

CHAPTER 11

La Mercadita 2050: Telling Tomorrows of a Market After Oil

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Introduction

Imagine waking up tomorrow in a city that does not depend on fossilfuels. What kind of energy will we have? Which energies will power economic and social systems, and how do they shape our lives? Also, picture how we mobilize through that future. Ask yourself, whose voices were listened to in order to reach that future and what, if any, visions were hegemonic?

When I try to answer these questions, I see two opposite scenarios informed by my interest in energy transitions and my political engagement as a feminist. On the one hand, I see a single future in which more technologies are put in place, but not so much has changed in terms of equality, justice, or careful relationships with humans and morethan-humans. On the other hand, I envision a plurality of futures beyond

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exploitation; where less energy is needed, and everything is powered by a mix of renewable and human-powered kinetic energy. In these futures, my voice and other women's voices are listened to, and they shape the communities in which we live in.

Yet, while trying to answer the above questions, I realize that there are many more imaginaries¹ than my utopian or dystopian ones of how the future will be. It makes sense to ask wider questions about the future and to ask them to the people who have not been listened to by experts—governments, energy industry, technicians—in order to speak in the plural of futures and to open up the possibility of imagining and envisioning other realities. After all, dominant and alternative imaginaries have the potential of limiting pathways by closing down alternatives that individuals or social groups can choose from, or they have the capacity of opening up pathways that can challenge the vision of the powerful (Birch, 2017).

In Mexico, fossil-fuels and renewables are frequently counterposed in public debates about energy futures. These dominant imaginaries mainly revolve around the environmental and economic implications of each. The use of fossil-fuels is linked to nationalism and energy independence, whereas the use of renewables is linked to the climate crisis and sustainable development (Elizondo et al., 2017; Malló, 2021). However, both are focussed on top-down policy frameworks, large-scale technologies and the centralization of energy production and distribution.

In Mexico City, policymakers have used these two imaginaries to create a future vision of the city, where some public spaces and government-owned buildings will be powered by renewables and others by fossil-fuels (SEDECO, 2013). Considering that municipal public markets are officially owned by the city, they were included in such imaginaries of

¹ In this chapter "Imaginaries are landscapes of collective aspirations and/or fears that enact and are enacted by practices and commitments to certain views of the world; also, these encode how life ought (or ought not) to be, and therefore express shared understandings of good and bad" (Sol Cueva, forthcoming). In this sense "imaginaries differ from pure discourse analysis because the former usually focuses on language [...] whereas the latter emphasizes actions and performance with materialization through technology. Imaginaries are not the same as policy agendas or frames either [...], as imaginaries are less explicit and accountable. Nor are they the same as narratives, which are usually extrapolated from past events and serve explanatory or justificatory purposes. Imaginaries instead are instrumental and futuristic, they project visions of what is good, and worth attaining (and also, [...] dystopias worth avoiding" (Sovacool, 2019, p. 174).

the future. Until 2019, it was envisioned that by 2024, municipal public markets would be powered by solar energy (SEDECO et al., 2019). Today, this picture has been erased, keeping markets powered by fossil-fuels and out of the "Solar City".²

Arguing that communities outside and beyond centres of power have the capacity to produce and perform other imaginaries (Marquartdt & Delina, 2019), I invited mainly women vendors to creatively and collectively explore the future of four municipal public markets and their energy systems. The activity was a storytelling-game called "Tell me a (un)fortunate story" that used messaging apps as a medium to maintain physical distance during the COVID-19 pandemic. The game consisted of co-creating stories with 16 vendors about the future of municipal public markets and their energy systems. The final versions of the stories were sent to the vendors and discussed with them at the marketplaces.

In this chapter, I present some of the wishes, dreams and fears vendors have while talking about the future and some of their concrete ideas that address energy transitions. I will also elaborate on the energy

AUDIO INSTRUCTION

You are members of a team of 4 people who will 'Tell us a (un)fortunate story'. The objective of the activity is to create a story collectively about the future of municipal public markets and their energy systems. Each person will be a single element of the story: you can be the main character or characters, the place where the story takes place, the actions that the character performs, or their emotions and moods. I will go from one participant to another and in each turn the participant has to add a bit to the collective story according to her corresponding story element. In total there will be three rounds. I will begin the story by time travelling with you. You will continue creating the story with the help of some questions and sentences. Were the instructions not completely clear? Don't worry, during the activity your doubts will be solved, however, if you still have doubts, do not hesitate to communicate them!

The only rules are that 1) the main character or characters must stay alive and 2) you need to answer to my message with the questions and sentences that same day or the following. I will write down the main ideas and send them to the next participant to read what has been said. [...]. (Sol Cueva, forthcoming).

 $^{^2}$ Ciudad Solar or 'Solar City' is the name that the government is using to talk about Mexico City's energy policy, which focuses mostly on the installation of rooftop PV in the 2019–2024 period.

³ For more information about the storytelling activity, here I am presenting the game instructions. The instructions were sent as an audio and summarised in a GIF:

technologies imagined, as well as issues motivating energy transitions, governance arrangements and the role of different actors in the market's life. However, I will not present these findings as a set of arguments and descriptions that say, "here is what vendors said about A, B or C". Rather, I aim to articulate vendor's alternative visions of the future by sharing a story of a fictional marketplace in 2050. The story will contain some of their concrete ideas and the implications these visions may have in their communities and environments. As such, the story will *show* what markets *can be* if vendors' visions of the future come true (Leavy, 2012), making the story "exploratory, explanatory, hopeful and generative" (Dunlop, 2001 cited in Leavy, 2012, p. 518).

First, the chapter summarizes its feminist and narrative grounds, followed by an explanation of the particular research methods utilized for its development. It then proceeds to tell the story of *La Mercadita*, an imaginary market located in Mexico City in the year 2050. Finally, the chapter ends with a conclusion in which I reflect and push for more "stories for connecting (when the world is falling apart)" (Di Chiro, 2017).

THE BEGINNING: THE GROUNDS

Every story starts from the beginning. This specific one started in the search for hope. Like Giovanna Di Chiro (2017), who was inspired by Rebecca Solnit, I started working with storytelling looking for hope in the tales, histories and stories of people. This is especially important now that hope has become a scarce resource for many of us. Not because of lack of enthusiasm but because wherever we look, capitalism and violence rule, and the possibility of stopping the planet from warming with conventions and treaties has proved disappointing (if not useless).

In storytelling with vendors, I aimed to explore the potential of stories to enrich, deepen and communicate feminist, future and energy studies. My hope was that developing and creating stories with people would provide new imaginaries, visions, ideas, narratives, projects and demands. These would enable the vendors and me to envision a plausible, alternative, non-fossil futures (Adamson, 2016); futures which centre women's

histories and lives and tackle gender inequality and environmental injustice. To explore alternative futures, my method of inquiry was feminist standpoint theory, "which examines the experiences of women in order to analyse how they experience and know differently from men, taking into account the intersectionality of gendered experience in its combination with class, race, age and other forms of difference" (Harcourt, 2016, p. 1008). At the same time, I used the notion of socio-technical imaginaries to investigate the landscapes of collective visions of desirable futures that enact and are enacted by commitments to certain views of the world, attainable through and supportive of science and technology (Jasanoff, 2021).

Focussed on creating stories with and not on Mexican women vendors, I wanted to "challenge notions of expertise and knowledge hierarchies, and [...] to critically examine and challenge representational practices in research and writing" (Harris, 2021, p. 9). Story and storytelling are particularly important for engaging underrepresented communities in research and policies, offering the possibility of shifting the power dynamics of knowledge creation and challenging who listens and who speaks in academia and policy discourse (Ingram et al., 2014).

Moezzi et al. (2017) and Smith et al. (2017) highlight that storytelling can provide data describing phenomena at a variety of levels, including emotional and imaginative. This is particularly relevant in energy studies because "[s]tories offer the possibility of opening up the conversation to participation by people who may not otherwise feel competent in 'energy speak', thus bringing to the fore a wider range of knowledge, insights, and perspectives and a deepened awareness of community values, identities, relationships, cultures, and histories" (Miller et al., 2015, p. 67). Equally, storytelling is important for feminist research since this method "is a way to challenge dominant narratives which erase, oversimplify and universalize women's voices and experiences. It is an unconventional way to explore women's stories and to expand their possibilities as women tell their own stories [,]in their own words" (de Nooijer & Sol Cueva, 2022, p. 238).

By challenging notions of factuality and expertise and working to engage others, storytelling holds the potential to connect individual experiences to broader socio-political realities, explore place-based and

everyday practices, and foster collaboration. This is because, when storytelling, participants share imaginations, negotiate meanings and expose elements of the self as well as the broader economic, political and social context. Thus, the experiences reflected in stories are never solely about the individual, but rather about groups and communities, power dynamics, resistances and collaboration (Harris, 2021).

While recognizing these potentials, we must also remain aware of the limits of storytelling and stories. We need to be sensitive to the fact that, when creating stories, people decide what is included and excluded, inevitably silencing other voices and experiences. Therefore, stories need to be understood as "partial truths that offer visions of and insights into situated moments in which they were crafted and about what they were told" (Rice et al., 2020 in de Nooijer & Sol Cueva, 2022, p. 251). Thus, storytelling needs to be performed as an open practice in which narrative closure is resisted.

Bringing together feminist theory and a narrative approach, this chapter stories alternative energy imaginaries explored in the vendors' tales of the future. This enables me to weave together heterogenous experiences into collective knowledges and gives me the chance to creatively present vendors' "understandings of their communities, how they've been treated, what is owed to them by regulators and other dominant groups, and what their future should look like" (Ottinger, 2017, p. 43).

METHODOLOGICAL DISCLOSURE

Feminist theory as well as future studies encourage the use of creative and art-based methodologies in the process of doing research and in presenting its results (Rose, 2013). As such, experimentation with art and imagination has been common in feminist political ecology, environmental justice and nature-society studies (Harris, 2021).

Inspired by such creativity in methods and theory, I adopted a narrative approach and art-based methods in my Ph.D. research as well as in this chapter. During my research, I used a narrative and feminist approach to explore the future of energy with non-hegemonic voices in climate change, energy and future studies. In this chapter, I also chose fictional storytelling as a method to present such desirable futures using the power of fiction, such as its capacity to be a vehicle for greater immersion in what we read and what we retain after it (Leavy, 2018), to promote empathy and collaboration (Leavy, 2012), to resist dominant narratives and to strengthen senses of collective experience and solidarity (Hydén, 2017).

To create the story of an imaginary market called *La Mercadita*, I included elements of the "Fictionalizing Process" explained by Leavy (2018). Leavy suggests using processes of selecting, combining and using self-disclosure to analyse different empirical and story elements, (re)write stories in an orderly way and reveal the texts' "real" and "fictional" nature. First, I selected the main themes and elements of the four stories created by the vendors that represented alternatives to the dominant energy imaginary in Mexico. This was done based on a previous analysis of the four stories, our conversations after them and my observations at the marketplaces. The themes selected were the use of renewable energy technologies in the future, for whom these would be, and how these could be managed. Based on my analysis, I chose dialogue, negotiation and self-organization as effective strategies for the governance of the energy systems and markets.

Second, I combined and reorganized the elements as if the futures imagined in the vendors' stories were real (Leavy, 2018). I consider this as 'a simulacrum' of the world imagined, which means that instead of presenting research results of *how* "reality" *is*, I show *what it can be* (Leavy, 2012). I also made collages with drawings, photographs and illustrations to produce unique visualization and insights into the imagined futures.

Third, I created characters, places and situations that reflected not just the alternative visions imagined by the vendors but also the context in which the stories were created, as well as my personal observations and experiences at the markets. For example, the setting in the following story was developed according to how vendors constructed the markets in their stories, my observations and what has been discussed in the literature.

Fourth, I used parenthetical citations to identify which pieces of this story are directly based on the vendors' interviews and stories. The rest of this story was fictionalized out of my encounters with vendors in 2018, 2019 and 2020, and my long trajectory as a customer of municipal public

markets in Mexico City, the city in which I grew up and lived for more than 30 years. In that sense, the characters, places and problematics in the following story "are fictionalized but are being drawn from, and are in response to, lives and living" (Murphy et al., 2017, p. 218).

Lastly, taking into consideration that this is just one story about one possible future, in La Mercadita, I did not pretend to describe what will happen in "the future" or to convince you about this vision of the future. Instead, it is expected that readers "[...] try to understand the various developing imaginaries and help to create and disseminate new ones" (Hajer & Versteeg, 2019, p. 132).

THE STORY (FIG. II.I)

I couldn't stop thinking. You are late again Carmen. The clouds are gray, it is going to rain... You forgot to close the dome of the market's milpa4 and your compañeras⁵ need your fingerprint to close it... Some raindrops might slash down onto the hanging pots, and the crops are not used to the rainwater anymore. The milpa might not survive... Focus, don't stress. You are three minutes away.

Arriving at the market, I could see the 11 letters above the entrance, "La Mercadita", glowing brightly with a purplish spark. Next to it, there were the sleek, vertical touchscreens, for self-ordering in any language, including the 68 indigenous languages spoken in Mexico (Catálogo de Lenguas Indígenas Nacionales; Variantes Lingüísticas de México Con Sus Autodenominaciones y Referencias Geoestadísticas, 2018). The huge

⁴ Milpa is a traditional intercropping system of regional vegetables and is practised in Mesoamerica. The word milpa comes from nahuatl, an indigenous language, and means 'what is sown on top of the plot'. This growing system is configured around polyculture, where crops such as maize, beans, chilli, squash and some herbs are grown together (San Vicente Tello & Jönsson, 2019).

⁵ Translated to English, Compañeras means companions. In municipal public markets the word can also be used to refer to colleagues who work at the market as well. Among feminists the word is used to refer to those who fight alongside each other against patriarchy and other systems of oppression. In this sense, the word can be equated to the concept comrade. In this text, its meaning is a combination of all the above.



Fig. 11.1 Collage "La Mercadita" by Sol Cueva, 2022

automatic doors opened as I went in, and a cool breeze brushed across my copper-skinned face.

Looking around, all I could see was a crowd of people shouting and shoving. Apart from our regular visitors, there were holograms and people with spandex suits walking through the corridors that divide and organize the market in a nearly perfect grid (Repoll, 2010). They were taking photos as fast as they could, interrupting the ones who were purchasing items and bartering. The actions of these unusual visitors were almost robotic, smiling, picking up the item, taking a photo and always applauding after a vendor shouted "¿Qué va a llevar marchanta6?"7

Walking through the main hall, I could smell papayas and oranges, which tempted me to slow my pace. Instead, I said good morning and rushed, returning to my mission. I crossed the communal kitchen and ran into the shared utility room where I finally reached the controls to close the dome.

Once the milpa was protected, I took a step backward and focussed on the large group that was walking towards one of the stalls. It was a vegetable stall, in which a mestiza⁸ woman like me was packing a bunch of limes under the lamp light, asking questions about kilos and products. I noticed a peculiar tone of voice coming from the centre of the group. There he was, Professor Carcar Solar, the most famous influencer-scholar, giving a live presentation of La Mercadita.

"Here you can see a vendor with her customer. Can you see how the vendor is selecting limes and giving them to this woman? Yes, you guessed right, here they don't use food-walls, but they have products at display. People can pay with credit cards and biometric systems, but they seem to prefer social interaction, touching the products and smelling them,

⁶ Marchanta is a word of popular use by vendors in Mexican markets used to address the buyers. The diminutive is marchantita and male marchantito. Possibly, the French introduced this word in Mexico, as it is similar to marchand or merchant.

⁷ Translated to English, the sentence means "What are you gonna buy, marchanta?"

⁸ Mestiza, as understood in Mexico, generally refers to a woman who has been the result of racial and cultural mixture between Europeans, Indigenous and/or African descendants (López-Beltrán & García Deister, 2013).

⁹ This character was created by me, it did not appear in the stories or the interviews. It was thought of as a critique of some academics' behaviour, who approach the world as a laboratory and participants as 'objects' to study, and who try to capitalise on people's knowledge, efforts and experiences.

funny right!" Carcar mentioned. "Why did you decide to keep the folklore of your little stall?" he asked the vendor, and when she was about to respond, the professor interrupted "Well, actually..." and then he ignored my *compañera*, sharing his own interpretation. He did the same to the vendor in the next stall and the next.

As one of the vendor's representatives, I could not tolerate his attitude. I made my way through the hologram devices and the people gathered to ask Carcar about his presence in our space. "Oiga señor, if you are going to talk about La Mercadita, I suggest you engage with us, the vendors and customers. We built this space, and we keep it running every day. We know its history, because we are part of it." But Car, as he likes to be called, was not interested in our story, he was just trying to sell his tours of what he calls "the city's food scene" (Wattenbarger, 2019). He responded, using his instant translation device to speak in "common people's language", with an explanation of how social media works and how the experience of a woman like me was not fascinating enough for his audience.

I was crestfallen and furious at the same time. Many questions popped into my mind. What should I do now? How dare he treat us like this? We are not lesser than him, and more importantly, it is our story to tell, not his.

I could feel myself filling with anger. I looked him straight in the eyes and took a deep breath, remembering all the time that me and my *compañeras* needed to stand up and demand better treatment and a better market. Then, I said to the crowd, almost shouting "Just so you know what *La Mercadita* is, it seems fair that I tell you our story. It is the story of how this marketplace came to be. And it is the story of the lessons we learned along the way. In our journey, we were not alone. We were imagining multiple futures for our marketplaces with and for vendors…"

Just like that, I was not mad anymore. I saw the other vendors nodding and cheering, the people in the crowd were listening. I felt powerful. So, I continued (Fig. 11.2).

"To be honest, when we started to imagine and to make *La Mercadita* a reality, we thought it was like an oasis. It was a fertile idea in an arid region. Dreaming of its future existence, the vision of a strengthened community and market, gave us relief. At the same time, it made us believe that we were losing our minds in hallucinations."



Fig. 11.2 Collage "Our Story" by Sol Cueva, 2022

"In 2025, in the middle of the chaos and confusion that the COVID-19 pandemic left behind, many vendors tried to avoid the loss of more lives and livelihoods (Castellanos, 2021a, 2021b). Numerous markets started to explore ways to resist what seemed to be a fatal destiny. Stalls were closing, markets were burned down (Corona, 2021), and supermarkets were built on top of their ruins. Our markets were being buried, just like the great pyramids of this territory called Mexico were buried by the Spaniards hundreds of years ago. On top of this, we were experiencing complete power outages. We knew this was coming when in 2021, from one moment to the other, large parts of Mexico City went dark ('Mexico Suffers Another Day of Rolling Blackouts Due to Storm', 2021). You might imagine how stressful it was, we were not able to work for hours until the electricity came back.

"We had already known for decades that structural renovations were needed at the markets and that we were not able to afford them. For years we, the vendors, absorbed the costs of small renovations here and there, but we did not have the means nor the capacity to make major changes (Meneses Reyes, 2011). In particular, the energy, water and sanitation systems were as old as the markets themselves; 70–75 years-old in 2025, and the resources to transform them were out of our reach (Liliana, personal communication, 26 November 2020). Plus, we were not able to decide how and for whom energy would be produced or how to deal with droughts and floods in Mexico City, two sides of the same coin. We felt like our hands were tied!"

"It is true that there were policies and programs in place since the beginning of the century. We would hear politicians and entrepreneurs saying 'this policy will rescue urban heritage' and 'this project will modernize food markets' (Delgadillo, 2018). However, these were insufficient and inadequate to face the challenges and bring the solutions that our communities were demanding (Giglia, 2018). There was always, either a lack of money, or an invisible hand that favoured supermarkets and malls instead of the municipal public markets" (Delgadillo, 2018).

Then, a hologram woman said "Yes, I remember campaigns promoting the modernization of markets. Close to my neighbourhood, a market was renovated. It was super cute after. We could find hip restaurants and cafés. The only weird thing was that all the vendors were new. It was like the renovation replaced the vendors who worked at the market before. But La Mercadita doesn't look like that. What did you do here?"

"Well, the first thing we did was to create a commission. It was our goal to travel around the city to collect ideas and to learn from other market's experiences, like merchant's caravans moving across continents to find valuable goods. And so, we started the journey that same week. It was March 2025 and we began to visit the remaining municipal public markets in Mexico City, to learn from and with them (Fig. 11.3)."

"We travelled for almost a year." Said Lulú, who took the floor, continuing with the story. She was passing by, going from the communal kitchen to the care centre where she would pick up her granddaughter. Lulú was also a vendor and part of the caravan. So, I invited her to share her experience.

"Carmen, the other vendors and I visited the markets to pay close attention to the challenges they were facing and the ways they were solving them. It was amazing! Some markets were moving away from processed food and the use of electronic and digital technologies. They went back to selling only fresh fruits, vegetables and seeds and were using human-powered machines. Other markets were installing solar panels, buying waste-to-energy systems, and using robotic cleaners." She continued, "For example, in Mercado Rosa Torres, we were welcomed by Lucky, the robot-girl cleaner, who was about to clean the market's corridors, as she does every morning and night. She is powered by the waste-to-energy system for which she collects and recycles waste (Liliana et al., forthcoming). In Mercado San José, they were using banana peels to power their information screens and biometric payment systems... and they were even planning to use a micro-hydropower generator and install small wind turbines (Gabriela et al., forthcoming). In Mercado San Joaquín, they were expanding the solar panel system to all the market, inspired by a woman butcher who turns a regular stamp-clock into a solarstamp-clock (Erika and Jess, forthcoming). Literally, some markets were covering all the renewable options!" Lulú exclaimed.

Then I added "I also remember that in markets like Mercado San Mateo Tlaltenango, vendors managed to redesign the stalls and vertically expand them, in combination with the installation of individual solar panels and rainwater harvesting systems for the entire market. They

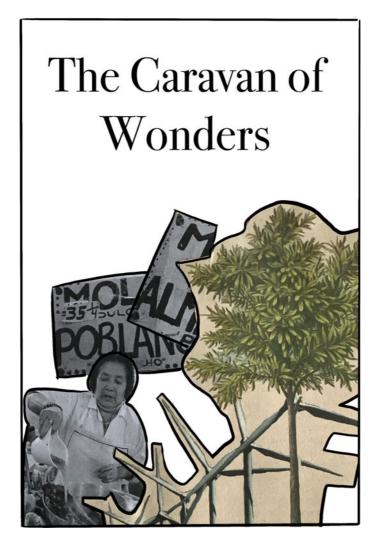


Fig. 11.3 Collage "The Caravan of Wonders" by Sol Cueva, 2022

even had a vegetable garden for the cocinas corridas 10 (Claudia et al., forthcoming)".

Yes! And when we asked the vendors why they decided on all those transformations, the response was similar in every market. Vendors didn't want to struggle with water or energy scarcity, nor pay high energy prices, and they wanted to care for the environment and their livelihoods. Vendors wanted to keep and recover some traditional practices while being modern at the same time (Claudia et al., forthcoming). By this, I mean markets wanted the newest technologies, but not at the cost of their practices and wellbeing (Liliana et al., forthcoming), Lulú pointed

"It all makes sense!" someone from the audience raised her hand and said, "Municipal public markets wanted new paint on the walls, but they also needed reliable services, and to keep running without turning into supermarkets."

"That was exactly our conclusion after visiting the markets. Well noted! But then again, that was not all!" Lulú replied. "It was time for us to present these ideas to all the vendors, after which we needed to come to an agreement. It was time for us to re-shape our market and to rethink services, products, and ways of interacting with each other and our communities. Carmen, would you tell them about this? I must go" Lulú said, giving me a hug. As she walked towards the care centre, she shouted "Do not forget to visit the kitchen, I have made fresh zucchini blossoms in salsa verde¹¹ with ingredients from our milpa. I promise that you will love them. Bye (Fig. 11.4)."

Oh, me oh my, I have to tell people about the transformations we made here and how we did it. Not an easy task. Let me think... "Everybody, I think that the best way to continue the story would be by showing you what we-"

"Wait a minute sweetheart." Carcar stepped forward and faced the audience. "I think I can take over from here. I have very nice holographics to show the transformations."

¹⁰ Cocina corrida is a business that sells meals of several courses at a fixed price, eaten about 2 and 4 pm. It is called corrida (run) because it is expected that you eat this meal in a maximum of 30-50 minutes.

¹¹ Salsa verde is a spicy sauce made of tomatillos, onion, green chili and cilantro.

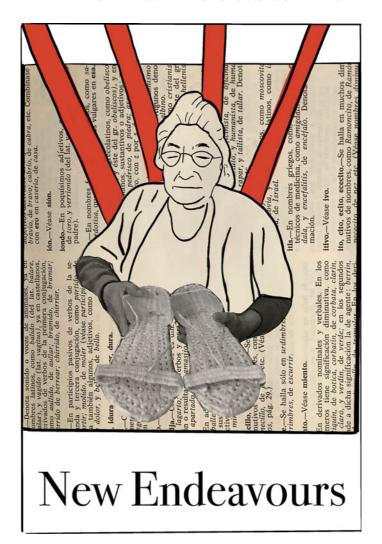


Fig. 11.4 Collage "New Endeavours" by Sol Cueva, 2022

"No thank you, sweetheart. I can do it. Actually, I was about to give some examples of what we have done here and explain why. Is this okay for everyone?" and the group nodded "Great, follow me."

I walked calmly, leading the visitors from the communal area to one of the four main corridors. This way people could take some time to look around the marketplace. The corridors were wide, allocating separated stalls on either side of them (Repoll, 2010). The stalls were not grouped according to their commercial activities and products as it was years ago (Meneses Reyes, 2011). In La Mercadita, vegetables, fruits, repair shops, etcetera, were scattered throughout the market.

"Here we are!" I stopped in front of my stall. It was a metal structure of two floors, shear walls and sliding glass doors on the ground floor. A 3D printer, tools and different materials such as fabric, wood and paper were visible through the glass doors. There was a table at the middle of the room, and there were shelves displaying shoes, cutlery, pencils, stencils and toys all the way to the back. 12 "Ten years ago, this stall used to sell dried seeds and *mole*, ¹³ as you can see in the photo hanging next to the door. Today it is a 3D workshop. 'Why did Carmen change her stall?' You might ask. Well, my compañeras and I decided to keep just one stall with dried products in the market and to set up a workshop instead. This way, we would avoid competition among us and serve diverse local needs (Brenda, personal communication, 25 November 2020). Let me show you a pair of shoes we have been working on."

I picked up and showed a pair of shoes with woven soles of natural fibre, which were having a major revival after being out of fashion for nearly 50 years. Suddenly, a written message popped-up in Car's holographic videocall chat asking, "Do you have other services like this?"

¹² The idea of a communal workshop was completely imagined by me. It was inspired by spaces such as 'Hackerspace Rancho Electrónico' (collective project of co-construction of knowledge), 'Casa Gomorra' (collective project of dissent, bodies, pleasures and politics) and 'Enchúlame la Bici' (communitarian workshop to build and repair bikes), among others in Mexico City.

¹³ Mole is a traditional marinade and sauce in Mexican cuisine. Generally, mole contains dried chilies, nuts, chocolate and spices such as black pepper, cinnamon or cumin. They can range from bittersweet to spicy.

"Yes, at La Mercadita we have more services that share the same principles. We have my stall which is a workshop, the kitchen, the milpa and the care centre. The four of them serve a purpose for the market and its community, they are led by us, and we assume mutual responsibility towards them. For example, the kitchen is where vendors and visitors can go to drink, eat, bake or even to socialise. It is run by the workers of the old cocinas corridas. So, the team cooperates in collecting the ingredients, cooking, and cleaning the kitchen, in coordination with the rest of the market which also collaborates with them in clear tasks. 14 Actually, if you look over there you can see that two people are working in the milpa right now" I pointed to the woman and man standing beneath the maize leaves hanging from pots, carrying large hand-woven baskets. "These vendors are harvesting chilies and squash that will be used for dishes in the kitchen and sold at the market later (Claudia et al., forthcoming; Gabriela et al., forthcoming). Finally, in the care centre we provide and receive selfmanaged care services such as basic healthcare and childcare. I could go on and on about the care centre, but the truth is that this project has been set up recently. So, we are still experimenting and learning from it. I hope I can tell you more next time you visit us. For now, I will tell you that these services were recovered from the old markets' designs, in which there were stalls but also libraries, day-care centres, among others (Delgadillo, 2016; Meneses Reyes, 2011; Repoll, 2010). Nice, right?" And people reacted by having their watches pop up a hologram GIF of a puppy holding a sign that said "Mind blowing" on it.

"Talking about experimentation, it is important to point something out. Seeing the market today, you might think that we knew exactly what we wanted and how to achieve it, when in reality, things were and are not so straightforward" I added. "The processes of thinking together

¹⁴ The idea of four communal services was mostly produced by me. It was inspired by San Mateo's and San José's stories in which community tasks are presented. It was also based on the way vendors organise market clean-up days, block parties, and planning meetings, as well as real-world examples of collective work such as *tequio* in Oaxaca and other parts of Mexico. *Tequio* is a form of organisation of labour in which all healthy members of a community must participate with the same regularity in equally arduous community activities (Zolla & Zolla Márquez, 2004).

and putting things in place took years of trial and error, of testing and piloting projects (Erika, personal communication, 27 November 2020). This did not happen from one day to the other. Little by little, market by market, we were gathering puzzle pieces and learning how to fit them together, in a way that made sense for our community and every stall. I mean, we were not planning to copy-paste the ideas of other markets. Why would we pretend to be exactly the same? For instance, we first thought about having a marketplace full of the latest technology, focussing just on e-commerce. But we remembered what happened in Mercado Rosa Torres: transforming the market in that way caused disunity between vendors, distance from the community and dissatisfied customers. 'Customers love to inspect their avocados before buying them' (Liliana et al., forthcoming), I remember a vendor saying to us. So, after long hours of presenting the technologies and projects, after discussing their cons and pros, and making their benefits for the majority visible, we came to an agreement (Claudia et al., forthcoming; Gabriela et al., forthcoming; Liliana et al., forthcoming). We decided to renovate the market, introducing new payment methods, screens, and new appliances, but maintaining direct contact with customers and products at display" (Claudia et al., forthcoming; Erika & Jess, forthcoming; Gabriela et al., forthcoming; Liliana et al., forthcoming). Even the most sceptical vendors agreed.

"We also considered other things that were shared by the markets we visited. In Mercado San José, vendors told us that they were using so many emerging technologies that the high energy demand did not fit their energy system. Thus, they needed to install a complex hybrid renewable energy system to meet their energy needs (Gabriela et al., forthcoming). When we asked ourselves if we could run La Mercadita on energy technologies such as hydroelectric dams, wind turbines and similar, we said no."

I glanced at the audience, who were looking at me with confused expressions. After many years of pushing states to support the goal of 100% renewable energy technologies, what I just shared sounded completely contradictory to them. I took a deep breath. "Please, don't look at me like that. Of course, we also wanted to get rid of fossil-fuels, protect the environment, and have energy free of charge or at low cost! But, at the same time we wondered which type of energy systems we needed, for what and for whom. We wanted to make a decision that was centred on us, the complete market and every stall, not just on energy technologies. So, we gathered in vendor's assemblies to decide what we wanted" (Claudia et al., forthcoming; Gabriela et al., forthcoming).

"After discussing the options, in several general assemblies, we decided that we needed a mix of small-scale renewable energy technologies. Also, we were interested in taking advantage of architectural adjustments that maximise the benefits of the heat and light gained from the sun moving and the wind blowing. For example, look at the lamps above us. They look like ordinary electric lamps, right? Well, they are not. These are pipes of reflective materials that capture and bounce back the sunlight (Mayhoub, 2014)."

"So, these lamps don't use any electricity!?!?" Car exclaimed, incredulous.

"Nope, they don't. Now look in between the lamps. Do you see the small, spinning turbine? It is a wind driven vent that continuously replaces trapped, stale air with cleaner, cool air from outside. It does not use electricity either and it is a technology that has existed at the markets since the last century. And...I am sure that you also saw the solar panels on our roof when entering the market. Similarly, we installed a rainwater harvesting system to better manage our water needs (Claudia et al., forthcoming; Gabriela et al., forthcoming). Also, we have a micro waste-to-energy system to manage waste and generate power. You can't see these last two, because they are in the closed loading and unloading area. My point is that what we decided was "to combine modern and natural energy' (Claudia et al., forthcoming) to meet our needs.

"Once we knew which type of energy we wanted, we agreed that energy would be produced and controlled by us, therefore we would not be connected to the cables on the streets (Claudia et al., forthcoming; Erika & Jess, forthcoming; Gabriela et al., forthcoming; Liliana et al., forthcoming). Finally, we made alliances with the government and experts, considering that they have more money and information than us" (Mario, personal communication, 26 November 2020).

"Aha, I knew it. You couldn't do this by yourself. I mean, we see how the energy industry does its best to give us energy, and they can't manage." Car voiced.

"Just like other markets, we learned that alliances were necessary to achieve our goals. The majority didn't want a third party to control and produce energy and agreed that we couldn't do everything by ourselves with little resources. Therefore, WE achieved this, but with the support of others. We wanted to collaborate with people and institutions that

supported our journey and who acknowledged that energy needs and interests are only known by us, the vendors (Jess, personal communication, 27 November 2020). We did not and do not want any more lies, empty words or random ideas. With this, I mean that there is no room for those who want to replace the marketplaces with supermarkets or gourmet markets, neither is there room for alliances that want to renew the marketplaces but displace the vendors or alliances that don't recognize, revalue, improve and protect our markets" (Delgadillo, 2020, p. 10).

"So, I would kindly ask you, Carcar, to leave La Mercadita. I have had enough of your behaviour which, sadly, inhibits OUR collective ways to flourish." I said while opening up my arms, as if I was wrapping the audience and the vendors in a hug, making the "we" gesture.

"For the rest of you, please stay as long as you want. I hope you enjoyed our story and that you will be back soon to see what other things we are creating here, or even better, to join us in making La Mercadita into what we have dreamt. Have a wonderful rest of the day!" I said smiling, before heading towards the flourishing veggies under the dome. It was time to go back to work (Fig. 11.5).

Conclusions

In an attempt to explore the future visions of municipal public markets in Mexico City, I used storytelling, a non-traditional method in energy research. In this chapter I wove together "other ways of doing knowledge", inviting readers to think about alternative ways of imagining energy futures.

In order to pluralize the voices of these futures and to challenge the "male technical" voice in energy transition conversations, my text tapped into a range of historically underrepresented voices, centrally those of women vendors. By using an imaginary setting, informed by the visions of vendors, the text gave insight into the role of energy in women's daily activities and how changing the socio-technical energy systems might impact their community, their day-to-day lives and the city in general. It showed the possible societal, technological, environmental and political influences on the created story world.

For example, based on the stories and the conversations with vendors, I created strong female characters who work at markets and collaborate with other vendors to make markets better places in the future. During

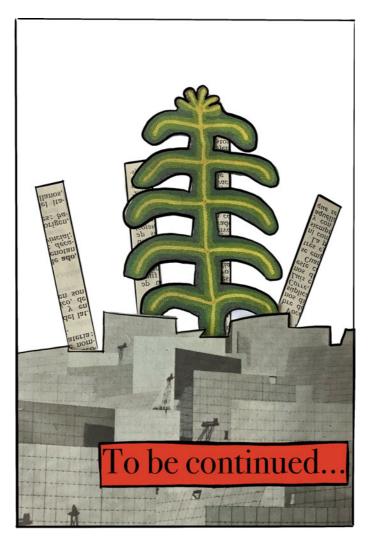


Fig. 11.5 Collage "To be continued..." by Sol Cueva, 2022

the fictionalizing process, I used the characteristics of the marketplaces and their energy systems narrated by these women vendors. Vendors described new energy technologies and fuels, such as solar energy and waste-to-energy technologies to face future energy challenges. Also, vendors described governing structures in which they install and control renewables and forums in which all vendors participate. In this sense, storytelling facilitated complex reflections about the energy futures.

The created story demonstrates that the way people understand and engage with energy systems is informed by the cultural and social as well as the technical context. The chapter presents an image of what a world without fossil-fuels would look like in a specific place and time, and how methods such as storytelling and speculative fiction can contribute to research.

Finally, in searching for hope, I found hopeful visions of the future. During the storytelling activity, the vendors had the option of telling a fortunate or unfortunate story, and all of them chose the first. This did not mean that vendors cannot shine a spotlight on injustices and inequalities, power relations and oppressions—they do—but they decided to focus on a future without major conflicts and disruptions. What the stories showed us is that hope can bring people together and form a basis for collective action. Vendors imagined better futures for themselves, others like them and for people who are willing to contribute to the flourishing of their communities.

Hopefully, this exercise will invite others to keep exploring nonhegemonic imaginaries in feminist political ecology and energy studies and provide some ideas on how collectively imagining energy futures can inform energy, future and feminist studies.

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References

- Adamson, J. (2016). Humanities. In J. Adamson, W. A., Gleason, & D. N. Pellow (Eds.), Keywords for environmental studies (Print, pp. 135–139). New York University Press.
- Birch, K. (2017). Techno-economic assumptions. Science as Culture, 26(4), 433–444.
- Brenda. (2020, November 25). Interview San José [Personal].
- Castellanos, Z. (Host). (2021a, February). Iniciemos el viaje: Sistema de Abasto Tradicional y su importancia en la vida de la Ciudad Chilanga (No. 1) [Audio podcast episode]. In OrigenEs. Retrieved 13 February 2021a, from https://open.spotify.com/episode/2ICxTdq2pvzBROMj5SpcrO?si=zEV9G3yLTwWml-pWWlP7dw
- Castellanos, Z. (Host). (2021b, February). Mujeres en el comercio en tiempos de Pandemia (No. 6) [Audio podcast episode]. In OrigenEs. Retrieved 22 April 2021b, from https://open.spotify.com/episode/6VrzL3RlXeafvV0QDl3r0x?si=mL Mn7LRRFCwd5014KZaGA
- Catálogo de Lenguas Indígenas Nacionales; Variantes Lingüísticas de México con sus autodenominaciones y referencias geoestadísticas, Diario Oficial de la Federación, Mexico § Primera (2018). https://www.inali.gob.mx/pdf/CLIN_completo.pdf
- Claudia, Marisela, Color, & Fernando. (forthcoming). Mi Mercado San Mateo Tlaltenango 2050 (L. Sol Cueva, Trans.).
- Corona, S. (2021, November 4). ¿Cuántos mercados se han incendiado en la CDMX? El Universal online. https://www.eluniversal.com.mx/metropoli/mercado-sonora-cuantos-mercados-se-han-incendiado-en-la-cdmx
- de Nooijer, R., & Sol Cueva, L. (2022). Feminist storytellers imagining new stories to tell. In W. Harcourt, K. van den Berg, C. Dupuis, & J. Gaybor (Eds.), Feminist methodologies: Experiments, collaborations and reflections (pp. 237–255). Palgrave Macmillan. https://doi.org/10.1007/978-3-030-82654-3_11
- Delgadillo, V. (2016). La disputa por los mercados de La Merced. *Alteridades*, 26, 57–69.
- Delgadillo, V. (2018). Markets of La Merced: New frontiers of gentrification in the historic centre of Mexico City. In S. González (Ed.), Contested markets contested cities. Gentrification and urban justice in retail spaces (pp. 19–35). Routledge. http://contested-cities.net/wp-content/uploads/2018/08/Chapter-2.pdf
- Delgadillo, V. (2020). *Mercados Vivos* [Contest]. Concurso Mercados Post Covid-19. https://www.academia.edu/44152385/MERCADOS_VIVOS
- Di Chiro, G. (2017). Seaweed, "soul'-ar panels and other entanglements. In J. Adamson & M. Davis (Eds.), *Humanities for the environment: Integrating knowledge, forging new constellations of practice* (Print, pp. 70–87). Routledge.

- Elizondo, A., Perez-Cirera, V., Strapasson, A., Fernandez, J. C., & Cruz-Cano, D. (2017). Mexico's low carbon futures: An integrated assessment for energy planning and climate change mitigation by 2050. Futures, 93, 14-26. https:// doi.org/10.1016/j.futures.2017.08.003
- Erika. (2020, November 27). Interview San Joaquín [Personal].
- Erika, & Jess. (forthcoming). Mi mercado San Joaquín- Zona 22 2050 (L. Sol Cueva, Trans.).
- Gabriela, Papelería Moce, Odilón, & Brenda. (forthcoming). Mi Mercado San José 2050 (L. Sol Cueva, Trans.).
- Giglia, A. (2018). Comercio, Consumo y Cultura en los mercados públicos de la Ciudad de México. Universidad Autónoma Metropolitana, Unidad Iztapalapa, División de Ciencias Sociales y Humanidades, Departamento de Antropología. http://dcsh.izt.uam.mx/departamentos/antropologia/wp-con tent/uploads/2020/01/libro_comercio_cultura_dra_giglia.pdf
- Hajer, M., & Versteeg, W. (2019). Imagining the post-fossil city: Why is it so difficult to think of the new possible worlds? Territory, Politics, Governance, 7, 122–134.
- Harcourt, W. (2016). Gender and sustainable livelihoods: Linking gendered experiences of environment, community and self. Journal of Agriculture, Food, and Human Values, 33(4), 1007-1019. https://doi.org/10.1007/s10460-016-9757-5
- Harris, L. M. (2021). Towards enriched narrative political ecologies. Environment and Planning E: Nature and Space, 5(2), 1-26. https://doi.org/10. 1177/25148486211010677
- Hydén, L. C. (2017). Entangled narratives: Collaborative storytelling and the reimagining of dementia. Oxford University Press. https://doi.org/10.1093/ oso/9780199391578.001.0001
- Ingram, M., Ingram, H., & Lejano, R. (2014). What's the story? Creating and sustaining environmental networks. Environmental Politics, 23(6), 984-1002. https://doi.org/10.1080/09644016.2014.919717
- Jasanoff, S. (2021, February 25). Renewable futures and the future of renewables [Keynote]. The Leibniz Research Alliance on Energy Transitions Energy Futures Conference, Online. https://www.leibniz-energiewende.de/konfer enzen/2021-energy-futures-emerging-pathways-in-an-uncertain-world/con ference-recordings
- Jess. (2020, November 27). Entrevista San Joaquín [Personal].
- Leavy, P. (2012). Fiction and the feminist academic novel. Qualitative Inquiry, 18(6), 516-522. https://doi.org/10.1177/1077800412442813
- Leavy, P. (2018). Fiction-based research. In Handbook of arts-based research. The Guilford Press. https://search-ebscohost-com.eur.idm.oclc.org/login.aspx?dir ect=true&db=nlebk&AN=1535661&site=ehost-live&scope=site
- Liliana. (2020, November 26). Interview Rosa Torres [Personal].

- Liliana, Mario, Silvia, & Marisela. (forthcoming). *Mi Mercado Rosa Torres 2050* (L. Sol Cueva, Trans.).
- López-Beltrán, C., & García Deister, V. (2013). Scientific approaches to the Mexican mestizo. Ciências, Saúde-Manguinhos, 20, 391–410.
- Malló, O. (2021, October 16). Petronacionalismo, antiextractivismo y capitalismo verde en el México actual. *La Jornada del campo*. https://www.jornada.com.mx/2021/10/16/delcampo/articulos/petronacionalismo-antiextractivismo.html
- Mario. (2020, November 26). Interview Rosa Torres [Personal].
- Marquartdt, J., & Delina, L. L. (2019). Reimagining energy futures: Contributions from community sustainable energy transitions in Thailand and the Philippines. *Energy Research & Social Science*, 49, 91–102.
- Mayhoub, M. S. (2014). Innovative daylighting systems' challenges: A critical study. *Energy & Buildings*, 80, 394–405. https://doi.org/10.1016/j.enbuild. 2014.04.019
- Meneses Reyes, R. (2011). Legalidades públicas: El derecho, el ambulantaje y las calles en el centro de la Ciudad de México (1930–2010). Universidad Nacional Autónoma de México y el Centro de Investigación y Docencia Económica. http://ru.juridicas.unam.mx/xmlui/handle/123456789/11968
- Mexico suffers another day of rolling blackouts due to storm. (2021, February 16). *The San Diego Union Tribune*. https://www.sandiegouniontribune.com/business/nation/story/2021-02-16/mexico-suffers-another-day-of-rolling-blackouts-due-to-storm
- Miller, C. A., O'Leary, J., Graffy, E., Stechel, E. B., & Dirks, G. (2015). Narrative futures and the governance of energy transitions. *Futures*, 70, 65–74.
- Moezzi, M., Janda, K. B., & Rotmann, S. (2017). Using stories, narratives, and storytelling in energy and climate change research. *Energy Research & Social Science*, 31, 1–10. https://doi.org/10.1016/j.erss.2017.06.034
- Murphy, M. S., Huber, J., Clandinin, D. J., Caine, V., Steeves, P., & Estefan, A. (2017). Exploring the purposes of fictionalization in narrative inquiry. *Qualitative Inquiry*, 23(3), 215–221. https://doi.org/10.1177/107780041664 3997
- Ottinger, G. (2017). Making sense of citizen science: Stories as a hermeneutic resource. *Energy Research & Social Science*, 31, 41–49. https://doi.org/10.1016/j.erss.2017.06.014
- Repoll, J. (2010). Consumo y Usos de la Televisión en los mercados públicos de la Ciudad de México. *Comunicación y Sociedad*, 14, 83–108.

- Rose, D. B. (2013). Slowly ~ writing into the Anthropocene. *TEXT*, 1–14. https://doi.org/10.52086/001c.28826
- San Vicente Tello, A., & Jönsson, M. (2019). Landrace maize diversity in milpa: A socio-ecological production landscape in Soteapan, Santa Marta Mountains, Veracruz, Mexico. *Satoyama Initiative*. https://satoyama-initiative.org/case_studies/landrace-maize-diversity-in-milpa-a-socio-ecological-production-landscape-in-soteapan-santa-marta-mountains-veracruz-mexico/
- SEDECO. (2013). Política de Protección y Fomento para los Mercados Públicos de la Ciudad de México (2013–2018). Secretaría de Desarrollo Econónimo de la Ciudad de México (SEDECO). http://www.sedecodf.gob.mx/archivos/Politica_de_Proteccion_Mercados_Publicos.pdf
- SEDECO, Energética, & D.G.d.D.y.S. (2019). *Política Energética Sustentable para la Ciudad de México*. Secretaría de Desarrollo Econónimo de la Ciudad de México (SEDECO). https://www.sedeco.cdmx.gob.mx/programas/programa/CDMX2019
- Smith, J., Butler, J. R., Day, R. J., Goodbody, A. H., Llewellyn, D. H., Rohse, M., Smith, B. T., Tyszczuk, R. A., Udall, J., & Whyte, N. M. (2017). Gathering around stories: Interdisciplinary experiments in support of energy system transitions. *Energy Research & Social Science*, 31, 284–294.
- Sol Cueva, L. (forthcoming). Women's visions: Futuring energy for Mexico City's Public Markets (PhD). International Institute of Social Studies-Erasmus University Rotterdam.
- Sovacool, B. K. (2019). Visions of energy futures: Imagining and innovating low-carbon transitions. Routledge, an imprint of the Taylor & Francis Group. https://doi.org/10.4324/9780367135171
- Wattenbarger, M. (2019, December 9). Are we killing the markets of Mexico City? [Eater]. *Eater*. https://www.eater.com/2019/12/9/20963654/mex ico-city-public-markets-in-trouble-over-tourism-gentrification
- Zolla, C., & Zolla Márquez, E. (2004). 24.- ¿Qué son el tequio, la gozona, la faena, la fajina, el tequil, la guelaguetza, el trabajo de en medio y la mano vuelta? In *Los pueblos indígenas de México*, *100 preguntas* (Second). Universidad Nacional Autónoma de México; E-Book. https://www.nacionmulticult ural.unam.mx/100preguntas/pregunta.php?num_pre=24

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