tatiana, 208–9, 211
Peace Accords, Guatemalan, 6–7, 132, 140, 213
Pedagogy of the Oppressed (Freire), 120
Pelto, Gretel, 70
Pérez-Bustos, Tania, 34
pesticides, 113, 159, 164–65, 172–73, 202
phrenology, 65, 78. *See also* anthropometry; head circumference
Pigg, Stacy, 185
Policing the Womb (Goodwin), 150
policy, US: border, 49, 54, 140–42, 148, 177, 214, 218n1; family separation, 3, 135, 141, 144, 152; immigration, 3, 5–6, 10, 140–42, 214
political will, 47, 50, 91
politics: injustice of, 50, 52, 103, 150, 152; reproductive, 17, 29, 48–49, 54, 118, 134, 171; of science, 154, 168–69, 181; transformative, 29, 34, 148, 199, 209, 211
Pols, Jeannette, 29
Poovey, Mary, 110, 129
population, 47, 159
Porras, María Consuelo, 53
poverty: and biology, 22–25, 33, 35, 56–60, 76–77, 144; and culture, 68–69; as intergenerational, 33; and land inequality, 40–41, 104, 173; in Maya-Mam communities, 15, 35, 78; and migration, 140; nutrition as solution, 21, 26, 64–65, 91, 208; rates, 2, 108; as systemic cruelty, 45–46, 49, 51, 54. *See also* bio-logics
Pratt, Mary Louise, 65
prenatal care, 7, 9–10, 16, 137, 139, 153, 165
presidents of Guatemala, 7, 26, 171; Árbenz, Jacobo, 6, 42–45, 52, 97, 112, 158–60, 213; Colom, Álvaro, 7, 115; Giammattei, Alejandro, 26, 53, 214; Morales, Jimmy, 8, 26, 62, 214; Pérez Molina, Otto, 8, 19, 25–26, 46–47, 61, 139, 153, 170–71, 202, 213–14; Pérez Molina, criminal charges, 21, 215n1 (chap. 1); Pérez Molina, role in armed conflict, 20, 44, 51, 97; Ríos Montt, Efraín, 20, 44–45, 97, 132, 213, 215; Ubico, Jorge, 112, 115, 117
presidents of the United States, 44, 161; Clinton, Bill, 5–6; Eisenhower, Dwight D., 41, 43, 45, 52; Johnson, Lyndon B., 68, 81, 97, 104; Kennedy, John F., 161; Obama, Barack, 7, 140; Reagan, Ronald, 44–45; Trump, Donald, 8, 48, 140–41, 214, 215n1 (chap. 1)
Price, David, 215n2 (chap. 1)
promotoras de salud (health promoters), 7–8, 114–15, 117, 119–22, 124, 126, 129, 202
propaganda, anti-communist, 42–46
protein deficiency, 23, 30, 81, 85–86, 92, 102; contestation of, as problem, 85, 102–4, 180
protein supplementation, 12–13, 23, 80–82, 85, 87–88, 92–95, 173. *See also* Longitudinal Study of Human Capital (INCAP)
protests, 20–21, 53, 150, 161
proxies, 84, 85–87, 89, 91, 97, 98, 103–4, 205; definition, 82–83

Q'eqchi' (language), 50
Quemé Chay, Rigoberto, 162
Quetzaltenango (municipality), 162

race, 57–58, 68–69, 215n1 (chap. 1); in anthropology, 56; and capitalism, 56–58, 159–60, 209–10; creation of, in European science, 65–66
racial capitalism, 56–58, 159–60, 210
racialization, 57, 68, 87
racism, 28, 51, 65, 160, 204, 216n6; in anthropology, 31, 69, 216n4 (chap. 2); and bio-logics, 57–58, 64; and poverty, 25, 57, 68, 81; scientific, 32, 34, 56, 66, 76, 78–79, 100, 103
racism, anti-Maya, 6, 24, 47, 76, 129; role in armed conflict, 6, 44, 135, 150, 152
Rahder, Micha, 174
Ramirez Vasquez, Wilmer Josue, 142

rape: during armed conflict, 44, 50, 135, 148; forced pregnancy following, 16, 47–48, 139–40; and migration, 48
Raven Progressive Matrices, 87, 100
reductionism, 194–95, 198
refusal, 54, 77, 151, 199
Reis Castro, Luísa, 30
remittances, from US, 124, 190, 202
reproductive autonomy, 17, 25, 49, 52, 58, 74, 110, 134, 140, 173, 176, 207
reproductive justice, 35, 135, 150–52
reproductive politics, 17, 29, 48–49, 54, 118, 134, 171
reproductive rights, 46–49, 54
reproductive sovereignty, 34, 104
rescription, 29, 30
responsibility, 143–44, 151, 208; collective *vs.* individual, 35, 147, 150, 209–11
Reverby, Susan, 7
revolution: anti-communist, 43; mothering as, 147
Reyes Girón, Esteelmer, 50
Rivera, Eileen, 203–5
Roberts, Dorothy, 66
Robinson, Cedric, 57
Rockefeller Foundation, 156, 159
Rosa (Maya-Mam weaving instructor), 106–9, 127
Rosaldo, Renato, 37, 195
Rosenberg, Irwin, 178, 194
Ross, Loretta, 147
Russia, 41–43, 45, 159

safe passage (across political borders), 17, 34, 176, 197
Said, Edward, 86
Saldaña, Abril, 8
Sanabria, Emilia, 52
San Carlos University, 181, 204
Sandoval, Juan Francisco, 53
Sandoval Girón, Anna, 133
San Juan Ostuncalco (and surrounding communities), 1–7, 15, 76–77, 110, 123fig., 144fig., 189fig., 196–98, 200–203, 207–9, 214; ethnographic approach to, 31, 35, 73, 182–85; health programs in, 38fig., 58fig., 72, 127, 136fig., 137, 213; Los Círculos project, 118–26, 129–30; microcephaly study, 55, 58, 75; migration from, 9, 18, 48, 96, 190; nutritional aid in, 10, 14fig., 17, 26, 95, 169fig., 193fig.; Paisano project in, 111–18, 128fig.
Santo Domingo, 80, 99, 100, 104. *See also* Longitudinal Study of Human Capital (INCAP)
Save the Children, 13, 15, 26, 111, 115
School of the Americas, 45, 97
science: otherwise, possibilities for, 11, 31, 154, 174, 177, 193, 195, 197–99; and politics, 25, 168–69; and racism, 32, 34, 56, 65–67, 76–79, 100, 103; research in Guatemala, history of, 18, 26, 27, 28, 30; six S's of, 193–94; and stereotypes, 32, 58
scorched earth campaigns, 6, 113, 132, 142, 213, 217n4
Scrimshaw, Nevin, 22, 102, 160, 166, 168–69, 178, 181, 194, 213; nutritional research, 86–87, 98–99, 156–58
Seckler, David, 70
Sepur Zarco case, 50–51
settler colonialism, 151
Shange, Savannah, 177
Sharp, Ellen, 8
Shiva, Vandana, 16, 173
Simpson, Audra, 69
Simpson, Leanne Betasamosake, 151
slavery, Indigenous, 65, 112, 117
slavery, sexual, 50
"small but healthy" hypothesis, 70, 77, 180
Smith, Adam, 84–85
social justice, 31, 45, 102, 129, 150, 204
social reproduction, 110, 134, 143, 149
Solomons, Noel, 18, 156, 168, 177–81, 193–96, 198, 203, 218n2; collaboration with, 176, 182, 185, 187–88; critiques of nutrition science, 62, 73–75, 103
sovereignty: food, 58, 153, 158, 173; Indigenous, 24, 34, 70, 78, 171, 197; land, 17, 34, 52, 58, 176, 207; reproductive, 34, 104
Soviet Union, 41–43, 45, 159
Spain, 22
stature, 22, 70–71, 75, 98; and discrimination, 74–75, 77, 97, 99, 100, 105. *See also* stunting
Stengers, Isabelle, 30, 128
stigma, 74–76, 97, 100, 205, 207, 210
stress, and women's health, 101, 114, 119, 125, 127, 205
strike, national, 53
structural violence, 22–25, 28, 34–35
studying sideways, 195–96
studying up, 196
stunting, 55, 61, 64, 69, 79, 178–79; as economic threat, 45–46, 90–91; and INCAP's Longitudinal Study of Human Capital, 88, 98–99; as intergenerational threat, 39–40, 70–71; as measure of chronic malnutrition, 59–60, 86; prevention of, 62–63, 148; and racism, 34, 65–68, 70; rates, in Guatemala, 36, 62; scientific critiques of, 205; vs "small but healthy" hypothesis, 70, 77, 180; stigmatization of, 72–76, 207

supplements, nutritional: Bienestarina, 26; corn-soy blend (CSB), 26, 93, 95, 115, 127, 137–39, 153, 190–91, 193fig.; Herbalife, 26; Incaparina, 26, 93–95, 99, 101–2; Mi Comidita (My Little Food), 20, 26; Omnilife, 26; Plumpy'Nut, 26, 27; Vitacereal, 26, 95
Sur, Malini, 217n3 (chap. 5)
sustainability, 58, 177, 181, 194, 197, 199; translation of, 175, 182–83, 185, 187–89, 192, 195–96
sustainable development, 181, 191, 195, 199, 202, 207
Sustainable Development Goals, 31, 32fig., 58–59, 61, 175, 183, 196, 214
swidden agriculture, 157–59, 162–63, 166 174
Sylvia (Pachali farm caretaker), 154–55
symposium on anthropology and nutrition, 203–4
syphilis, injection of Guatemalans by US scientists, 7, 92
systemic cruelty, 37–38, 41, 46–47, 50–52, 54, 126, 134, 143, 153, 176–77, 197
systems thinking, 168, 194

Taking Children (Briggs), 141
tanq'ibela, 188–90, 192, 195, 199
Tejada, Carlos (Pilo), 94, 167–68
Tetsuo Yamahiro, Saison, 131, 133
Thurow, Roger, 36–41, 45–46, 49–52
Todos Santos, 19; lynching, 131–34, 142, 150, 217n1 (chap. 5)
Tokyo, Japan, 203, 205–6, 208
Torres, Jada Benn, 216n4 (chap. 2)
Torres Colón, Gabriel A., 216n4 (chap. 2)
Totonicapán, 20
toxicity, 16, 164–65, 172–74, 178, 210
transformation, 34, 65, 119, 129, 151–52, 199, 206, 208; and anthropology, 11, 28, 29–31, 208
translation, as research question, 175, 182–83, 185, 187–89, 192, 195–96, 217n1 (chap. 7)
Truth Commission. *See* United Nations Commission for Historical Clarification (CEH)
Tseng-Putterman, Mark, 58
Tuck, Eve, 15, 109, 111, 127
Tuskegee syphilis experiments, 92
Two Crosses of Todos Santos, The (Oakes), 133

UNICEF, 186
United Fruit Company, 18, 41–43, 45, 68, 158, 160–61, 170
United Nations (UN), 18, 26, 108, 134, 176, 190, 199; Decade of Action on Nutrition, 59; Food and Agriculture Organization (FAO), 39, 186, 196; and INCAP, 22, 156, 180; Special Rapporteur for the Right to Food, 206; Special Rapporteur on Torture, 20; Sustainable Development Goals, 31, 32fig., 58–59, 61, 175, 182–83, 185, 196, 214; University, 186
United Nations Commission for Historical Clarification (CEH), 6, 44, 97, 135, 152, 213; and gender violence during war, 50, 148, 150
Universidad del Valle, 63, 71
University of Pennsylvania, 88, 178
urgency, 10, 13, 39, 51, 60, 156, 199
USAID (United States Agency for International Development), 13, 53, 141, 183, 185, 202, 205, 213; corn-soy blend (CSB) supplement, 26, 93, 95, 115, 127, 137–39, 153, 190–91, 193fig.; Feed the Future Innovation Lab, 172–73; Guatemala City headquarters, 160–62, 217n1 (chap. 6); Guatemala programs, 18, 71, 109–10, 135; Paisano program (Programa de Acciones Integradas de Seguridad Alimentaria Nutricional del Occidente/ Western Program of Integrated Food and Nutrition Security Actions), 111–21, 127–30, 213; and Window of 1,000 Days (La Ventana de los Mil Días) program, 8, 10, 20, 136, 140, 143, 147–52, 171
US government agencies: Customs and Border Patrol, 3, 5, 96, 143, 214; Department of Health and Human Services, 3; Department of Homeland Security, 3, 78, 135; Department of Justice, 3; Immigration and Customs Enforcement (ICE), 78; Office of Refugee Resettlement, 48; State Department, 132, 215n2 (chap. 1)
US-Mexico border, 3–5, 18, 48, 51, 141–43, 148
US states: Arizona, 5, 48; Florida, 71; Michigan, 107; Minnesota, 113; New Mexico, 142; New York, 192; Ohio, 113; Oregon, 9–10, 113; Texas, 3, 9, 113, 142; Virginia, 192

vaccination, 7, 19, 122
Valdez Asij, Heriberto, 50
Valencia, Daniel, 132
Valeria (Óscar Alberto Martinez Ramirez's daughter), 51
Van Trotsenburg, Axel, 60
Vasquez, Maugdo, 161

Vásquez Romero, Darwin Ovidio, 96
Velásquez Nimatuj, Irma Alicia, 53, 78
Venkatapuram, Sridhar, 206
veterinary science, 81, 85–87
vice presidents of Guatemala: Baldetti, Roxana, 19–21, 25–26, 46–47, 92, 139, 153, 170–71, 202, 213–14, 215n1 (chap. 1)
vice presidents of the United States, 161; Nixon, Richard, 43–44
vicious cycles, 165, 209
vigilante patrols, during armed conflict, 7–8
vigilantes de salud (health vigilantes), 7–9, 129, 202
Violence of Care, The (Mulla), 28, 29
Viteri, Fernando, 168

Wallace (Juana's grandson), 191–92
Waqib Kej, 20
Warin, Megan, 143
Warnholz Locht, Margarita, 163
War on Poverty, 68, 81, 97, 104, 207
Warren, Scott, 5
weaving, 33–34, 73, 106–8, 127, 130, 216n1 (chap. 4)
Weaving Identities (Hendrickson), 216n1 (chap. 4)
Webb, Meghan Farley, 203, 205
West, Paige, 113
Willett, Walter, 207
Wilson Gilmore, Ruth, 159–60
Window of 1,000 Days (La Ventana de los Mil Días) program, 19–21, 25, 45–47, 61, 109, 136–39, 173, 202, 207, 213; and USAID, 143, 148–50, 171
women, Maya-Mam, 7, 11, 77, 99, 106, 110, 183, 188, 207; in the US, 9–10. *See also* Maya-Mam communities
World Bank, 26, 39, 60, 75, 89–91, 108, 214
World Food Bank, 39
World Food Programme, 20, 26, 52, 95
World Health Organization (WHO), 19, 23, 31, 32, 55, 60, 81, 100, 186–87, 205–6; growth-for-age standards, 61; Safe Motherhood Initiative, 74

Xela, 15, 40, 113, 117, 120–21, 162–63, 176fig., 191, 204

Yong Kim, Jim, 89–91, 104, 214

Zero Hunger Pact (Pacto Hambre Cero), 19–20, 46, 61, 2012

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Cover illustration: Edgar Calel, *Jun Kio Oxi qi Munib´al ri qatit qa Mamá (Unas dos tres ofrendas para nuestros ancestros; Some Two or Three Offerings for Our Ancestors)*, 2023. Courtesy of Edgar Calel and Proyectos Ultravioleta, Guatemala City.

ISBN: 978-0-520-40442-7