TOUCHED BY DEEP TIME: Earthquake Sickness in Mexico City

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In the middle of 2018, nine months after Mexico City had last been shaken by a major earthquake, Elena lay in the bed of her apartment in Doctores, wide awake for perhaps the fourth night in a row. "It was as if I could hear the walls," she would later tell me, noting that such sleepless nights had become routine since the earthquake of September 19, 2017. While the 7.1M earthquake had frightened her, she emerged fine, as did her friends and family. Her building, too, had ostensibly remained unharmed. And yet, as time passed, cracks appeared in the walls of her apartment—deep, alarming fissures that wrapped around the room. Still more troubling was that these cracks were mirrored in the apartments above and below hers, suggesting not isolated, superficial damage, but some hidden thing gone wrong in the building itself. As if its slow disintegration were too loud, Elena leaves her apartment, drives to the office where she works, puts her head on her desk, and falls asleep until her colleagues arrive.

Elena, by her admission, is *tocada*. *Tocado/tocada* translates as "touched,"[1] but is generally used to mean "crazy" or "affected," similar to the English phrase *touched in the head*. A woman in her fifties, Elena has lived in Mexico City all her life and has experienced many of the city's tremors. But during the minute that she laid on the floor on September 19, 2017, arms wrapped tightly around her

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head, something changed in her. Since then, she has been affected by a peculiar range of health issues: she has lost weight (15kg), has dizzy spells, and suffers long bouts of insomnia. Though years have now passed, she tells me that the earthquake never really ended for her.

Over the past six years in Mexico City, I have met dozens like Elena: people who present a broad range of post-earthquake symptoms and sometimes refer to their condition as *tocado*. Alongside physiological issues—such as migraines, insomnia, loss of appetite, weakness, dizziness, diarrhea, and diabetes—their symptoms often include psychological states: a persistent sense of dread, generalized listlessness, pronounced claustrophobia, and panic attacks. With embarrassment, some hang cutlery from their ceilings to notice light tremors, pay close attention to their pet's behavior, sleep with their shoes on, refuse to shower if they are alone in the apartment, and leave their front doors unlocked whenever they are home. Across these diverse symptoms, there is one constant: the 2017 earthquake made them sick.

UN BOLILLO PA'L SUSTO

When a tremor strikes Mexico, people make the same joke: *un bolillo para el susto* (a *bolillo* for the fright). A *bolillo* is a small, crusty bun, an accompaniment for *chilaquiles*, the foundation of a small *torta* (sandwich), or (my favorite) a *guajolota*—a *tamal* stuffed inside a *bolillo*. When *chilangos* explain why you eat a *bolillo* after an earthquake,[2] they say that a fright (*susto*) can make you weak and, if unmanaged, give you diabetes. Often, they refer to their grandparents, who either explicitly taught them that they must eat a *bolillo* to avoid fright-induced diabetes or who attributed their own diabetes to an experience of acute stress (cf. Elizondo et al. 2003; Mendenhall 2012; Poss and Jezewski 2002). In Mexico, to experience a *susto*, like the shock of an earthquake, is to risk becoming like Elena: a person overtaken by the fright (*alguien que se queda tocado por el susto*).

Susto, in medical anthropology, is a "culture-bound syndrome" throughout Latin America, particularly Mexico and Central America, which describes a person who experiences a fright that induces a range of negative health effects like anxiety, depression, weakness, insomnia, wasting, bodily aches, diarrhea, and diabetes (Castaldo 2004; Gobeil 1973; Poss and Jezewski 2002; Rubel 1960). *Susto*'s connection of acute moments of stress to negative health outcomes, alongside its broad symptomology, has produced a range of interpretations.[3] Early medical anthropology interpreted *susto* as a "folk illness" (Rubel 1960; Rubel, O'Nell, and Colado-Ardon 1984). Such works often identify *susto* as a locally

specific variation of post-traumatic stress disorder (Bourbonnais-Spear et al. 2007; Weller et al. 2008). In response, critical medical anthropologists foreground how structural conditions of deprivation produce illness, highlighting the role of socioeconomic factors in physiological causes like hypoglycemia (Bolton 1981), malnutrition (Mysyk 1998), or internal parasites (Signorini 1982). Such works often frame *susto* as an idiom of distress rather than an illness, a means of reinforcing social norms (Greenway 1998), contesting sexist social expectations (O'Nell and Selby 1968), or protesting economic insecurity (Mysyk 1998). While divergent, these interpretations share an understanding of *susto* as a physiological expression of an individual's maladaptation to societal expectations (Green 1994, 121). This view transcends medical anthropology, with *susto* included as one of nine "cultural concepts of distress" in the American Psychiatric Association's DSM (APA 2013).

Beyond English, the literature on *susto* offers more sustained attention to local interpretations and context. Jaime Echeverría García (2014) shows that sixteenth-century Nahua speakers in New Spain said that frights cause their *tonalli*, or animating essence, to leave their body. Historically, a *susto* was understood as a fright that permanently disrupted someone's thermal equilibrium—and *susto*'s association with cold things, particularly winds, persists (Barba de Piña Chan 1995; Muñoz Morán 2011). While some note that the devil and spirits are associated with *susto* (Barba de Piña Chan 1995; Muñoz Morán 2011), others argue that *susto* is a syncretism of pre-Conquest and Catholic ideas (Remorini et al. 2012). Miriam Castaldo (2004) suggests that *susto*'s plurality has seen anthropologists homogenize the affliction in pursuit of generalizable definitions, warning that synthetic accounts assume culture to be static and its members isomorphic, which elides how cultural and natural factors shape the illness, and it inhibits studying how *susto* emerges and changes over time in a community (Castaldo 2004, 63–64).

As Eduardo Menéndez (1994) argues, illnesses "structure knowledge to face, coexist, solve, and, if possible, eradicate" the conditions that produce it, so the details of an illness's social context prove vital for understanding it (cf. Remorini et al. 2012; Urióstegui-Flores 2015). Instead of unmasking the purportedly real cause underlying *susto*, explaining the affliction away by appealing to the universal body of biomedicine, an overarching social structure, or Euro-American metrics of human psychology, scholars should focus their attention on the historical, political, and social contexts in which *susto* emerges as an illness (Jacobo Herrera and Orr 2020). I would add to this Merrill Singer's (2010)

recommendation that anthropologists consider how *environmental* conditions mediate such an illness. Frida Jacobo Herrera and David Orr (2020) note something surprising in the English-language literature: although all forms of *susto* share a constant—an intense moment of fear—the role of fear as a contributing factor is rarely explored. But when "fear [is] a way of life," as Linda Green (1994) describes the village of Xe'caj, southwestern Guatemala, during the Guatemalan Civil War, individualized pathologizations miss the political conditions that generate fear, how that fear is socialized, and what embodying that fear does to a person. In situations where social, political, and environmental factors render fear chronic, understanding fear might be central to understanding the illness.

In Mexico City, this fear is induced by earthquakes and associated geophysical processes. Building on a longer history of considering geology (cf. Ingold 1993; Nash 1979), social scientists have sought to examine how "political and social worlds are constituted, limited, and unsettled by the Earth" (Oguz 2023, 417; see also Bobbette and Donavan 2019; Braun 2000; Elden 2013; Melo Zurita et al. 2018; Povinelli 2016; Weizman 2007). Broadly speaking, the pursuit of "analytical tools capable of lifting the veil of the earth itself" (Marston and Himley 2021, xx) has produced two trends: works that spotlight the interface between geology and humanity and those that foreground the excess of that relationship. The first trend might be framed as a geological extension of the more-than-human approach to anthropology (Tsing 2013), in which geology figures as an unstable participant in human projects (Limbert 2020; Oguz 2021, 2023; Weszkalnys 2014); the second trend foregrounds what exceeds the human, arguing that geology demands analytic tools that moderate the significance of humans (Chakrabarty 2009, 2014; Harmon 2018; Ialenti 2020; Morton 2013).

Jerry Zee's (2017; 2020; 2022) work on dust management in China offers a rich example of the first of these trends, framing the meeting point between political and geo-atmospheric processes as a symmetrical "experiment" by which the two co-produce one another. For Zee, these technopolitical works are not projects of control in which sand emerges as a passive object of management; rather, sand enters state strategies as an unruly participant, such that the state itself becomes sand-like. However, Dipesh Chakrabarty (2014, 3), a key protagonist of the second trend, argues that the "vastness" of the geological conflicts with the "familiar[ity]" of the human, because the two are "vastly different and incommensurable scales of time." For this reason, Nigel Clark (2011, xvii) rejects the symmetry of actor-network theory–inspired approaches to geology, imploring the social sciences to study those "regions where we are absent" and

the "worlds beyond us." Temporality, though not necessarily a central focus, is seldom far from these geological discussions, and the form time takes follows the contours of each analytic. On the one hand, Zee (2017, 217) examines how "sand-control programs in practice make governmental control of and intervention into time a site of chronopolitical experiment, where the soaring futures of the state are reshaped through sand as a material." Working with Finnish nuclear waste disposal engineers, Vincent Ialenti (2020, 2), on the other hand, argues that "gazing into deep time . . . is our collective responsibility" to overcome the short-term thinking that produced the Anthropocene.

While there are differences within and exceptions to these trends, geology in the social sciences is typically understood either at the interface or in the excess. The former foregrounds continuities between geology and humanity and the stakes, conditions, and outcomes of their embroilments; the latter turns to that with which humanity cannot be mutually engaged, questioning the possibility of ever understanding geological things. More critically: the former, to a certain extent, elides the question of scalar difference, while the latter surrenders to it. In this essay, I draw from both trends while making space for a third line of inquiry. Following Kathryn Yusoff (2017), I understand Mexico City as a "geosocial stratum," rather than only an assortment of human things superimposed on a geological foundation: I agree that there is a connection between the endless creep of tectonic plates below and the muted unraveling of buildings above. However, mutuality and continuity are not the only ways in which we can understand human-geology relationships, and attention to peoples' debilitating fear also requires that I keep geological excess in the frame. To properly describe being *tocado*, the fear that emerges in this geosocial stratum, I try to write about how it feels to live alongside what exceeds mutuality.

To understand living with the latent presence of the Earth, I have learned from work on environmental uncertainty, particularly on toxicity. Toxicity is an epistemological problem that emerges from material processes (Murphy 2006) and shifts bodily orientations to the world. Writing about formaldehyde exposure, Nicholas Shapiro (2015, 369) describes a "chemical sublime," an "experience and a practice" whereby "minute aberrations in the body" become a means of tracing how toxic atmospheres accumulate. Processes so diffuse and unstable demand a "somatic mode of attention" (Csordas 1993)—and its recognition as a real illness demands new evidentiary modes, generating new social forms, becoming what Joseph Dumit (2006) calls "illnesses you have to fight to get." Exposure occurs at the interface between the human and the environmental without

a normative sense of relationality. Writing of pollution in Mexico City, Elizabeth Roberts (2017) reminds us (and I'm paraphrasing) that "becoming-with" (cf. Haraway 2008) is sometimes "becoming-with shit." Like geological motion, toxicity registers on the body without being unequivocally known, and this indeterminacy both induces fear and demands new forms of embodied knowledge.

Indeterminacy constitutes a problem anywhere, but it is compounded by situations in which knowledge remains unreliable. This partly results from the unpredictability of seismicity (Reddy 2020)—but also from that of the Mexican state. In Mexico, political processes and state bureaucracy routinely overlap. *Caciques*, or powerbrokers, use clientelist networks to exercise covert influence well beyond their formal stations (Castro 1984). Insofar as administrative standards for bureaucratic function exist, there is room for negotiation for political benefit (de Vries 2002; cf. Gupta 1995). Mexicans know this all too well: the politics of resolving a problem are generally understood as coterminous with the appropriation of resources and institutional power (Lomnitz 1996). In this process, the Mexican state, in Megan Crowley-Matoka's (2016) apt term, becomes "slippery": it is inconsistent, prone to chance—one might get a good doctor in a public hospital, one might not (Wentzell 2015); a flood might be an accident or an intentional calibration of the city's overstretched drainage (Chahim 2022); or, as I show, a building might have been built according to standards, but then again, it might not. The point is not that the Mexican state doesn't work, but, rather, that few can be certain it will. The state of being *tocado* emerges at the confluence of these geological and political uncertainties, at the edge between an excessively lively Earth and the slippery architecture built atop it.

These dual indeterminacies were an ongoing topic of conversation in Mexico City after the earthquake of 2017. When I first met the residents who would become my interlocutors in this research, we talked about the buildings that had fallen in the earthquake. In the years that followed, we continued talking about the buildings that seemed to keep falling—those damaged in the earthquake and those ostensibly unharmed. Beginning in late 2017, the informal civil society group Verificado19s introduced me to members of the neighborhood assembly of earthquake victims Los Damnificados Unidos de Tlalpan (The United Casualties of Tlalpan). Alongside them I attended weekly assemblies, protest marches, and meetings with state officials during the summers of 2018 and 2019, and again from 2020 to 2023, when I lived permanently in Mexico City. We kept in touch via WhatsApp, especially during the quarantine period of the COVID-19 pandemic, when interlocutors would forward me photos of fractured columns and

cracks in their apartment walls or recordings of the sounds their buildings made at night. After meeting people who described themselves as *tocado*, I conducted transect walks. In these walks, people would take me to their buildings or show me the architecture that made them most afraid. I grew up in Australia, which has little familiarity with earthquakes, so I listened to residents' stories with heed—including long after the friends and family of *tocados* had become fed up with listening to their concerns. To be *tocado* is, as those affected say, to be trapped in the moment of fright, in earthquake time; by being willing to listen to the stories others had tired of, I managed to inquire into the experiences generated by the 2017 earthquake.

This article examines the uncertain geological knowledge that fear assembles in the form of being *tocado*. Central to my argument is that, for buildings in Mexico City, destruction is only a relative condition. They might be okay. But if they're on the right side of livable now, no one can be sure for how long. Soft soils, earthly motions, lax legislation, and corrupt developers conspire a city full of buildings that might be slowly falling, perceptible only if you know how to notice. After an acute earthquake experience, people who are *tocado* attune themselves to the signs that populate the spectrum between absolute and relative destruction. In this article, I follow these signs. Outlining what might be considered a geological sensorium, I show how people who are *tocado* develop sensitivity to the barely perceptible kinesthetics of the city's materiality. Their sensitivity to ongoing geological processes induces an embodied apprehension of human vulnerability to the Earth, manifesting in a sense that the 2017 earthquake has not ended. Rather than being an individual pathology, an idiom of distress, or a cultural expression of a human universal, I suggest that being *tocado* makes for an earthly seasickness in which people are overwhelmed by the Earth's constant motion and exhausted by the demand to bridge abyssal scalar difference with their bodies. Neither mutuality nor excess, a falling building constitutes an interface between the human and the geological only insofar as a precipitous cliff would mark an interface between the sky above and the abyss below.

UNGROUNDING EARTHS

As I fall onto the pavement, my eyes are fixed on the skyline. I had been looking where Fernanda was pointing—where, a few blocks away, a building was hanging over the street—when my foot caught a crack that had kept itself hidden. The first time I fell over on a transect walk with an interlocutor, I felt embarrassed; by now I am used to it. At the time, I was walking with Fernanda

in Doctores, visiting the buildings she expected to fall. I could have been anywhere. I could have been careening groundward during one of the dozens of memory walks (Bonilla 2011) I undertook with residents across central and eastern Mexico City. I could have been slotting the tire of my bike into a new crack on the road's surface as I rode to a meeting of earthquake victims. I could have been sprawling while accompanying Los Damnificados Unidos on their regular protest walks from Tlalpan to Zócalo, as they reminded the city that, for them, the 2017 earthquake was still ongoing. The gravity of the situation mattered little; if I was walking, I would at some point end up on my face, the permutations of the city's surface catching me off guard.

This is unsurprising. Although the basin in which Mexico City sits is (currently) 2,240m above sea level, it has spent most of its past underwater. Completely submerged until the end of the Tertiary Period, from the Late Cretaceous through the Middle Eocene (100–38mya), a marine regression takes place, and the subduction of the Cocos tectonic plate causes the North American Plate to rise. What we call Mexico begins thrusting its head above water about 30mya (Guzmán and de Cserna 1963). The friction of this movement produces vertical fractures through the continental crust of the North American plate, and magma pours upward through these discontinuities to form the Trans-Mexican Volcanic Belt, a 998km-long east-west arc of around 8,000 volcanic structures that cuts across Mexico from Nayarit to Veracruz (Pardo and Suárez 1995). The Valley of Mexico, in the center of this belt, is at this point still a valley, hemmed by mountains to the west (Sierra de las Cruces), east (Sierra Nevada) and north (Sierra Pachuca), with the river Rio Balsas flowing south to the Pacific Ocean. At some point in the Late Pliocene, these volcanos begin erupting, sealing the southern reaches of the valley and forming a basin 5,960km^2 in size (Allan 1986; Cantagrel and Robin 1979; Mooser, Nairn, and Negendank 1974; Pasquaré et al. 1991). Melting snow on nearby peaks and summer rainfall pour down the mountains; when the first human inhabitants of the region arrived around 11,000 years ago, these lakes were saltwater in the north, freshwater in the south, with rich, productive wetlands all around (Bribiesca-Castrejón 1960). The Mexica arrived in the fourteenth century, constructed a vast system of dams to keep these waters separated, founded the city-state Tenochtitlan, and forged the Triple Alliance between Tenochtitlan, Tlacopan, and Texcoco in 1428. About a hundred years later, the Castilian conquistador Hernán Cortés arrives and describes with wonder an immense city "built on a salt lake" that "rises and falls with its tides as does the sea" (Mundy 2015, 11). The colonists found the city's environment

unfamiliar (cf. Melville 1994), so they demolished the infrastructure that managed the lakes, drained the basin (Candiani 2014), established one of the largest cities in the world on the soft soil of a lakebed, and set into motion a now half-millennium-long struggle to manage the surface of Mexico City (Chahim 2022; de Coss-Corzo 2021; Hoberman 1974; del Valle 2022; Vitz 2018).

The Mexican soil scientist Ma del Carmen Gutiérrez-Castorena and colleagues (2005) demonstrate the impossibility of the megacity of Mexico City with a thought experiment: imagine a rectangular prism of soil, they tell us, whose face is one meter by one meter, and is 70 meters long, the length of the deepest point of the clay layer beneath Mexico City. Seventy cubic meters of ground, cubic meter by cubic meter. Were this imaginary column put into an oven at 105 degrees Celsius for four days, its water would evaporate, and we'd have less than seven cubic meters of soil. Then, once the air pockets that held the water had collapsed, there would be just over half a cubic meter of solid material remaining. Although the lakes are gone, Mexico City still floats. Sort of. As the city grew, it burrowed into the soft soil beneath it (Zeevaert 1953). Sinking at an average of twenty to thirty centimeters per year, the city shows surface fissures, particularly in the eastern regions of Iztapalapa and Tláhuac (Osmanoğlu et al. 2011). Fifteen of the city's sixteen delegations are considered subject to earthly disturbance, with Benito Juárez, Iztapalapa, Cuauhtémoc, and Tláhuac especially prone (Avilés and Pérez-Rocha 2010; see Figure 1). Throughout Cuauhtémoc and Tláhuac, where I researched, *grietas*, or fractures, emerge at the intersection of soils with different rates of subsidence, appearing as writhing concrete and slumping roads. The city's empty underground generates an active surface.

So, while I wouldn't recommend tripping as a method, it did prompt conversation about what was happening under us. As I dust myself off, people say, *Es un desmadre* (This path is a mess), or words to that effect, with sympathy and a stifled smile. Then they reflect on the motion beneath us, branching easily from *¡Aguas!* (Watch out!) to a meditation on the crack that made me trip. We were never short of material. Concrete cracks; gutters that might once have stood a foot above the street level sink, dragging the road with them; the camber of the streets swing from side to side along their length; holes emerge along these streets that gradually swallow the road itself. As I fall with Fernanda in Doctores, she says, "You can't trust it, *pinche* ground."[4] With two fingers, she follows as the crack splinters into discrete but connected fissures: one that passes from the footpath to the road adjacent—a patch of subsidence undermining the street, perhaps—and another that digs its way underneath a nearby building to

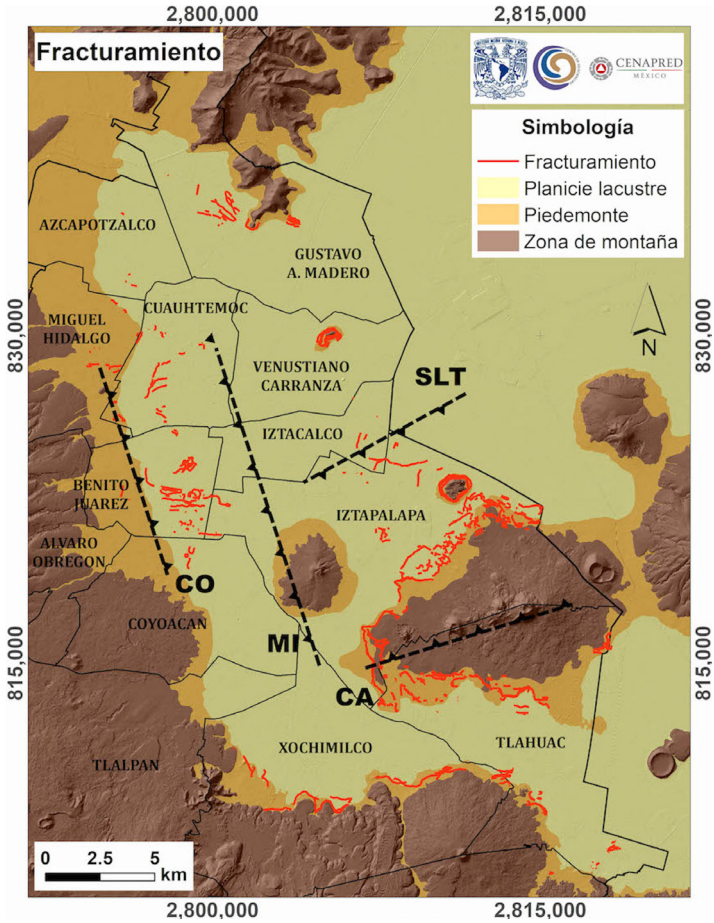

Figure 1. Digital map of the distribution of fractures and subsidence across Mexico City. From Dora Carreón Freyre et al. (2017).

do unseen work to its foundations. "It's not only the cracks," she tells me, "It's whatever else is happening down there."

Whatever's happening *down there* is an ongoing concern for people who describe themselves as *tocado*. Fearfulness of seismicity makes them hypersensitive to these cues of earthly motion. Many things bring a building down in Mexico City, but the hollow earth is central, slowly giving way for years, such that a standing building might just be hovering. Alongside cracks and subsidence in the Earth's surface, residents track where water pools after summer rains to see if they might follow the ancient waterways to future seismic risk. But more often, they use buildings to understand the action of the unseen Earth beneath them, as if buildings were antennae that caught signals of hidden geophysical motion.

ANGLES OF UNCERTAINTY

When I tell José Enrique that I can't see what he is seeing, he clicks his tongue. "I think it gets a little wider at the top," I say, "but I couldn't tell you for sure." As I look across the two-meter atrium outside his bedroom window to the apartment opposite, he tells me, impatiently, "It's getting bigger. You think I'm crazy, but I see it every day. I know it's getting bigger." I squint out the window again (Figure 2). It seems to get smaller toward the building's base, but I can't tell if my eyes are tricking me, my perspective distorting the angle. Ever since he noticed the gap, a year or so after the earthquake, José Enrique struggles to sleep, has higher blood pressure, and finds himself occasionally "seized by terror." Though he experienced several of the city's major earthquakes, he tells me that he feels different after 2017. His family is worried, as much for him as for the building; like others across the city, he told me with some resentment: "They just think I'm crazy." But in apartments like José Enrique's, on the fourth level of a mid-century building in central *colonias* like Guerrero, where numerous buildings have fallen, these gaps take on great importance.

Figure 2. Gap widening in the wall across José Enrique's atrium. Photo by Lachlan Summers.

People know the stories of buildings that suddenly collapse in Mexico City. They know stories of people like the architect Max Tenenbaum, who designed numerous buildings throughout the capital, one of which fell in 1985 (the city's largest earthquake) and two of which fell in 2017 (Yañez 2018). They know how figures like him became obscured in the institutional flurry to reform architectural codes post-1985 (Alcocer and Castaño 2008), and that despite his fallen building, and despite his flight from the country in 1986 (Stockton 1986), he could become a *corresponsable en seguridad estructural* (Steward of Structural Safety, or CSE) in new institutional bodies charged with verifying the structural security of buildings throughout the city. People in Mexico City know that while the government might describe *directores responsables de obra* (Liable Director of Construction, or DRO) and CSEs as separate "assistants of public authority" (Gobierno de la Ciudad de México 2019), architects like Tenenbaum can be the DRO who designs and oversees a building's construction and the CSE who reviews its adherence to architectural codes. Because developers will fire CSEs and DROs that require them to use more durable, and so more costly, construction materials, a market has developed in Mexico City for what is known colloquially as *firmones* (signers): DROs and CSEs who can be paid to sign blueprints without verifying them. Residents know that, despite the increased attention that DROs and CSEs received after the 2017 earthquake, and despite the notoriety of his three fallen buildings, Tenenbaum renewed his DRO license in November 2017.

* * *

But this story is not about Max Tenenbaum. Rather, it concerns the widespread fear that residents have of the impossibility of knowing whether the slippery hands of someone like him pocketed the money and drew the designs for the building unraveling around them. While, in June 2016, then *jefe del Gobierno* Miguel Ángel Mancera promulgated a decree that would curtail loopholes that let people like Tenenbaum design *and* verify buildings,[5] residents knew that even if it were to result in legislation, it would never result in a meaningful procedure of enforcement. (Either way, it didn't; Mancera suspended the decree in November 2016.) For instance, people fearful of seismicity point out billboards that sit atop residential housing. In 2004, the Mexico City government decreed that, because of the risk they posed in strong winds and earthquakes, all billboards needed to be removed from residential buildings. Eventually, the Mexico City government promulgated a law that prohibited billboards on residential housing and set into motion a plan for their removal (Gobierno de la Ciudad de

México 2010). And yet, during the 2017 earthquake, Viaducto Miguel Aleman 106 collapsed under the extra weight and resonance of a billboard, scheduled for removal since 2014, killing eleven people (Instituto de Verificación Administrativa del Distrito Federal 2015).[6] To today, billboards sit atop residential buildings throughout the city, prominent markers of the state's inability to enforce the laws it promulgates.

It is for these suspicions that seemingly innocuous angles, like that which might be widening outside José Enrique's bedroom, feel so unsettling. Cracks, gaps, and angles make for uncertain markers of a process, signs that invite skepticism toward a building's permanence. Attention to these signs can make people sick. I accompany Ana on her route to the *pesero* (minibus) that takes her to the salon where she works, so we can pass a building she scrambles under each morning. When we're a few blocks away from it, she grabs my arm and says, "Ay, it gives me vertigo, even from here." Ana has told me that she suffers from two types of vertigo. One is a lightheaded feeling, induced by being in high buildings—which only began affecting her after the 2017 earthquake. The other describes what she feels when she passes buildings like this one: "It makes me dizzy when I'm underneath it. It's as if I feel it pressing onto me." I don't understand what she's talking about until we reach the base of the building, at which point I feel it too. It is as if the top of the building is rushing down on top of us. At the base of the two buildings, there's a gap of a few millimeters; five levels above, it spreads to about half a meter (Figure 3). The structures are not condemned, and they seem occupied, but the buildings have splayed away from one another, upright only for the support of the buildings on their opposing sides. Ana begins breathing heavily, and we walk away to watch the structures from a safe distance.

After catching her breath, Ana says angrily, "Every day I pass by it, and it looks bigger. Like it has suddenly grown. I don't know if there was a little tremor, if something underneath has given way, but they're moving. How long until they come down?" I feel dizzy too, like a reverse vertigo, induced by the proximity of a tall thing so unsteady. "When they come down, those buildings come down with them," she continues, waving her arm laterally, "Why the fuck are they still allowed to be up?" As I walk home, I trip again, but this time because I'm trying to calculate what an admissible incline for these buildings might be. The Mexico City government's *Normas Técnicas Complementarias para Diseño y Construcción de Estructuras de Concreto* (Supplementary Technical Standards for the Design and Construction of Concrete Structures) denotes the "coefficients of

Figure 3. Two splaying buildings, Tlalpan. Photo by Lachlan Summers.

seismic design" required by Article 181 of Mexico City's *Reglamento de Construcciones Para el Distrito Federal* (Building Regulations for the Federal District), specifying that a building may only lean 0.43 percent of its height. If they are twenty meters tall, which is my impression, it should only lean 8.6cm. This doesn't help. How would 8.6cm appear from twenty meters below? Would it be safe if it were only eight centimeters? Seven centimeters? If it isn't yet 8.6cm, how long until it would be?

INTERNALIZING INHUMAN TIMES

There's no electricity, unsurprisingly, so Julio and I begin climbing the stairs to his former apartment on the fifth story. Though we're technically indoors, a disquieting breeze howls down the central stairwell of the building. Thick dirt and rubbish from the street mingle with the lighter dust generated by the building itself. With several load-bearing columns buckling during the 2017 earthquake, Julio's building was condemned, and he and other residents moved in with family or friends. A year after the earthquake, the building owner still permitted residents to leave their belongings there. Almost as soon as Julio

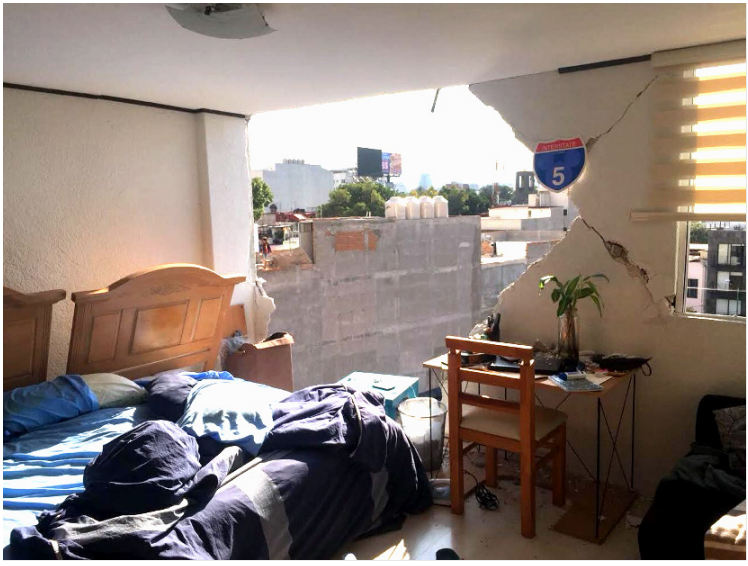

Figure 4. Julio's bedroom wall. Photo by Lachlan Summers.

unlocks the door to his apartment, it flings heavily against the wall of his former living room, as if the building were leaning at such an angle that the door would open itself if it weren't locked shut. I look through the living room to his bedroom, see the city beyond, and struggle for a moment to understand my senses. Half of his bedroom wall has fallen from the building; light and dust pour into his apartment. There is no real division between the outside world and inside the building (Figure 4). "Fucking hell, Julio, why do you lock the door?" I ask in English, and he laughs.

He points toward the crack running behind the Interstate 5 poster on his wall. "That's from September 7," he tells me, the 8.1M earthquake that preceded September 19, 2017, though that earthquake is generally described as not having caused damage in Mexico City. The September 7 earthquake was massive—the largest in Mexico's modern history—but Julio describes it in Mexico City as "just a jolt"; it struck near midnight, he got out of bed and went downstairs for a few minutes, but didn't think too much of it. In the light of the following morning, he saw the crack across his wall. "I was like, 'Shit,' but it didn't seem too bad. Every building has cracks, so I didn't think about it." Once again, I look through his apartment to the city beyond. The crack that had commenced at midnight on September 7 gave way twelve days later, and it's hard for Julio to know how his building would have responded on the 19th had it not sustained that damage. "I didn't realize it at the time, but that crack should have been a red flag," Julio tells me. "If I saw that now, I would run."

After September 19, 2017, people in still-standing buildings throughout Mexico City wondered if they, too, had cracks that were waiting to give way. Los Damnificados Unidos and their supporters told me that officials from the Sistema Nacional de Protección Civil (National System for Civil Protection, or SINAPROC) and Centro Nacional de Prevención de Desastres (National Center for Disaster Prevention, or CENAPRED) had responded to calls from people worried about the new cracks. However, the scale of the disaster meant that they were overstretched, so state resources became harder to access. *Chilangos* turned to other methods. They used the hashtag #*RevisaMiGrieta* (unfortunately only translatable as #CheckMyCrack) on social media, as residents posted photos of fissures and people who claimed to be engineers or architects verified them. Small groups of civil responders, particularly the group Ciudadanía19s, organized architects and engineers to respond to calls for building checks, but gradually focused on pressuring the government to create a city-wide risk atlas.

Mexico City remains littered with markers of its seismic history, angry gaps in the skyline that mark the buildings that once were. Carparks in central parts of the city—particularly Roma Sur and Doctores, working-class districts that hem tourist zones—correspond with the registry of buildings damaged in 1985, making these gaps perhaps the most prominent markers of seismicity throughout the city. They commonly appear on street corners, where buildings are exposed to two shearing forces, rather than only one. While a few parking lots emerged after the 2017 earthquake, most sites of fallen buildings remain boarded up. I pass these sites and often see someone standing silently, looking into the void left in the skyline (Figure 5). Sometimes, part of the building remains, a normal structure at eye level that is busily collapsing overhead, as if the city were a surrealist landscape intended to confuse the senses.

But these markers of seismic history are always in motion, often in modes that trouble standard perceptions of time. Calzada Tlalpan 1171 is one such building. I couldn't understand why it was condemned until I met Gloria, a former resident with whom I visited the building, who showed me photos of the fractures spiraling up its internal atrium. Calzada Tlalpan 1171 was finished in 1979, and by all accounts sustained severe damage during the 1985 earthquake. Gloria herself moved into the building in 2003, when a large fissure hung over the stairwell and cracks began appearing inside apartments. Even then, she said, the cracks seemed to spread. Gloria joined her neighbors in paying for occasional repairs, becoming accustomed to chunks of wall suddenly crashing to the ground and debris piling up in common areas until someone removed it. "I can't

Figure 5. An empty space where a building once stood, Roma Norte. Photo by Lachlan Summers.

believe it now," she told me. "But we thought we had done what we needed to make it safe. The walls and roof falling somehow didn't bother us."

After the 2017 earthquake, these cracks spread with ferocity. "They appeared in new places, *bien cabrón*,"[7] she tells me, and she and her neighbors felt these new cracks were different. They asked the DRO to check the building, and his assessment, finalized in May 2018, confirmed their fears: the building was at a "medium risk of collapse" because a reinforcement beam the residents had installed in the mid-1990s had damaged the first floor of the building. The earthquakes had compounded one another through residents' attempts to manage the city's seismicity. While the shearing effects of that beam in the 2017 earthquake did significant damage to the building, the assessment showed that the building had long been unsafe (Figures 6–8). Residents were forced out. Gloria moved in with her cousin. She hasn't been the same since: "When we received that notice, the 'medium risk of collapse'—what the fuck is that, a *medium* risk of collapse?—it all changed for me. It wasn't just the earthquake. It's that we were so lucky . . . . It was falling the whole time . . . . The earthquake just aggravated what was always happening there. It was happening all the time, all the time, all the time."

We stand in front of Gloria's former home, its peeling gray facade flashing occasionally through the black veil that billows around it. "It's still falling, but

Figure 6 (left). Calzada Tlalpan 1178, December 2008.
Figure 7 (middle). Calzada Tlalpan 1178, September 2017.
Figure 8 (right). Calzada Tlalpan 1178, November 2021.
Photos from Google Maps.

it's still here," Gloria says, motioning to the debris on the footpath. The rubble around us, which she had once casually swept into piles, now marked something that had long gone wrong in the building. "Now when I see rubble like this, or cracks, I panic. I can't do it. I see it and my heart goes *pum pum* and I can't breathe. I know that I was living in a building that was waiting to come down, and it could have done that at any point in those fourteen years . . . . I mean, yes, it didn't fall on me. But I don't feel like I escaped it." I look from her building to the computer repair store next door, where two young men are bullying each other. Gloria meets my gaze and shakes her head, eyes wide.

Across the city, people worry whether the cracks in their walls indicate unseen forces in their buildings. When Elena, with whom I began this essay, opens the door to her apartment, the crack is the first thing I see. It snakes its way from the kitchen through the wall that separates the bedroom from the kitchen and around the bedroom. She knows diagonal cracks are more worrisome than horizontal ones, so we pay attention to where the crack seems to pivot at an angle, and where it intersects with support beams (Figure 9). This particular crack appeared a few weeks after the earthquake, deeper than those already in the apartment. A few months pass, the cracks spread, and Elena's neighbors report similar cracks, as if a connecting column was damaged, so they contact the building's DRO. He tells them the cracks are superficial, and can be repaired by resurfacing the walls. Elena, gesturing around her, says, "But I had doubts."

By the time the DRO had been contacted Elena was finding it impossible to hold food down. It's a problem that returns periodically, so she estimates that she has lost fifteen kilograms since the 2017 earthquake. "I'm nauseous all the time, but there's nothing wrong with me," she tells me. "I've been to checkups;

Figure 9. The beam where Elena thinks her apartment's crack emerged. Photo by Lachlan Summers.

the doctors don't know what's happening." The earthquake struck while she was alone in her third-floor apartment, shaking so violently that she fell to the ground. She lay on her side, arms wrapped around her head, praying. "The headaches began immediately," she says, "and I haven't felt right since." After a few sleepless weeks, she left for her brother's house in Texas. "But when I got back, it was so awful. The crack was *feísima* [extremely ugly], like *angry*; it had jumped across the wall in two weeks . . . . It wasn't my home when I returned." Neighbors leasing their apartments left the building, but Elena, who had bought the apartment with her now-deceased husband, was stuck. "Where would I go?" she asks me. "And who would want to buy this place from me? I'm trapped."

A few months after contacting the DRO, Elena takes a pencil and, "as if it were a growing child," draws a line across the crack and writes the date (Figure 10). A few weeks later, she noticed that the crack had splintered beyond where she had initially drawn the line. She begins marking the various cracks around her apartment at several-week intervals, confirming that all continue to expand. She tells her neighbors, who do the same thing or who take photos of the cracks for provenance, corroborating that their building is indeed in motion. When I visit Elena's apartment, the various cracks are all dated several times, and patches of the wall's surface are ripped out between dates that are close together, to check whether a crack on the surface indicated a fissure underneath. "When do you decide to date them?" I ask her, and she tells me, "Sometimes I see it, and it tells me that it is worse."

Figure 10. Elena's dated fissure. Photo by Lachlan Summers.

Government guidance recommends verifying individual cracks, but not measuring their movement. Yet Elena's attention to the cracks' speed suggests that the problem is not just the damage but also the fact that an indeterminate process might have taken root in her apartment. A one-off check proves insufficient. Elena dates the crack when it seems to have sped up; similarly, she leaves the apartment when she "gets the feeling" or when her cat behaves strangely, rather than on a schedule in human time, like daily, or every Sunday, or on the first of the month. While not everyone dates their apartment's cracks, residents have a sense for their movements, knowing when particular splinters occurred, and whether another tremor caused it. This attunement transforms their homes into indifferent geological entities; Elena tells me, "We're all marking these cracks, but really it's just one crack. They all connect, I'm nearly certain; just somewhere we can't see anything. It is one crack, wrapping itself around all of us."

As the surface of the city writhes, as the gap in José Enrique's neighboring building widens, as the buildings near Ana continue splaying, as cracks twist their way through Elena's apartment, Julia stares absently out the window toward the abandoned building adjacent to hers and says to me, "Se acerca el día en el que se cae encima de mi [The day that it falls on top of me is closing in]." Julia had by then described to me a few times her ongoing, post-earthquake symptoms—insomnia, dizziness, claustrophobia, and sensitivity to noise. However, what interests me here is her language itself. Her phrasing uses the reflexive verbs *acercarse* (to approach) and *caerse* (to fall), articulating her worry in a passive voice. Such a grammatical formulation is not uncommon and perhaps meant to convey her sense of the neighboring building as an agentic subject,

while she remains its passive object. But in the phrasing *se acerca el día* (the day approaches), Julia herself is not approaching the day in which the building falls. The day in which the building falls is approaching her. Time, in her rendering, is not organized around her position in the world, in what might be understood as a temporality that orients itself around the experience of a central individual; rather, time is *happening to her*, something apparent through the presence of the slowly falling building next door. It—and so she—remain within the time of the earthquake.

TOUCHED BY DEEP TIME

It is common to hear that someone *se queda tocado por el susto* (stays with the fright). They are, in a very material sense, stuck in that ongoing moment. While this might seem like a local interpretation of post-traumatic stress disorder, if anthropologists are to take their interlocutors as theorists—as I am trying to do—rather than data points (Bonilla 2015, xvii), we would have to accept that the term *post-traumatic stress disorder* is inappropriate, because some people in Mexico City remain in the time of the earthquake. They are not only in human time anymore; the *post* of *post-traumatic* is plotted on the wrong calendar. Rather than their affliction being induced by a traumatic experience and a fear of future earthquake events, people who are *tocado* fear the processes initiated during the earthquake and carried forward by sinking soils and slippery states, a form of seismic time that requires a seismic event—but is not reducible to it. Neither "slow violence" (Nixon 2011), nor a spectacular sublime (Masco 2004), neither interface nor excess, to be *tocado* is to be inundated by barely perceptible processes that point to a single force, closing its grip around the person noticing them, while the city beyond continues as normal.

I have described *tocado* as an earthly seasickness. This is not a metaphor. Seasickness is induced by the sea's motion, a perceptual incongruity that stresses the brain, inducing nausea and heightening other senses, especially smell. The form of "somatic knowing" (Shapiro 2015) demanded by being *tocado* constitutes a state of being similarly overwhelmed with motion—though that of the Earth: undulating surfaces, cracking walls, widening gaps, and sinking foundations. Those who feel compelled to notice these signs become fearful of the processes they index: they feel themselves enveloped in something that happens *all the time, all the time, all the time*. The inevitability of the end toward which this motion points inflects these indeterminate markers of change with an uncertain urgency, impelling temporal questions like "Is this new?" and "How long has it

been like that?" But there are also questions like "How long do we have left?" and "When could we be certain?" These processes and questions contain someone who is *tocado* in a geological present, and they find themselves irretrievable from the moment of the earthquake, which continues all around them.

The "real" cause of being *tocado* in Mexico City is an earthquake in Mexico City. This is not to say that it is a culture-bound syndrome, but rather an environmental illness produced by the Valley of Mexico: its social history, its geological past, and the form of statecraft that has emerged there over the past few centuries. And while recognized in Mexico, being *tocado por el susto* is not medical; it is familiar, but humiliating, and largely elicits only pity. Akin to other afflictions that blur mind, body, and environment, being *tocado* is an issue as much epistemological and social as it is physiological, demanding new ways of knowing and new forms of proof that sit "at the very limit of the phenomenal" (Massumi 2005, 43). Borne at a specific interface of lively earths and slippery architecture, it is to somatically register a destructive geosocial history, like the formaldehyde exposure of Shapiro's (2015, 387) "chemical sublime" is to "apprehend the costs of late industrial infrastructures." But while diffuse causes like formaldehyde poisoning are too minute to constitute anything recognizably medical, the cause of being *tocado* is too vast and distributed for recognition. Those affected are trapped in the time of the earthquake, embodying a geological scale distinct to Mexico City.

What is the cure for being *tocado*? Can someone cure their earthly sickness, much like a person will get their "sea legs" to overcome seasickness? Many people in Mexico City perceive an earthquake as a shock, but they don't stay with it. Yet for those who *se quedan tocados por el susto*, few remedies appear to exist beyond embarrassed, wearying management. The political and geological forces that cause, exacerbate, and prolong earthquakes endure, so what might have been a sudden shock has become both their permanent condition (cf. Choy and Zee 2015) and, perhaps, that of the city. People who are *tocado* can only hope that the building holds, that the next earthquake is not strong, or that it strikes while they are outside. Until then, there is not much more than *un bolillo p'al susto*.

ABSTRACT

In Mexico City, earthquakes are so frightening that they make residents sick. Sometimes referred to as being tocado *(touched), the illness might be considered part of the "culture-bound syndrome" known as* susto *throughout the Spanish-speaking Americas, where acute experiences of shock—such as being trapped in a shaking*

building—induce chronic physiological outcomes. Instead of explaining the illness as an idiom of social distress or a cultural interpretation of a biomedical affliction, I suggest we might better understand tocado*'s symptomology by following the fright itself. People who are* tocado *fearfully attune their senses to the signs of seismic risk—puckering potholes, sidewalk fissures, building subsidence, cracks in apartment walls—and develop an embodied apprehension of the ongoing geophysicality of their worlds. We might thus understand being* tocado *as being sick with the everyday presence of deep time.* [susto; earthquake; architecture; time; indeterminacy; corruption]

RESUMEN

En la Ciudad de México, los terremotos son tan aterradores que enferman a los residentes. A veces se le conoce como "tocado/a/e", la enfermedad podría considerarse parte del "síndrome de cultura" conocido como "susto" en Hispanoamérica, donde las experiencias agudas de shock, como estar atrapadas en un edificio tembloroso, induce resultados fisiológicos crónicos. En lugar de explicar la enfermedad como un idioma de angustia social o una interpretación cultural de una aflicción biomédica, sugiero que podríamos entender mejor la sintomología de estar tocado siguiendo el miedo en sí. Las personas que están tocados sintonizan con miedo sus sentidos con los signos de riesgo sísmico (baches en crecimiento, fisuras en la acera, edificios de hundimiento, grietas en paredes de concreto) y desarrollan una aprensión encarnada de la geofísica de sus mundos. Podríamos entender que el tocado está enfermo con la presencia cotidiana del tiempo profundo. [susto; terremotos; arquitectura; tiempo; incertidumbre; corrupción]

ZUSAMMENFASSUNG

*In Mexiko-Stadt sind Erdbeben so beängstigend, dass sie die Bewohner*innen krank machen. Die Krankheit, welche manchmal als* estar tocado *(berührt sein) bezeichnet wird, kann als Teil des in den spanischsprachigen Amerika als* susto *bekannten "kulturgebundenen Syndroms" bezeichnet werden, wo akute Schockerfahrungen chronische physiologische Folgen auslösen. Anstatt die Krankheit als kulturspezifischen Ausdruck für soziale Belastung oder als kulturelle Interpretation eines biomedizinischen Leidens zu erklären, schlage ich vor, dass wir die Symptomatologie von* estar tocado *besser verstehen, wenn wir dem Schock selbst folgen. Menschen, die* tocado *sind, richten ihre Sinne ängstlich auf die Anzeichen eines seismischen Risikos aus—Schlaglöcher, Risse in Bürgersteigen, Gebäudeabsenkungen, Risse in Wänden—und entwickeln eine körperliche Wahrnehmung der anhaltenden Geophysikalität ihrer Umwelt. Auf diese Weise erkennen wir, dass* estar tocado *eine Art Leiden an der alltäglichen Präsenz von Tiefenzeit ist.* [susto; Erdbeben; Architektur; Zeit; Unbestimmtheit; Korruption]

NOTES

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1. Spanish is a gendered language, so *tocado* is the masculine form of the word, while the feminine form is *tocada*, and a non-gendered form would be *tocade*. For simplicity's sake, I am using *tocado* as the generic plural, as my interlocutors do, but whenever I do so, it should be read as *tocado/a/e*.
2. I use the slang *chilangos* to refer to residents of Mexico City.
3. *Nervios* is another illness that anthropologists have subjected to interpretation; see Low 1981.
4. *Pinche* is a difficult slang word to translate; it literally means "trickster," but it's used like the adjectival "fucking."
5. I haven't translated *jefe de Gobierno* because I don't really know how: it's more than a mayor, but not quite a governor, reflecting Mexico City's status as a federal district, rather than a city or a state.
6. According to the Instituto de Verificación Administrativa record no. INVEADF/OV/A/440/2015. Last accessed April 11, 2025, available at https://miedificio.contralacorrupcion.mx/assets/docs/viaducto_doc2.pdf
7. In this context, this slang expression means "with great intensity."

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