Our Voice

In a 1919 essay, Sigmund Freud said that individuals experience the uncanny (*unheimlich*) differently but that it can be defined as something terrifying, long familiar to us. In this short essay, I want to underline not aesthetic examples from fiction, which is what Freud alluded to, but rather the experience of the uncanny, and very especially, déjà vu, the anxiety we feel when confronted with the uncanny evoked by a return to something similar.

That is exactly what happened to us on September 19, 2017. Our memories of how our day-to-day existence was broken apart in the past century, a kind of urban legend for young people who had only heard their elders' stories, were distant indeed. And every year for decades, we would more and more reluctantly attend earthquake drills, feeling that now what was breaking up our existence were the drills themselves.

The alarm sounds; the drill begins. And we don't even take a moment to remember what we were doing at 7 in the morning that day in 1985.

But then, hours later, Freud's uncanny feeling floods our bodies with goose bumps; anxiety, our memory hyperbolized. Because the alarm doesn't sound, and yet the earth moves. And amidst the commotion, we're grateful to be able to remember —thanks to the drill— where the safe areas are, those columns we hold onto as we listen to the walls creaking, the glass breaking, for elastic minutes that seem like hours and where something similar has returned to spark fright, a déjà vu that, as always, has traces of the implausible.

This issue of *Voices of Mexico* is exceptional for many reasons; first, because it is monographic: it covers the two September 19 that have indelibly marked both Mexico and Mexican society. Second, it is the magazine's longest issue ever published. Third, among the many voices presented here, a large number evidence the wealth and diversity of the UNAM, and specifically its humanities subsystem. This is because, from their specialties, both men and women researchers have carried out sociological, political, economic, urban planning, communications, cultural, and even literary analyses of what the earthquakes have taught us about the city and the country, as well as the society inhabiting them. But it also offers testimonies and art that complete that multifaceted vision of the voices surrounding the earthquake.

This issue of *Voices of Mexico* reflects on the date that will continue to be an uncanny coincidence and that is an x-ray of the disaster and what has come after it. We thank all the authors who contributed to building a very complete panorama that at the same time registers our university memory, our collective memory.

Graciela Martínez-Zalce
Director of CISAN
May 2018

◂ Photo by Daniel Ojeda.

© Jesús Verdugo/Cuartoscuro.com

Sign, left: And where's the money from #fuerzamexico? Sign, right: Earthquake victims united.

Margarita Favela Gavia*

Politics Looks at the Earthquake Or the Earthquake Looks at Politics?[1]

Looking at 1985 and 2017

The September 19, 2017 earthquake inevitably reminds us of the other earthquake 32 years before; that was a turning point for part of society, among others, a group of social scientists. Therefore, we tend to look at the more recent one from the same standpoint: we want this earthquake to be a new turning point in the country's social and political life.

The September 19, 1985 earthquake was exceptional because the country had not recently seen a massive mobilization of the citizenry like the one that emerged to help the victims. But it was even more remarkable because it reflected the vitality of society, which organized autonomously and "spontaneously" in view of the paralysis of both local and federal governments, which could do nothing more than deny the magnitude of the calamity they were confronting.

In contrast, the population so resoundingly organized and carried out rescue work and support for those affected that its innumerable demonstrations of heroism and solidarity amazed people both here and abroad. In fact, this response became almost a myth that ennobles and empowers us as part of our nation.

Some have tried to see in these expressions of social vitality, full of altruism and generosity, the main forces

We tend to see in the 1985 earthquake a tectonic shift that freed up long-contained social energy, opening the way for the country's transformation.

* Researcher at the Center for Interdisciplinary Research in Sciences and the Humanities (CEIICH), UNAM; dfavelag@unam.mx.

behind the political transformations of the following years, mainly in Mexico City. Among the latter are the city's change in status and the creation of institutions that guarantee our rights as full citizens. But that is not all: also numbered among the transformations is the germ of the transition that finally led to parties alternating in office and in the legislature. So, we tend to see in the 1985 earthquake a tectonic shift that freed up long-contained social energy that opened the way for the country's transformation.

Ginnette Riquelme/Reuters

And that is what happened. But I think we need to identify the components of that process to be able to understand what occurred and what may be emerging today, after an event similar to the one a little over three decades ago.

In 1985, in addition to the impressive solidarity of the rescue workers and brigades in the moments immediately after the earthquake, the backbone of the victims' undeniable victory over the tragedy they were facing —but above all, their victory over the many and truly ignominious attempts by both government and business community to take advantage of their precarious situation to gain huge political and economic advantages— was the collective strength that was constituted and exercised as a single voice. That possibility was based on the already-existing organization among many of the most hard-hit groups: the neighborhood associations in the Guerrero, Morelos, and Tepito areas of the city; the Coordinating Committee of Tlatelolco Residents and those of many other popular neighborhoods, members of the National Coordinating Committee of the Urban Popular Movement (Conamup), which were the basis and the example for residents of the Doctores, Roma, Condesa, Juárez, and Cuauhtémoc Neighborhoods to work together. Jointly, they took action until they founded the United Coordinating Committee of Earthquake Victims (CUD). This organization weathered an arduous negotiation, plagued with moments of critical confrontations with government representatives, that managed to conceive and put into practice a Housing Reconstruction Plan that fulfilled a large part of the victims' demands. It was that victory's spectacular novelty and scope that created the basis for a citizenry rooted in experience in Mexico City.

Governmental actors continue to have fundamentally the same intentions as in 1985: to prevent citizens' organization and achieve political advantages and economic benefits.

What Is Happening Now?

In a certain sense, we see actors who are similar but also different. Governmental actors continue to have fundamentally the same intentions: to prevent citizens' organization and achieve political advantages and economic benefits. Basically, those affected by the earthquakes mainly want justice and to recover their homes and belongings. However, in addition to that part of civil society that once again spontaneously came out to generously offer solidarity and support to the victims, another part of society wants to ensure that the resolution of the emergency does not reinforce local political bosses or guarantee impunity, much less cover up misuse of funds and further illicit enrichment of individuals.

Now what we are seeing is that, given the characteristics of the event and the real estate speculation rampant in Mexico City, like the rest of the world's great

Information is manipulated differently than in 1985, when data was lacking. Today, the strategy is the reverse: putting out a multiplicity of versions, turning the tragedy into a media show.

globalized cities, particularly since the beginning of the twenty-first century, the earthquake victims are atomized, and, generally speaking, lack organizational experience in neighborhood groupings. They also do not have what is required to deal with a situation like they are experiencing now of suddenly being completely dispossessed. That is why, as they create those forms of organization to make a common front that will allow them to increase their negotiating clout *vis-à-vis* the realtors and the governments, the tasks of non-governmental organizations are crucial. Thirty-two years ago, they didn't exist, or they were very incipient and inexperienced; today, they are a real force that, by defending the interests of third parties, also defends its own.

The "third party" participation is becoming fundamental in demanding a citizens' solution to the emergency from the get-go. And this is a confrontation, a relationship of forces, more or less peaceful or violent according to the circumstances and the reasons involved, between different projects. As I was saying, what matters above all to those heading public administration is that the critical moment be gotten over as soon as possible, that calm returns, that we return to normalcy, to the daily routine. And this is not only because that way, the society that mobilized will be demobilized and once again be manageable and governable, but also because, if the magnitude of the tragedy is seemingly eased, the legitimacy of the demands decreases in the same proportion. That is, we return to "politics as usual."

This means that the earthquake victims' demands will be treated like all other requests from the citizenry. That is, they will be sent on up the line of the bureaucracy to be dealt with each in turn. Meanwhile, as the indignation at the "marks of corruption" becomes blurrier together with the marks themselves, so do the victims' demands and the support from society lose strength. That is why "removing" the rubble is urgent, as is "facilitating" reconstruction. This has been done by pushing not one, but several plans for support with which the federal and local bureaucracies shuffle through possibilities, determine needs, propose mechanisms, and play around with amounts that are always ephemeral and provisional; their main intent is to disconcert, distract, and confuse not only those directly affected, but also us "third parties," the entire public.

Information is manipulated differently than in 1985, when data was lacking. Today, the strategy is the reverse: putting out a multiplicity of versions, turning the tragedy into a media show with fleeting declarations, as society continues to wait for "official figures" to be able to construct at least minimal certainties to operate by. But, perhaps this is the moment for breaking with this perverse game and continuing with the experience that platforms like #Verificado19s (September 19 Verification) or #Epicentro (Epicenter) began when they created their own data bases to organize rescue efforts, the stockpiling of public donations for the earthquake victims, and distribution of those donations. Initiatives like "Nosotros" (Us) or #PartidosDenSuDinero (Parties Give Your Money), or lawyer Luis Manuel Pérez de Acha's bringing charges of homicide against those responsible for 48 collapsed buildings should continue and do it autonomously,[2] not only as proposals to monitor the situation, but also as spaces for building autonomy for the citizenry's activity.

The unequal powers confronting each other today are even more unequal when we look at "rural" areas, both in Mexico City (Xochimilco and Tláhuac) and in the states of Puebla, Oaxaca, and Chiapas. There, the lack of organization is more visible and "politics as usual" does nothing but deepen inequality and the precariousness of the lives of those who have the least.

If we want this September 19 to be a watershed as it was in 1985, we have to look around us and work with those whose voices we have not heard up until now. VM

Notes

1 A previous version of this text was presented at the seminar "Between the Earth that Shakes and a Society Shaken to the Core," held October 3, 2017, at the UNAM's CEIICH.

2 "Autoridades cometieron homicidio culposo tras sismos: Pérez de Acha," *Oaxaca político*, October 4, 2017, http://oaxacapolitico.com/cdmx/seguridad/autoridades-cometieron-homicidio-culposo-tras-sismos-perez-de-acha. [Editor's Note.]

Earthquake victims organize to protest non-response by government to their demands and needs.

Jorge Cadena Roa*

Anti-Politics and Post-Truth
Earthquakes and Knowledge With No Consequences

If we had to give the September 2017 earthquake a name like we give hurricanes, we would have to call it "IToldYouSo," because it brought us face to face with what we already knew: corruption, violations of the building code, orders to shut down construction sites that were never carried out, and other acts by the authorities that are nothing new. A report by the UNAM Seismology and Engineering Groups (GSI) reads, "A serious problem is known to exist due to non-compliance with the norms stipulated in the current building regulations."[1]

Seismic Certainty

We also knew that Mexico City is not in a seismic risk area, but in a seismic certainty area, due to the interaction of five tectonic plates: the North America, Cocos, Pacific, Rivera, and Caribbean Plates. Some earthquakes

* Researcher at the UNAM Center for Interdisciplinary Studies in the Sciences and Humanities (CEIICH); cadenaroa@gmail.com; https://www.researchgate.net/profile/orge_Cadena-Roa.

are caused by inter-plate movements (those that happen at the border of two tectonic plates); others, like the recent September 19 quake, are intra-plate (those that take place within a tectonic plate).[2] The National Seismological Service (SSN) reports an average of 40 quakes a day.[3]

We have no doubt, then, that Mexico City and other places throughout the country will experience earthquakes again, though we do not know when or where, or how intense and what kind of damage they will cause. We do know, however, that the damage will depend on the distance from the quake's epicenter and the kind of constructions and terrain that exist. Depending on the latter, certain areas face greater risks than others, and that should be reflected in the kind of constructions allowed there. "We all know," reiterates the GSI report, "that a large part of Mexico City is built on soft sediment of what used to be the lakes in the valley. This sediment amplifies the seismic waves in Mexico City enormously,"[4] affecting, among others, the Roma, Condesa, Downtown, and Doctores Neighborhoods. There, the seismic waves can be magnified up to 50 times more than on solid ground. The movement also lasts much longer in areas with soft sediment. That means that "the majority of damage [caused by the September 19, 2017 earthquake] is to be found in the western part of the sediment basin, in the transition area, and part of the soft terrain, very near the western border."[5] It is so clear that we knew this that it is fully documented in the risk atlases,[6] which were not widely known because certain people thought that their dissemination could affect land values and the interests of real estate businesses. Who would buy buildings in transition areas? But even if there were builders and buyers for these areas, shouldn't the authorities prohibit construction or set more stringent standards for building there?

So, *we all knew*, for all the good it did. This is knowledge with no practical consequences. That is why this earthquake and other disasters are not purely and simply natural phenomena: they are also social and political disasters, worsened by the irrational disconnect between means and ends. What we know does not affect what we do; risks and costs are not reduced, and human and material losses, pain, and suffering are not prevented.

We have no doubt that Mexico City and other places nationwide will experience earthquakes again, though we do not know when or where.

Anti-Politics

The response of political parties to the emergency, victim rescue, the care for the homeless, and reconstruction became politicized —in the bad sense of the word. This was not something these bodies debated in order to find the best ways to intervene; rather, the debate was carried out in terms of "office politics," or what you mean when you say "somebody in the office wants to screw me."

Amidst the emergency and the pain, some parties tried to take advantage of the moment to sling mud at the others. The Institutional Revolutionary Party (PRI) proposals to reduce public funding to all political parties and eliminate Chamber of Deputies seats elected by proportional representation are a clear example. They were not even viable since both these rights are guaranteed in the Constitution (the former in Article 41, Section II, Clause *a*; and the latter in Article 52).[7] The federal electoral process for which they were proposing those changes had already begun a few days before the earthquake, again, making them inoperable.[8]

If the proposals were unviable, what purpose did they serve? Discounting the possibility that they were motivated by ignorance, the only remaining possibility is that the motivation was bad faith. The intention was to stir up the generalized anti-party feelings and then blame the others for the measures not being implemented. The political merit would be for the proponents; the costs would fall to those who opposed the measure, for whatever reason. We should remember that the PRI proposal that the parties renounce part of their funding and deposit it in a fund operated at the discretion of the president of Mexico sparked the demand for the resignation of the political commentators of the first edition of the NRM Comunicaciones media corporation radio news program *Enfoque* (Focus).[9]

So, the PRI proposals were not trying to solve anything; they only sought to discredit their political competition

and foster mistrust —already high in any case— without taking into account that this irresponsible attitude would only feed anti-politics thinking, thus shooting themselves in the foot. Fostering anti-politics thinking is very dangerous: it discredits institutions and opens up the way for personality- and caudillo-based, opportunistic, populist, messianic politicians. It fosters the belief that what the country needs are leaders whose personal characteristics separate them from the rest and who are capable of changing things by themselves. It ignores the fact that what exist in politics are not individuals, but groups; that in democracies, political parties continue to be indispensable for creating a national representation and filling out the branches of government. Increasing the discredit of politics, politicians, and representative institutions opens up the way to anti-institutional, authoritarian adventures. Anti-politics and the consequences of fostering it are widely known, but we act as though they were not.

Post-Truth

Anti-politics is linked to knowledge because we live in an era of post-truth, in which political groups and other interested parties knowingly lie, with no attempt to back up their statements with evidence, only in seeking to manipulate in their favor the existing widespread resentment about the undesired effects of globalization and other issues.

The link between anti-politics and post-truth prompts us to look at the institutions dedicated to producing and disseminating scientific knowledge, culture, and innovation. These are, of course, the universities, which worldwide —but particularly in Mexico— are the institutions that are most trusted by the public. In times of anti-politics and post-truth and manipulation of information, grievances, and resentment, universities and academics have the duty and the commitment to base their statements on data and evidence, unmask lies, and make viable proposals.

These activities, which are opposed to anti-politics and post-truth, can make universities and their academic personnel uncomfortable for society. We can do no less than note the denunciations about what has been called the "master fraud," in which high-ranking officials from some universities are accused of colluding with federal authorities to commit multi-million-peso fraud.[10] We must demand a thorough investigation of these cases and that they be prosecuted to the full extent of the law because, when not proven or clarified, they undermine public confidence. However, it is precisely now, in the time of campaigns and elections, of anti-politics and post-truth, that the attacks on universities and some academics in particular ratchet up. The *Enfoque* radio news program incident can be considered censorship of university academics because the three people involved (Leonardo Curzio, María Amparo Casar, and Ricardo Raphael) are academics who were commentators in different media. What should be done in the face of threats to universities and academics? We must protect their prestige and the trust the public has placed in them.

The Game Must Go On

How can the distance between the political class and society be remedied? Here, the ball is in society's court. Certainly, several volleys have been sent into the political class's court, but they either stay there or they are returned with the balls deflated, stopping the game. Despite this, society must not allow this to stop the game, leaving things as they are. The game must go on; the changes society wants must be made. It was civil society that proposed the Anti-corruption System, welcomed as a transcendental achievement. Nevertheless, the system is not operating; we do not have an anti-corruption prosecutor.

We are entering an electoral period, but the special prosecutor for electoral issues was deposed October 20 for "violating the institution's code of conduct" while investigating the alleged funding by the Brazilian company Odebrecht of President Enrique Peña Nieto's election campaign. In mid-December 2017, a new special prosecu-

> The response of political parties to the emergency, victim rescue, care for the homeless, and reconstruction became politicized —in the bad sense of the word.

> The PRI proposals were not trying to solve anything; they only sought to discredit their political competition and foster mistrust, without taking into account that this would only feed anti-political thinking.

tor was appointed, but nothing has been said about the investigation that had been underway. As I write this article, we continue without a federal attorney general. The previous one resigned October 27, 2017 amid the process of designating the new federal prosecutor.[11] Corruption, criminality, and impunity are three of the problems most keenly felt by the population, and we have no prosecutors to prosecute them. This shows that the citizenry's demands are being received and responded to but incompletely and without any effect in practice.

Corrupt public officials debase politics and public service because things like impunity have allowed these activities to turn into something probably more lucrative than any in private business, with the additional advantages that they require very little investment and involve minimal risk. In politics, public officials can amass incalculable fortunes in only a few years. As long as this continues, as long as politics continues to be an activity in which you can steal with impunity, the most ambitious and unscrupulous individuals will continue to be attracted to it; and we will continue to be governed by a "strongmanocracy," the worst of the worst.

The Immediate Future

Very probably Mexico City will experience a bigger earthquake than the September 19, 2017 event. The GSI report states that "under the coast of Guerrero state . . . is a 250-kilometer-long seismic gap . . . where an earthquake of over 8 [on the Richter scale] could occur. This segment is about 300 kilometers from Mexico City."[12] That we know. Now, if we want to reduce the loss of life and property after a quake of that size, we must assume the consequences of what we know, which is no small thing. The task before us is to change from a country where knowing something is more or less useless, to one where knowledge informs and shapes private and public decisions. VM

Notes

1 Grupos de Sismología e Ingeniería de la UNAM, "Qué ocurrió el 19 de septiembre de 2017 en México," September 23, 2017, p. 8, http://usuarios.geofisica.unam.mx/cruz/Nota_Divulgacion_Sismo_19092017.pdf.

2 See José Pablo Espíndola, "Sismos interplaca e intraplaca, ¿cuáles son las diferencias?" Science and Health Section, *El Universal*, October 20, 2017, http://www.eluniversal.com.mx/ciencia-y-salud/ciencia/sismos-interplaca-e-intraplaca-cuales-son-las-diferencias. [Editor's Note.]

3 Grupo de Trabajo del Servicio Sismológico Nacional, "Reporte especial. Sismo del día 19 de septiembre de 2017, Puebla-Morelos (M7.1)" (Mexico City: GTSSN, UNAM, 2017), p. 7, http://www.ssn.unam. mx/sismicidad/reportes-especiales/2017/ssnmx_rep_esp_20170919_Puebla-Morelos_m71.pdf.

4 Grupos de Sismología e Ingeniería de la UNAM, op. cit., p. 3.

5 Ibid., p. 8.

6 See http://www.atlas.cdmx.gob.mx/zonificacion_sismica.html.

7 Article 41, Section II, Clause a) reads, "Public financing for their regular activities will be fixed annually, multiplying the total number of citizens registered on electoral rolls by 65 percent of the daily value of the Measuring and Update Unit." Article 52 of the Constitution reads, "The Chamber of Deputies will be composed of 300 deputies elected according to the principle of relative majority . . . and 200 deputies elected according to the principle of proportional representation." *Constitución Política de los Estados Unidos Mexicanos,* https://www.juridicas.unam.mx/legislacion/ordenamiento/constitucion-politica-de-los-estados-unidos-mexicanos#10581 and https://www.juridicas.unam.mx/legislacion/ordenamiento/constitucion-politica-de-los-estados-unidos-mexicanos#10597.

8 According to Article 225 of the General Law on Electoral Institutions and Procedures (LEGIPE), "The ordinary electoral process begins in September of the year prior to election year and concludes with the decision and declaration of validity of the election for the president of the United Mexican States." LEGIPE, January 2017, https://www.juridicas.unam.mx/legislacion/ordenamiento/ley-general-de-instituciones-y-procedimientos-electorales.

9 *Enfoque* news program commentators Ricardo Raphael and María Amparo Casar and the program director, journalist and researcher Leonardo Curzio, resigned after attempts to censor them and to protest the pressure they were subjected to after they had stated that the proposal by the PRI and other parties to earmark electoral funds for reconstruction were unviable and illegal and intended to fool the public and make political hay in a deliberately unethical manner. [Editor's Note.]

10 "La estafa maestra. Graduados en desaparecer dinero público," *Animal político*, https://www.animalpolitico.com/estafa-maestra/.

11 Mexico's prosecutorial system recently changed from being headed by a presidentially-appointed attorney general to a Senate-appointed, autonomous federal prosecutor. However, the process bogged down over the debate about whether the outgoing attorney general should automatically become the first federal prosecutor. [Translator's Note.]

12 Grupos de Sismología e Ingeniería de la UNAM, op. cit., p. 9.

Laura B. Montes de Oca Barrera*

The Earthquakes' Social And Political Rubble

Mistrust of Government Institutions

Like any unforeseen and traumatic event —especially those that have potentially disastrous consequences for our lives—, the earthquakes that hit Mexico in September last year shook not only the tectonic plates underneath the ground. They also shook the fractured social and political foundations of a country marked by issues as diverse as inequality, poverty, corruption, and insecurity. The September 7, 19, and 23, 2017 earthquakes, in addition to causing physical destruction in 9 states and 699 municipalities, revealed unresolved problems underlying Mexican society, problems that have been accumulating for years, waiting to be released like the energy freed by seismic shock waves. In the following pages, I present some reflections about the difficult social and political issues —the rubble— that these earthquakes have made us turn and look at again.

A Critical Look at the Rubble

We could look at the positive side of the issues sketched below, seeing the glass as half full, highlighting, for example, the role of civil society organizations in reconstruction, or emphasizing those cases —exceptional or not— in which victims were rescued from the rubble. However, it is also useful to maintain a critical perspective in order to distance ourselves from simplistic euphemisms and political acquiescence. To change things, we must first recognize problems; that is what enables us to think

* Researcher at the UNAM Institute for Social Research (IIS); lbmontesdeoca@sociales.unam.mx.

about potential solutions. The goal of the reflections that I propose below is to look at the social and political rubble left behind by the earthquakes in order to recognize our issues as a society, and, from that point of departure, build the capacity to generate changes.

Mistrust of Institutions

Numerous opinion polls and sociological analyses amply document that distrust contaminates the government-citizen relationship in Mexico.[1] Citizens do not trust their governmental and state institutions. Although this distrust can have a productive function, whereby civil society acts like a "watchdog" over government, relationships based exclusively on distrust may also lead, as we will see below, to destructive apathy and citizens' disenchantment.

We find evidence of productive distrust in initiatives that civil society organizations took to monitor the post-earthquake reconstruction process. A couple of weeks after the quakes, and after having exhausted actions to rescue victims and care for the injured, civil society began floating initiatives to monitor reconstruction efforts. Virtual platforms such as "Epicentro," "Reconstrucción," and "Fuerza México," led by civic, professional, academic, and business organizations,emerged to make reconstruction proposals and to monitor government actions. If we stop to take a look at the course of action and proposals of one of these initiatives, Epicentro, we find indictors of mistrust of government institutions.

Epicentro, an initiative launched by some 30 organizations at the start of October 2017, within weeks had doubled in size to involve some 60 organizations. It defines itself as a "civic platform that seeks to promote and coordinate citizen participation for national reconstruction and the rebuilding of trust between society and government."[2] This definition speaks clearly of a lack of trust in public institutions. Epicentro's proposals, like those of other civic initiatives, are grounded in the citizenry's distrust of the work of governments and the state.

Virtual platforms such as Epicentro, Reconstrucción, and Fuerza México, led by civic, professional, academic, and business organizations, emerged to make reconstruction proposals and to monitor government actions.

The citizens who have raised their voices in this initiative do not trust the way in which public resources are used. One of the primary goals of the Epicentro platform is to monitor the destination and use of public resources and, by doing so, make transparent the methodologies and data relating to reconstruction. Nor do these citizens trust governmental procedures to deal with social problems. That is why they explicitly proposed that reconstruction should be based upon the needs of the affected communities —as if there was any reasonable alternative. This statement of the obvious reveals that citizens distrust, from experience, governmental work: many public programs have been criticized for the distance —and even the contradiction— that tends to exist between their design and the real needs of the target population.[3] Finally, as I illustrate below, citizens active with Epicentro do not simply distrust government institutions; they actively claim that government approaches to emergencies such as those caused by the earthquakes tend to reproduce a vicious cycle of poverty-disaster-poverty.[4]

Lack of Citizen Participation

As mentioned above, distrust of public institutions might very well encourage forms of citizenship that lead to an absence of engagement in public life. In Mexico, about 60 percent of eligible citizens participate in elections.[5] But, beyond this minimal participation, the bare bones of representative democracy, citizens are not interested in or motivated to engage in activities oriented toward the common good.

It is true that since the 1980s —and particularly following the major earthquake of 1985— citizens have started to organize to try to fill in the holes that state activities are no longer able to cover. However, this impulse to collective action has not turned into new institutional patterns, nor has it set up a new social contract. During the earthquakes of last September, members of Mexican civil society rushed into the streets to work together and help others. However, it seems that it is only in the face of tragedy that Mexicans unite, cooperate, and actively participate to solve what harms others and ourselves.

Only in such contexts does a spirit of solidarity emerge, a spirit that we forget in daily life, marked by individualism and stress, and in everyday politics, filled with brawls, lies, and omissions.

As happened after the earthquake of 1985, in 2017 once again Mexican civil society went above and beyond all expectations to try to help the victims and the injured through various means. Whether this impulse was part of the altruistic side of human nature (selflessly helping others) or psychological self-interest (to help oneself feel better in the face of widespread tragedy), the fact is that citizen participation flowed freely, especially in the first days and weeks after the earthquakes. The downside was that, once life started returning to normal, especially for those who had not been directly impacted by the tragedy, participation ebbed. After a month, everything seemed to return to normal. Yes, to a normality characterized by disinterest, apathy, and non-participation.

The Rubble of Authoritarianism

Distrust and lack of civic participation are not isolated phenomena. They have been nurtured by a political culture emanating from a government that, for decades —or centuries, if we go back to the shaping of the Mexican state— based itself on the building blocks of authoritarianism: elitism, lack of transparency, patron-client relations, dependency, and corruption.While in some ways these building blocks have been falling apart in recent decades, in others they have been resilient, because we have not been able to construct solid democratic foundations to put in their place.

Simply by browsing through the news since the earthquakes hit, it is easy to find cases of political opportunism, in which authorities or parties have tried to take advantage of the tragedy for political gain. After September 19, in response to citizens' demands, we saw party representatives competing in a grotesque precursor to the elections to see who would donate the highest proportion of their taxpayer-funded 2018 campaign support to reconstruction efforts. As if in an auction, figures began being tossed around in a disrespectful game of "who will give the most?" If one commited to donate 25 percent, then the next one bid 50 percent, until someone threw out the idea of 100 percent. All this posturing was without any realistic foundation, since public funds set aside for political parties' campaigns cannot legally be redirected to earthquake victims or reconstruction. (Mexican electoral laws prohibit using funds for activities other than those for which they are earmarked.)

Another case that illustrates this authoritarian political culture is the patron-client, personalized, and welfare-dependency aspect of the "help" given to earthquake victims. When Mexico's president, a state governor, or another state official personally delivered National Disaster Fund cards (intended to support the rebuilding of damaged or destroyed residences), such resources were positioned as a "favor" or an "act of charity" rather than as a right. Many families who lost their homes, particularly those in rural and semi-urban areas, were already living in impoverished circumstances. Such families experience a vicious cycle whereby their socio-economic marginalization is reinforced by the disrespect of their political rights by state actors, leaving them as easy prey for patron-client relations designed to preserve dependency. In the face of such "generous actions," the disaster victims feel grateful toward the public figure (the patron, the boss) who gives them "help," a situation that only leaves them even more vulnerable and dependent. Such victims are doubly violated: once by their tragic circumstances and again by their rights not being recognized.

The final building block of authoritarianism that we find amidst the rubble of the recent earthquakes is corruption, which has further complicated the reconstruction process. There is no shortage of examples of officials who delivered food and supplies donated by civil society stamped with the logo of a political party or government agency. Citizens reported such violations in the states of Puebla, Morelos, Michoacán, and in Mexico City. Prosecutors have formally investigated seven public officials and one congresswoman for electoral crimes associated with this misleading practice.[6] Likewise, corruption reared its head in the actions of other civil servants. One case

During last September's earthquakes, members of Mexican civil society rushed into the streets to work together and help others. However, it seems that it is only in the face of tragedy that Mexicans unite.

The final building block of authoritarianism that we find amidst the rubble of the recent earthquakes is corruption, which has further complicated the reconstruction process.

© Adolfo Vladimir/cuartoscuro.com

was reported in the town of Jojutla, Morelos, one of the places most severely affected by the earthquakes, where municipal workers unjustifiably demanded payment of Mex$6000 for the demolition of damaged residences.[7]

Concluding Thoughts

The examples presented in this article are only a small sample of those that illustrate that we continue to reproduce an authoritarian political culture that does not allow us to build solid foundations for a truly just and democratic society. Undoubtedly, as suggested by members of civil society organizations who participated in the Civil Society Dialogue: Community-Led Reconstruction,[8] after the 2017 earthquakes, we face a major challenge as a country. That challenge is to remove the rubble, not only the physical aftermath of the earthquakes, but also the social and political mess that we keep reproducing. After the earthquakes, and in the face of the rubble, we need to rebuild socially and politically. The challenge is not simply to repair damaged homes and buildings, but rather also to reconstruct the community, its social fabric, its economic and productive systems, its cultural circuits, and its spaces for socialization. At the same time, we must also promote political reconstruction, both in terms of political-institutional structures, and in terms of the forms of government-citizens relationships. VM

Notes

1 See, for example, Latinobarómetro reports (http://www.latinobarometro.org/latContents.jsp) and the Country Report published by the Federal Electoral Institute and El Colegio de México in 2014 (http://www.contraloria.cdmx.gob.mx/docs/InfPaisCalidadCiudadania.pdf).

2 Transparencia Mexicana, "#Epicentro: Plataforma cívica para reconstrucción social con integridad," October 1, 2017, https://www.tm.org.mx/epicentrocom/, accessed January 29, 2018.

3 Various programs seek to promote social development in Mexico, but their evaluations have not been encouraging. See, for example, Coneval, "Informe de evaluación de la política de desarrollo social en México" (Mexico City: Coneval, 2008).

4 Cohesión Social, "Lineamientos para la reconstrucción," October 18, 2017, http://www.cohesionsocial.mx/objetivos-y-causas/frente-a-pobreza-y-desigualdad/nuestras-propuestas/lineamientos-para-la, accessed January 29, 2018.

5 Integralia, "Primer reporte electoral 2018," http://integralia.com.mx/content/publicaciones/035/Primer%20reporte%20electoral%202018_VF.pdf, accessed in January 2018.

6 *Animal Político*, "Un alcalde, una diputada y un gobernador investigados por mal uso de víveres para damnificados," October 12, 2017, http://www.animalpolitico.com/2017/10/fepade-casos-uso-politico-viveres-sismo/, accessed January 30, 2018.

7 Benito Jiménez, "Piden moche de $6 mil por demolición en Jojutla," *Reforma* (Mexicao City), November 5, 2017, http://www.reforma.com/aplicaciones libre/preacceso/articulo/default.aspx?id=1250081&v=3&urlredirect=https://www.reforma.com/aplicaciones/articulo/default.aspx?id=1250081&v=3, accessed January 31, 2018.

8 This dialogue took place December 7, 2017 at the UNAM National School of Social Work, with the participation of organizations and affected communities. To read the minutes, see The Hunger Project Mexico, "Diálogos para la reconstrucción liderada por las comunidades," December 13, 2017, https://thp.org.mx/2017/12/13/dialogos-para-la-reconstruccion-liderada-por-las-comunidades/, accessed January 31, 2018.

Mario Leyva

Marcela Meneses Reyes*

Making Millennials
The Heroes of the Earthquake

It's true: when we all tried to go straight home to make sure our loved ones were safe, we were surprised at the number of cars stopping along the way to offer a ride to people stuck on the street desperately waiting for a bus or taxi to take them where they needed to go. You could see cars packed like sardines in a can heading toward big avenues, subway stations, *metro-bus* stations, and main thoroughfares, when in normal, everyday life, nobody would dare do that —"How can you invite a group of strangers into your car, with things as they are…?" Men and women of all ages were standing in the middle of intersections with broken stoplights directing traffic; people were blocking streets that had collapsed buildings with their cars to divert traffic and facilitate rescue efforts.

By 5 in the afternoon on that September 19, when I got to my home in the Narvarte neighborhood, the stream of young men and women going by was noticeable; they were hurrying toward the collapsed buildings armed only with surgical masks on their faces. Little mom-and-pop stores were besieged by customers buying gallons of water to take to the rescue areas. Hand-written signs reading "You can charge your phone here," "Free toilet," or "Earthquake donation collection point" were seen on the doors and walls of endless numbers of apartments, houses, and

* Sociologist and researcher at the UNAM Institute for Social Research (IIS); marcela.meneses@sociales.unam.mx.

businesses. Everywhere you heard "we need buckets, helmets, pick-axes, shovels, flashlights, batteries" to support the anonymous rescue workers who, having seen how the buildings where they themselves lived or worked, or where their neighbors or complete strangers lived, ran to dig into the rocks to get people out alive who had been trapped in the rubble. Desperation, fear, and hope permeated the air.

Little by little, night fell, and with it came a sharpening sense of uncertainty. Intermittent electricity and Internet access made it impossible to be up on what was happening in real time in the rest of the city; plus, they made it difficult to be in better contact with friends and acquaintances. "All that technology, and we end up here, scared to death, with a candle and a battery-run radio," a friend would write on his Facebook page.

In the darkness you could see the lights on the bicycles moving from one place to another carrying materials and tools. The quiet magnified the sounds of motorcycles and ambulance, fire-truck, and police car sirens, and at the same time forced us to look at ourselves as we hadn't for a very long time, to listen to each other, to hold each other, to share the sensation of finiteness. "And the police? And traffic cops? And security? And the official rescue teams? And timely, truthful news?" I asked myself through the hours, with no answer.

The next day, when some homes had electricity and Internet, what the day before was uncertainty now became an uncontrollable flood of information, much of it of doubtful origin and veracity. Individual or joint action by strangers taken in the first moments after the earthquake turned little by little into more organized activities by family members, friends, and contacts. The rescue brigades were better equipped; cars, pick-ups, and trucks with the sign "Support Vehicle" were adapted to transport rescue workers from one collapsed building to another, together with the food and tools needed, moving through the streets disregarding one-way signs, speed limits, or lanes reserved for other uses. Hundreds, thousands of food and tool collection stations were set up first, followed later by the collection of clothing and cleaning materials for earthquake victims. At supermarkets and little stores you could see dozens of families buying food to make traditional *torta* sandwiches on rolls, regular sandwiches, *chilaquiles*, rice pudding, bread, and coffee to feed rescue workers.

The media constructed an idea that would become a cliché: that young people were the main protagonists of the rescue efforts.

Everyone, men and women, dug deep for the best of themselves to offer support in whatever way was needed: restaurants closed their doors to customers to prepare food and distribute it to the rescue areas; hardware stores distributed their entire stock; bakeries donated rolls. I saw such unexpected sights as a children's party venue turned into a collection center and shelter for earthquake victims; a van with a sign in the window that read, "I'm a psychologist. Speak to me if you need me"; and, a group of little boys and girls actually playing soccer in the middle of the street! A state of emergency, with all the good and the bad that that means.

However, it seemed that everything you could do wasn't enough to solve the pressing need of the moment: getting those who had been buried under the rubble out alive. This created a feeling of anxiety and anguish unknown to those who had not experienced the 1985 earthquake. What we had now was the unending flow of tweets, Facebook posts, WhatsApp messages, phone calls, and emails with messages like "On such and such a street … they need flashlights, batteries, first-aid supplies, water," "At the corner of street X and avenue Y they need doctors to tend to people rescued," "Urgent: on another corner a building with people inside just collapsed." Many of these messages were fake, their source unclear, and impossible to corroborate, combined with the story about the nonexistent little girl named "Frida Sofía," allegedly trapped in the rubble of a primary school. They inundated our hours after the earthquake, preventing us from recovering our equanimity.

With the passing days, these volunteer activities, crude in technique and very useful in practice, became more and more expert. While initially civil society took the reins of the emergency, with the passing hours, other actors became visible who would have to be taken into consideration in the task of understanding the tensions and contradictions that any social phenomenon implies: that is to say, the dichotomy of "good, organized civil society

vs. bad, incapable state and authorities" is insufficient to explain the image of a soldier breaking down in tears over finding the lifeless body of a little girl.

Also, this dichotomy makes the role of the media —particularly Televisa, central to the story of "Frida Sofía—" invisible, as well as the possible break inside the elites with regard to the case of the collapse of the Enrique Rébsamen School. It also completely erases the centrality and responsibility of the real estate market in the tragedy.

Amidst this exaltation of civil society, the media constructed an idea that would become a cliché: that young people were the main protagonists of the rescue efforts. "Hidden Away from TV, but Once Again in the Front Lines of Solidarity," journalist Blanche Petrich would write;[1] "those same young people of the #YoSoy132 movement and social media activism," as writer Rossana Reguillo has characterized them; all the way to the oft-repeated statement about "the Millennials who saved Mexico." If not queried, this description could lead us to a series of imprecise ideas that are relatively unhelpful for constructing knowledge. The term "young Millennials" understood in the abstract makes it impossible to comprehend that

Their strength is not in the solidity of their arguments, or their performance on the street, but in their expert knowledge about digital social networks.

the young mechanic who works on the street of the Portales Neighborhood and who headed up the rescue of people trapped under the rubble was not, is not, and never will be a social media activist or a Millennial. Nevertheless, he put his body and his entire life in danger in order to save his trapped neighbors. And this idea also does not help us understand what a group of young people were doing at the front lines of a rescue effort, dressed with helmets, surgical masks, and vests, taking a selfie in front of a collapsed building.

With this, I mean to say that we run the risk of conceiving of young people as a homogeneous category that has gone from being scorned as a useless, selfish generation to being made into heroes after a gesture of momentary solidarity. This is why I ask myself where this

Ginnette Riquelme/Reuters

This exaltation of youth and civil society is kept up based on the initial absence and later ineffectiveness of the federal, local, and borough authorities.

construction came from and who this discourse is useful to. Who are these young people who did, in effect, flood the streets of our city for a few days? What are their ethical, moral reference points? How are those different from the reference points of other young people of the same age who didn't participate at all in these tasks or who, on the contrary, could be found at the other end of the spectrum in absolute indifference or even looting?

If we take on board the idea that the protagonists of the rescue are the same people who headed up the #YoSoy132 movement or the protests against the forced disappearance of the 43 young Ayotzinapa normal school students,[2] then it is possible to identify certain traits in their political and social activities that distinguish them from previous generations: that is, they are university students, which means they have a relatively high economic, political, social, and cultural capital that separates them from the vast majority of the population. What I notice about them is that their strength is not in their bodies, in the solidity of their arguments, or their performance on the street, but in their expert knowledge about digital social networks. The latter is what led them to operate the Verificado19s digital platform to test out and organize information and make rescue efforts efficient in the face of a lack of official information, as the Artículo 19 civil society organization has documented. It is also true that they have access to certain resources that allow them to act on a different level than how those with access to more old-fashiored resources or from popular sectors could act; that is, they have cars, Internet-capable cell phones, computers, ipads, equipment for taking photographs, audio, and video, and access to specialized computer programs. I repeat: none of these are accessible to the majority of the population. And I also must say that I notice that they take a great interest in being in the limelight, a product of the uncritical exaltation of their activity by the media in terms of political confrontation and by academia. These young people have believed this discourse, to the point that they take the credit for organizing collection and distribution of food, or the veracity of the tweets. All of this has happened amidst the high intensity of the immediacy of their activities, without any regard for taking on tasks that would have more far-reaching effects, much less for a level of organization that would involve other actors or a profound commitment that would imply more time and actually being in the space of real politics.

In the end, this exaltation of youth and civil society is kept up based on the initial absence and the later ineffectiveness of the federal, local, and borough authorities in the rescue efforts, in emitting trustworthy, timely information, and in solving the enormous problem the tragedy represents. All this has fed a feeling of self-sufficiency combined with the most absolute mistrust in the authorities, which in the long run may well sharpen the already dying relationship between the governing and the governed.

We must realize that the support, which lasted no longer than the week after the earthquake, is not enough to accompany the hundreds of people who lost all their belongings, and that we cannot resolve the long process of reconstruction that is coming by ourselves.

In whose hands and using what model is the city going to be reconstructed? Why do we continue to not have trustworthy, opportune information? Why at this point has no responsibility for the tragedy been assigned to authorities and businesspersons? Who will punish them and impart justice to the victims? What will the role of the real estate market be in this? What role will our university play in this process?

These are questions that we must seriously ask ourselves in order to deconstruct false dichotomies, avoid clichés, and completely seriously and with analytical depth construct the knowledge the nation demands of us so as to be able to fulfill the ethical and moral commitment that we have as university researchers. VM

Notes

1 Blanche Petrich, "Ocultada por la TV, pero de nuevo en primera fila de solidaridad," *La Jornada*, September 20, 2017, http://www.jornada.unam.mx/2017/09/20/politica/008n2pol. [Editor's Note.]
2 About these two movements, see https://en.wikipedia.org/wiki/Yo_Soy_132 and https://en.wikipedia.org/wiki/2014_Iguala_mass_kidnapping, respectively. [Editor's Note.]

Why Didn't the Seismic Alarm Sound before the Quake?

On September 7, 2017, at almost midnight, the seismic alarm sounded 124 seconds before an 8.2-magnitude quake was felt in Mexico City; its epicenter was in the Gulf of Tehuantepec, more than 600 kilometers away. However, on September 19, no alarm sounded before the quake. Therefore, people evacuated buildings when the ground was already shaking. The reason: this time the epicenter was "on the border between the states of Morelos and Puebla."[1]

According to the Center for Seismic Instrumentation and Registry (CIRES), on September 19, the alarm activated 20 seconds before the quake; however, the citizenry say that it sounded after the tremors started.

On September 28, CIRES corrected its statement to say that the alarm had not activated automatically and in advance because of the proximity of the epicenter and Mexico City. This means that the further away the epicenter, the more time there will be to alert the public.

According to CIRES, two kinds of waves are produced in an earthquake: P waves, which are rapid and do not cause as much damage, and S waves, which move more slowly and can be devastating. The CIRES system can identify both and activate the alert between 50 and 125 seconds before the S waves arrive to the capital.

On September 19, the P waves moved very quickly, but the Pilcaya and Tehuitzingo, Puebla sensors registered them with a 10-second delay. The system calculated the magnitude of the quake and communicated to Mexico City in three seconds (a calculation known as the 3S algorithm.). However, the sensors in Puebla cannot activate an alert with that algorithm; they must make a second calculation that takes longer and requires the registration of the S waves, which travel at half the speed of the P waves.

The calculation was made at the Pilcaya sensor, but it had to be confirmed by the other sensor. Seconds later, the Tehuitzingo sensor reported a quake of more than six on the scale. CIRES member Armando Cuéllar explained that there was a lag in the detection of the quake between the Pilcaya and Tehuitzingo sensors, with the latter calculating the magnitude of the quake seven seconds late.

The seismic alert system not only detects the movements in the earth, but also must ensure that the majority of the population can hear it. Many people have said that on September 7, the alarm did not sound. Some woke up when they felt their homes moving, implying that the siren was not loud enough to wake people up, or to get them to interrupt what they were doing, or to be heard by all the city's inhabitants.

After the September 19, 2017 11 a.m. drill, many people said that that they had not heard the alarm. On the afternoon of that same day, television and radio stations, which have an automatic system to interrupt programming and sound the alert, said they had not received the CIRES signal that sets off the alarm.

Seismologist Diego Melgar says that one of the challenges for Mexico's seismic alert is transmission, and that at least five or six media are needed to broadcast the signal, since one is insufficient. Those media could be radio, television, public loudspeakers, home equipment, and a cellular app. As an example, he mentions the California project he participates in where the seismic alert system produces alarms distributed by smartphone. In Mexico, cell phone apps like SkyAlert have begun to be created. Andrés Meira created an apparatus called "Grillo" (Cricket) that receives the CIRES radio signal, setting off an alarm and activating a "light alarm."[2] Today, technicians are working to create a "network of sensors" for Grillo and an app based on smartphone sensors. VM

Bertha Serrano Torre
Staff writer

Notes

1 Information for this article was all taken from Sara Hidalgo and Andrés Lajous, "¿11 segundos más tarde? Los límites y obstáculos de la alerta sísmica en la Ciudad de México," *Nexos*, digital edition, November 1, 2017, https://www.nexos.com.mx/?p=34379.

2 See more about this alert at Pepe Pulido, "Grillo es una alerta sísmica que avisa hasta 90 segundos antes del siniestro," Código espagueti, September 19, 2017, https://codigoespagueti.com/noticias/tecnologia/grillo-alarma-sisimica-90-segundos/. [Editor's Note.]

Leonardo Curzio*

The Role of the Media in the 1985 and 2017 Earthquakes

imagen/Excélsior TV

To my colleagues JCH, EM, and MCT, with whom I went through not one, but several earthquakes.

"We have to report what's going on;
whoever is afraid to can leave now;
we're staying because people are waiting for us."

JOSEFINA CLAUDIA HERRERA
News director of *Enfoque*

A New Opportunity

Not every city in the world has had as many opportunities to redefine its future as our country's capital. The last, devastating earthquake once again gave us the opportunity to rethink our circumstances in four fundamental spheres: the way this city is governed and our level of civic culture; the way we build and appropriate the public space; the information we have about risks; and our culture ***vis-à-vis*** civil protection.

It is a good idea to take these elements into consideration in the much-needed review of what happened on that September 19 afternoon and in its aftermath. I maintain that the communications media, supplemented in this case by social media, did not limit themselves to covering what happened that day —when, by the way, at no time did broadcasting cease—, but also documented the full process. All of this had an enormous impact on the way the event and its consequences were covered. Naturally, many lessons have been learned from past experiences, and others are still to be learned. I'll begin looking in reverse order at the four factors that should be rethought.

Civil Protection

An old proverb says that you must make a virtue out of necessity. After the devastating 1985 earthquakes, Mexico City discovered that, despite its long history of earthquakes, just like in many other spheres of government activity, it had not developed an effective mechanism for saving lives by alerting the population sufficiently in advance of a big quake. We also did not have a universal civil protection culture with regard to building regulations; and to this, we must add corruption, which makes it possible to build using low-quality materials in high-risk areas.

The population had not really taken on board a protocol of civil protection in their homes or businesses, much less in schools. We lived, literally, like we had in previous centuries when big cities were exposed to natural catastrophes without enjoying the elements to mitigate their impact or reduce the risk to people's lives.

In 1985, the media did not act in a coordinated fashion because there was no clear mechanism of how to respond to the emergency. Each media outlet did what it thought would be the most useful. Also, the government response was chaotic and even contradictory. Officials did not even know how to classify or organize international aid, and the

* Researcher at CISAN, UNAM, and journalist; curzio@unam.mx.

deployment of federal forces irritated rather than helped a population enraged by governmental incompetence.

The experience was so harsh and so full of lessons that the Mexican state, so loathe to creating modern administrative apparatuses, designed various mechanisms to predict and deal with an earthquake emergency. The first thing was to create scientifically respectable institutions that could nurture decision-making and disseminate timely information to the public. The National Seismological System (SSN, http://www.snn.unam.mx/), created September 5, 1910 as part of our university, deserves special mention. Over the years, it has become a point of reference. We also have to mention the implementation of the seismic alert system, a civil protection siren system, which, even with its breakdowns and some mistakes, has become a very effective mechanism for giving the population advance warning of an impending earthquake, a warning that can make the difference between life and death.[1]

Information

The media have become effective conveyors of this information and the alert, which is truly crucial when an earthquake is about to hit. They also play a very important role in the continuous dissemination of procedures and civil protection protocols that the population should follow; for prevention, at the time of the emergency; and in the first hours after an earthquake. In addition, the media disseminate emergency numbers to deal with issues like gas leaks, people buried under rubble, and in general, everything that must be done in the critical moments of an emergency.

One of the most complicated things is planning information —what should be reported and how it should be presented. At times when people are very nervous, coordination of all the members of the system is crucial for ensuring valid information. It is equally important to plan in uncertain circumstances, in which broadcasting could last indefinitely, something that requires an intelligent, functional logistical chain, since no one knows when events will end and what working conditions will be, since power outages could occur or telecommunications could fail. Rounds are organized; risk areas are assigned; teams are relieved; and exhausting watches are implemented. It is no simple matter: everything is done on the fly without any certainty about the magnitude and impacts of the quake.

The media also contributed to channeling humanitarian aid. We should note that in the last earthquake, the social media noticeably and effectively complemented the work of the traditional media.

These are not minor issues, although many of us take them for granted. But this long learning process bore fruit in the September 7 and 19, 2017 earthquakes despite the feeling of helplessness and disorientation we all feel after the Earth shakes, even those who have been through several quakes, including the one in 1985. The September 19, 2017 quake left its mark because of its magnitude, but the city showed that, with information, it can become more resilient.

The media also contributed to channeling humanitarian aid. It is essential that human or material support be delivered in a short time. We should note that in the last earthquake, the social media noticeably and effectively complemented the work of the traditional media in requesting volunteer support, food, medication, tools, and other materials, and also in cutting off aid from a place that had already received it and redirecting it to another where it was needed.

The possibility of keeping people informed about everything that was going on in the city led most of the important media (radio and television) to deliver on-going 24/7 coverage. It has been severely criticized as well, due, for example, to the way that certain radio stations and particularly certain television networks covered the "rescue" of a non-existent little girl ("Frida Sofía") who was supposedly under the rubble of a school in the southern part of Mexico City. I disagree with those who say this was an attempt by a corporation to try to create some kind of *telenovela* in the midst of the events.

Everyone has their own resources, but I must say that live coverage with absolutely no certainty about what is really going on or might happen leads journalists to improvise with more or less accuracy. I was fortunate in sharing the first three hours after the earthquake with two exceptional journalists, Mónica Garza and Hannia

Novell, and I think that what is broadcast to the public should strictly be what is known. It's true: in those moments, everything is an approximation, nerves, and the hope of having good news to impart, not because of any spirit of manipulation or sentimentalism, but because of the very human hope of finding someone alive. That mixture of impotence and hope that thousands of people demonstrated on the streets of Mexico City and that led them to help their fellows is also experienced in a television studio.

Going back to the issue of "Frida Sofía," it was a mistake not to verify "her" identity, but the idea that broadcasting the story was an attempt to manipulate people's feelings to get higher ratings seems profoundly misguided. All media try to get exclusives or scoops, and therefore, it is perfectly conceivable that, given the remote possibility that a little girl might be found alive, the company in question (Televisa) would try to keep the story on the screen. They lost the bet, but that does not prove bad journalism, since they did have an official source —which also was mistaken. Just like the population at large, the media's approach to reality is literally made on the ground, in the moment; that is, they have no advantage in terms of time or anything operational. They are in the field just like the rest of the actors under the public eye, since millions of people were following their broadcasts on that day. For me, the case of "Frida Sofía" is simply a mistake in coverage, and that's all.

In the case of "Frida Sofía," it was a mistake not to verify "her" identity, but the idea that broadcasting the story was an attempt to manipulate people's feelings to get higher ratings seems profoundly misguided.

Information about Risks and Dangers

One of the main things Mexico City lacks is information about the present and future use of the land. This leads to an almost absolute lack of certainty about the future of the neighborhoods and towns. Anything can happen: from the construction of a 27-story building next door to the university, to creating a mall in a town that has no means of access or egress. The logic of the market and the interest of developers have made Mexico City one of the planet's most chaotic urban centers. Experience indicates that, despite advances in creating a risk atlas, access to it was restricted.[2] Fate would have it that every September 19, Mexico commemorates National Civil Protection Day and holds a huge earthquake alert test, flying flags at half-mast to honor the victims of the 1985 quake. This means that politicians commonly talk about civil protection on that day. On the day of the 2017 earthquake, I was hosting a morning radio news program (the first broadcast of *Enfoque* [Focus], on Stereo 100 and Radio 1000), and I asked Mexico City Mayor Miguel Ángel Mancera if the risk atlas would be made public. A few hours before the devastating quake, he assured me that it could be consulted on line. The information is finally available, as is an important geophysical study by the UNAM (the topographical risk map of Mexico City), but a fundamental weakness was clearly illustrated by the 2017 earthquake. I hope this lesson remains writ large in the historic memory and that, starting now, every citizen who purchases a home knows the level of risk he/she is exposed to.

The city will continue to grow in a disorderly fashion; that is, the interests of real estate companies, so closely linked to the capital's political class, will continue to prevail over those of the public. It is not reasonable to think that we will do things differently now, but, even so, the hope that our city has the aim of changing after the earthquake encourages me. A few years ago, I was reading an introductory study of the history of the city that said that few capital cities have squandered as much cultural and architectural heritage as ours has. The El Colegio de México's inauguration in the 1970s led many to fantasize about a well-urbanized southern part of the city, dominated by culture. Today, the road up to the Ajusco area, where the college is located, is a human, ecological, and aesthetic failure.

In the western part of the city, we have the most widely known —but by no means the last— case of urban collapse: Santa Fe. Originally planned as the modern expansion of the city, today it is a choked area, lacking in attractive spots (except for malls) and with serious urban management problems. It is the most recently built up part of the city, but it is not healthy. While in the Ajusco area, creeping squatting has gobbled up the ecological

area, in Santa Fe, voracious developers in open complicity with local governments (from Manuel Camacho Solís [1988-1993] to the current administration) have ended up killing the goose that laid the golden egg. It is a strange area that tries to look like Houston with infrastructure that nobody would envy in Piedras Negras, Mexico. It's an urban model that should not be repeated, but the city is rushing toward collapse because we lack a model that includes four essential elements: public space, social cohesion, ecology, and mobility.

The first step in establishing this is to designate someone responsible for the use of the land, like in any serious city. Neither the Legislative Assembly nor the Ministry of Urban Development and Housing (Seduvi) have been able to show that they defend the public interest. Suspicions of corruption during every reclassification of land use are practically a certainty. We urgently need an autonomous technical body with an enormous, transparent mock-up of land use and a vocation for creating the best city possible, similar to the one that exists in Singapore. Never again must decisions about land use be left to politicians on the payroll of the real estate companies.

The second step is for the Economic and Social Council to convince private business of its predatory model's irrationality. Today, real estate developers are perceived as enemies of progress for the city. Every time they announce new investments, the citizenry trembles in fear because their activities become declarations of war against residents instead of being seen as opportunities for progress. Private business must realize that social responsibility starts by behaving in such a way that you are not seen as a predator.

Reconstruction

Nowhere is it written that we will make the most of the opportunity that has opened up to us. People are already talking about disaster sites being included in plans for a gigantic speculative manoeuver. Cities' decline is not a story put about by doomsayers. It's a reality, and if we do not correct our path, our city —that irritates us so very much today— will become one of the worst places on the planet to live.

One important lesson we learned from the 1985 earthquake involves how reconstruction is handled. The process had very precise stages: first, the risk to each of the buildings affected was assessed. This was not a simple procedure due to the enormity of the damage. The affected buildings were classified into three major categories: those without serious damage that required repairs to their exteriors; those requiring major intervention, but could continue to be used; and finally, those that were uninhabitable because they posed a risk for both owners and neighbors.[3]

The information was uploaded to a platform operated under the aegis of a commissioner for reconstruction, Ricardo Becerra, whose presence, aided by that of distinguished citizens, guaranteed that reconstruction funds would be handled in a transparent, non-partisan way. The overall amount came to a little over Mex$8 billion, and the Mexico City legislature completely arbitrarily decided to put a group of legislators in charge of monitoring how they were dispensed —this decision, by the way, was challenged in court by the opposition. The resulting scandal was so huge that both Becerra and Subcommissioners Mauricio Merino, Katia D'Artigues, and Fernando Tudela resigned in protest due to what was clearly a non-transparent handling of city resources and the fact that this implied a clear risk that benefits to earthquake victims could be used to create political clientele; unfortunately, this is typical of the way Mexico City is governed. Finally, all this was reversed amidst generalized discredit and indignation.

This lesson will have to be learned by a capital that has the country's most expensive local legislature and a weak administrative apparatus dominated by the power of its legislators. VM

Notes

1 The project began in 1989 with the Seismic Alert System for Mexico City (SAS), consisting of 12 earthquake sensor stations distributed along the Guerrero coast. This system pioneered the service worldwide, issuing the first alert on September 14, 1995. At first, it was played on the radio and on loudspeakers situated in schools and housing projects; later an app for cellular phones was designed; and beginning in 2015, sirens were attached to light posts throughout the city. [Editor's Note.]

2 Since the days after the 2017 earthquakes, an updated risk atlas is available at http://www.atlas.cdmx.gob.mx/. [Editor's Note.]

3 A color was assigned to every level of damage, like a stoplight; green was for those with the least damage and red for those in the worst conditions. [Editor's Note.]

abcnoticias.mx

Televisa's Danielle Dithurbide reporting from the Enrique Rébsamen School in southern Mexico City.

Raúl Trejo Delarbre*

In the Media, Tragedy. On the Social Networks, Confusion and Solidarity

The best remembered incident of the September 19, 2017 earthquake was fake news: the report that a little girl was alive under the rubble of the Rébsamen School. This report caught the imagination of and inspired hope in millions of people, concentrated media interest, and for a couple of days symbolized the efforts by thousands of rescue workers at that site and many others in Mexico City.

Amidst the confusion, that news item was souped up with details that made it plausible. One rescue worker swore he had heard her; another, using a heat censor, thought he found indications that she was moving. Someone else said the little girl was named Frida, and then someone else said her full first name was Frida Sofía. Dozens of media outlets, many with reporters posted outside the collapsed school, disseminated these details. The Televisa conglomerate stationed one of its reporters there 24/7 and, since rescue attempts were broadcast there live and nationwide, many TV viewers followed the dramatic event on that company's stations.

When two days later, the heads of the Ministry of the Navy coordinating rescue efforts at the Rébsamen School confirmed that the little girl did not exist and that the stories broadcast in the media were due to a chain of mistakes, many people felt tricked and expressed their irritation at Televisa and the government on the social networks. Even today, some people think that the story of "Frida Sofía" was a lie cooked up to entertain TV viewers; but the believers in this extravagant conspiracy do not explain why a media outlet would want to invent

* Researcher at the UNAM Institute for Social Research (IIS); rtrejo@unam.mx.

that story when victims were trapped in the rubble citywide and even in the Rébsamen School itself. Nineteen children and seven adults perished in that school alone.

After the earthquakes, the social media, particularly Twitter, Facebook, and Messenger, were means for linking up solidarity, but also for spreading rumors. They served as information sources for conventional media and linked up the citizenry. Telephone lines were overloaded and the power outages in the first few hours —or even days in some places— after the quake kept thousands of people isolated in certain parts of the city. With the September 19 quake, more than 1 800 cellular phone towers were temporarily out of order because the power was out. This made transmitting information and requests for help difficult in the critical minutes after the disaster in several areas.[1]

Despite this, calls to remove debris or take food and utensils to collapse sites did spread on line.[2] Announcements amidst the urban chaos ("Don't clog the roads by using your car," "Give ambulances the right of way.") alternated with messages inviting people to amass donations. Some cybernauts published lists of buildings that had been damaged and of shelters. The www.desaparecidos-sismo.mx website listed people whose whereabouts were unknown. Beginning on Wednesday, September 20, Google Maps had already identified places that needed help both in Mexico City and in states like Morelos, Puebla, Mexico, Oaxaca, and Chiapas, where the quake affected the population just as much if not more than in the nation's capital. The cellular app Waze not only displayed more efficient routes for getting around but also donation centers, shelters, and high-risk areas.

Created on Tuesday the 19th, the Twitter account @comoayudarmx (meaning @howtohelpmexico) had 17 100 followers and acted as a bulletin board to bring together supply and demand. @Brigadas19S and @juntossismocdmx (meaning @togetherearthquakemexicocity), created in the afternoon of September 20, had 1 700 and 8 500 followers, respectively, and linked up hundreds of people who wanted to participate in rescue efforts. With computer technology back-up from Google, the creators of www.salvatucasa.mx (translated as www.saveyourhouse.mx) designed a digital tool to connect architects and engineers, even some living abroad, who did a first damage assessment based on photographs sent by the interested parties.

Unfortunately, however, from the first moments after the earthquake, fake rumors that made solidarity more cumbersome also began circulating. After the September 7 quakes that particularly affected the states of Chiapas and Oaxaca, WhatsApp spread a message that went viral, falsely quoting specialists in Mexico and the United States as saying that a "mega-quake" was coming soon in both countries. When the September 19 quake happened, that message was revived, as was another that quoted a supposed United Nations warning. It is impossible to know how many people believed these tales. The same social media immediately followed them with messages clarifying that no one can predict an earthquake.[3]

After the earthquakes, the social media, particularly Twitter, Facebook, and Messenger, were means for linking up solidarity, but also for spreading rumors.

Confusion is the most fertile breeding ground for disinformation. When the facts are not sufficiently clear or when society cannot identify authorized, trustworthy spokespersons in a crisis, fake news flourishes. Fear, then, is the most vigorous detonator of obfuscation. When at risk, people are more prone to believe unproven statements or believe those who simply replicate or improvise statements without accredited sources.

On Wednesday, September 20, for example, a story came out that said that the buildings at 300 Insurgentes Avenue and the Condesa Plaza were on the point of collapse. Although Mexico City authorities immediately clarified that, at least until that moment, no one had discovered any structural damage in either building, some media outlets' online portals and dozens of Twitter accounts continued to present the fake rumor as fact. The image of a supposed break in the second story of southern Mexico City's Periférico outer beltway also circulated on line, but the photo was a fake. Both the company that manages that freeway and the Mexico City government denied that any damage existed there. On September 21, another rumor spread: that a seismic alert test (the system of sirens all over the city that sound an alert every time an earthquake takes place on the coasts of Guerrero and Oaxaca) was scheduled. This rumor stirred up a lot of fear because on September 19, a test had been made two hours before the earthquake, on the thirty-second anniversary of the 1985 quake.

In the face of the fake news, the media —by no means exempt from mistakes themselves— and the authorities reacted with common sense, explaining that people should not believe everything they heard.

Starting on Tuesday, September 19 at 5:11 p.m., then-Minister of the Interior Miguel Ángel Osorio Chong (@osoriochong) urged the population to "Please not create or believe rumors. Be alert for information from official accounts and the authorities." Less than two hours later, the Ministry of the Interior Twitter account, @segobmx, tweeted, "In an emergency situation, analyze and verify the information you consume; refrain from spreading rumors. Stay calm and remember that #PrevenirEsVivir [Prevention Means Life]." These kinds of clarifications were pertinent, but insufficient. The extremely suspicious public could well suppose that if the government was talking about rumors, it was because it was trying to hide serious facts. These speculations never had any basis, but they also spread like wildfire on the digital social media.

In addition to wrong or fake information about the disaster areas, there was confusion about the support needed. In this kind of a scenario, the intervention of citizens without any explicit party affiliation made it possible to gather donations and circulate information. On Wednesday, September 20, a group called @Verificado19s (meaning "September 19, Verified") began operating, but its Twitter account, which five months later was still active and had 37 000 followers, dates from Saturday the 23rd. The promoters of this citizens' coalition designed an online map showing the disaster sites in Mexico City and the kind of material and human support each one required. According to one participant, they created a network of cyclists and motorcyclists who transported "tools, material, food, medication, and, in some cases, specialists, to the disaster areas, where the monitors confirmed that the needs were being met."[4]

#Verificado19s became the seal for trustworthy information about the earthquake. More than 500 people on the street and in offices processed more than 20 000 pieces of information in the 10 days after the quake.

Furthermore they organized a mechanism to check the veracity of many news items circulating on the Internet. The rule was to only disseminate the reports that passed the verifiers' tests. "A network of volunteers picked up the needs in real time in online chats with monitors in the field who had verified information; others picked up the requirements when information on Twitter and other chats from other neighborhood networks created after the earthquake needed verifying; in that case, a #Verificado19s monitor would be sent to corroborate the report, since all the information had to be verified."[5]

The rule for carrying out this work was very simple: "Something is verified when it meets one of two requirements: 1) you saw it with your own eyes; or, 2) at least two different people who saw it with their own eyes told you. Any other information *is not verified*."[6]

#Verificado19s was organized after a call went out by the Horizontal Cultural Center, a collective interested in information and discussion about public issues. Members of the following social organizations and companies participated: Ahora, Artículo 19, Ayuda Óptima, Bicitekas, CartoCrítica, Cítrico Gráfico, Centro Pro de Derechos Humanos, Cencos, Codeando México, Cultura Colectiva, Data Cívica, Datank.ai, Democracia Deliberada, Devf, Fósforo, Horizontal, La Lonja mx, McKinsey, opi, Oxfam, *Revista Paradigmas*, R3D, Serapaz, Social tic, The Data Pub, Tú Constituyente, and Vice. They also had technical support from Google México.[7]

#Verificado19s became the seal for trustworthy information about the earthquake. More than 500 people on the street and in offices processed more than 20 000 pieces of information in the 10 days after the quake, according to the collective. Given the local and federal governments' difficulties in informing in a trustworthy, effective way, these 500 citizens contributed to organizing solidarity and dispelling uncertainty about what was going on and what was needed after the tragedy.

In addition, the coalition built —although less successfully— a network for aiding the other places in Mexico affected by the quakes. Ten days later, #Verificado19s coordinators who had dealt with emergencies organized and presented a series of open questions —actually, open discrepancies— about the performance of those in power *vis-à-vis* the earthquake. Among other questions, they asked, "Why were all levels of government incapable of establishing in real time and truthfully a logistical network

to deal with supply, storage, and distribution of tools, materials, equipment, medication, food, labor, and specialists in areas at risk and with collapses, as well as to facilitate the work of rescue teams?" "Why did the citizenry once again do the work of the civilian authorities and the armed forces?" "Why was there not better communication with families in terms of empathy, dignity, and respect?" "Why was the government incapable of making public a list of the missing in a centralized, verified, transparent, and timely fashion?" "Ten days after the earthquake, why did the government not yet know and make public the exact number of people left homeless by the quake?"[8]

#Verificado19s's reproaches have never been explicitly answered. The experience of this earthquake indicates that neither the federal nor the city governments had sufficient protocols in place to deal with an emergency of such magnitude. The authorities made mistakes in their response, but it was swift and organized, particularly with regard to rescuing victims and the first tasks to support those left homeless. In contrast with the other September 19, in 1985, when an 8.1-magnitude quake devastated the central part of Mexico City and for hours the government was absent, on this occasion, the authorities reacted immediately. However, communication with the public faced at least six problems:

1. The 2017 earthquake affected very diverse parts of the city: the North, in the Lindavista neighborhood, and the extreme South, in Xochimilco and Tláhuac, and of course, neighborhoods like the Condesa, Roma, and Del Valle, near downtown. Rescue efforts that were soon headed up by Army and Navy personnel were carried out in different, far-flung areas.
2. The initial effects made coordination and communication difficult among different areas of government. Failed telephone lines and power outages in large swathes of the city also affected the authorities.
3. Official information got lost in the ocean of messages that inundated the social media. Scanty and dispersed, the authorities' messages had insufficient influence, particularly in the hours and days immediately after the quake.
4. Official sources suffer from a lack of credibility among the active parts of society, notably mistrustful of the authorities. Many people prefer to believe the most alarmist stories. When government spokespersons exist to clarify them, the suspicion addicts suppose that, if the government is saying a certain event did not happen, it is because it wants to hide something.
5. The digital social media, with their universal access and the ability to propagate ideas instantaneously, are fertile ground for disseminating rumors. But they also serve to clarify fake news, as happened thanks to the work of citizens to verify the reports about the quake.
6. Whether as a result of a deliberate decision, or pressured by the circumstances, the authorities did not interfere with the spontaneous organization of thousands of citizens who collaborated to rescue victims, to gather donations, and carry out all manner of support. It was difficult, but also undesirable, to centralize these activities; and for that reason it was not easy to gather information about them all.

The complaints of #Verificado19s and the many lessons about this earthquake will have to be weighed so that Mexico City can intelligently prepare with sufficient resources for the inevitable —and perhaps worse— future earthquakes. Any preparations must take into account the willingness of the citizenry to act in solidarity, as well as the capability the digital social media can have for coordination and clarification. VM

Notes

1 Comisión para la Reconstrucción y Transformación de la CDMX, "Programa para la reconstrucción de la CDMX," January 2018, p. 54, http://www.reconstruccion.cdmx.gob.mx/storage/app/uploads/public/5a5/951/9f3/5a59519f3f047556008364.pdf.

2 See my article, "El sismo en las redes," *La crónica,* October 16, 2017, http://www.cronica.com.mx/notas/2017/1048058.html.

3 Among other notices countering this old rumor, an article originally published on April 19, 2016 by the UNAM National Seismological System (SSN) circulated again: "Los terremotos no se pueden predecir: SSN," http://www.dgcs.unam.mx/boletin/bdboletin/2016_251.html. [Editor's Note.]

4 Alberto Serdán, "Lo que vi en #Verificado19s," *Animal político*, September 27, 2017, http://www.animalpolitico.com/blogueros-el-dato-checado/2017/09/27/lo-vi-verificado19s/.

5 Ibid.

6 Tweet on the @Verificado19s account, https://twitter.com/verificado19s?lang=es.

7 "¿Quiénes somos?" http://www.verificado19s.org/#nosotros.

8 "#Verificado19s," *Horizontal*, https://horizontal.mx/verificado19s/.

Juan Carlos Barrón Pastor*

Balance Sheet of Post-Quake Face-to-Face and Online Social Mobilization

At 11 a.m. on September 19, 2017, the seismic alert siren sounded at the National Autonomous University of Mexico and we all participated in the annual test to commemorate the September 19, 1985 earthquake. After embellishing the civic exercise with the narratives and anecdotes of those of us who had lived through the event 32 years prior, and at least two hours after going back to work, the earth again shook furiously. The new earthquake once again brought us face to face with the event that has been linked historically to the resurgence of solidarity and citizens' movements that gave rise to Mexico's late-twentieth-century electoral reforms. Except that this time, something new was added, something indispensable for social interaction and communication at that moment and the days and weeks following: the communications media and, in particular, the so-called social media. The latter were key for organizing —and disorganizing— the flow of aid, requests for help that in a matter of minutes became insufficient, as well as to inform and misinform about what was happening. The virtual networks also fed solidarity and trust among people who could not help each other face-to-face, but without whom it would not have been possible to maintain support networks or contact rescue workers in the most direct way possible.

So, yes, solidarity was built, but rumors and lies were also exacerbated: from what seemed like innocent, but unverified, messages propagating rumors, which led to citizens' initiatives like #Verificado19s, to plays dubbed as Machiavellian propaganda involving a non-existent little girl named "Frida Sofía" and a rescue dog oddly also named Frida, both mentioned by representatives of the Navy and the mainstream media.

https://horizontal.mx/a-un-mes-de-verificado19s/

The federal and local governments seem to have reacted relatively promptly and in accordance with their agendas for territorial and population control.

It must be said that, in contrast with the 1985 earthquakes, in Mexico City, both the federal and local governments seem to have reacted relatively promptly and in accordance with their agendas for territorial and population control. On the other hand, although the spontaneous help by civil society was key in the first hours of the tragedy, it is also true that, as the days passed, most of the donations collected had to be turned over to pro-government, military, or civilian groups to handle. In some cases, the population resisted that, and there were even sites where local residents organized to prevent it. However, in general, the impression that several of us who tried to distribute aid directly in the weeks after the quake was that proceeding that way, particularly in places far from the urban area and even in other states, implied growing

* Researcher and CISAN academic secretary; jbarronp@unam.mx.

risks and obstacles. The circumstances, then, pushed us to take that aid to the "authorized" collection centers, where those in charge then distributed it.

In contrast to these acts of solidarity, many large stores benefited from the tragedy: the public flooded their aisles, shooting sales up spectacularly. In the media, entertainers praised people's attitudes and asked them to take everything from the most obvious, like water and clothing, to the most complicated, like cement crushers, to the collection centers. So, lines of people at the cash registers, whether to purchase their own emergency rations or to donate to earthquake victims, were a common sight at that time.

Aid from other parts of the country and from abroad was unprecedented. For example, items were purchased on line to be delivered in Mexico; and people send donations on line to personal accounts to be used to purchase whatever was needed at the moment.

At the UNAM, donations at the University Olympic Stadium reached epic proportions: hundreds of young students, professors, and employees built and organized a collection center capable of filling tractor-trailers in minutes, which then went mainly to the most inaccessible areas of the southern part of Mexico City and the state of Morelos. Organized in brigades, those working in the stadium quickly unloaded the donations from cars and pick-up trucks, classified them, trained and equipped volunteers, and set up a logistical plan to make sure the aid went where it was needed. When this donation center was later demobilized, it was due to strange, controversial circumstances that sparked speculation and explanations reported on by the press. The important thing is that women and men working and studying in the university made their contribution to the heroic efforts of those days.

Society to the Rescue . . . of Itself

Women played a fundamental role, not only in the tasks traditionally —and conservatively— assigned to them, like caring for the injured and cooking, but also in other areas, like clearing rubble or searching for people trapped under it. This could be seen all over the city, but it was particularly noteworthy in a building at the corner of Bolívar and Chimalpopoca, reminding us of the stories from 1985: women seamstresses being over-exploited in precarious conditions.[1] Their case was widely reported on in social media like the Facebook pages of Guerrilla Comunicacional México (Mexico Communicational Guerrillas) and Brigada Feminista de Apoyo CDMX Sismo (Mexico City Feminist Support Brigade).

It is important to point out that the mainstream media focused its attention and broad coverage on other disaster areas, like the Rébsamen School, the scene of the botched "Frida Sofía" case. But, meanwhile, the case of the sweatshop and a toy factory that seem to have existed in that building on Bolívar Street sparked insufficient interest to even report on what had happened there, much less do any follow-up on the case.

Some thought that these mainstream media wanted to minimize the coverage of the work being done by women rescue workers who were risking their personal safety to lend solidarity to other women, women workers who had been made invisible. I should point out that documents were discovered amidst the rubble revealing a terrible reality not usually considered when people think about Mexico: the existence of sweatshops employing undocumented immigrants.

Another building that caught the public eye differently way depending on the media outlet providing the coverage was the one at 286 Álvaro Obregón Avenue. Just like in the other cases, initial help came from civil society, which spontaneously organized rescue efforts. And, also like in other cases, the Navy and Army only arrived to block that work, control access, and propagate deceptive versions of the situation that gave hope to family members waiting behind military cordons. This is where flashy teams of Israeli and Spanish rescue squads disembarked, giving the impression that they were going for specific objects and bodies, or to pose for photographs that circulated widely on social media, often emphasizing how physically attractive they were. Meanwhile, the relatives of most of the victims saw valuable hours go by before having to begin searching and rescuing themselves, days later, when the

Documents were discovered amidst the rubble revealing a terrible reality not usually considered when people think about Mexico: the existence of sweatshops employing undocumented immigrants.

Despite their good intentions, many people went from one place to another, but arrived everywhere late.

international rescue teams and Navy and Army personnel practically abandoned them to their own devices.

Among the many buildings that collapsed was one at 119 Durango Street in the Roma neighborhood. Most of the people left homeless by this were of Otomí origin, an indigenous people from central Mexico. So, for weeks afterwards, between 70 and 200 people lived in the street —different media outlets also said that Otomí families were living in nearby buildings. They were denied access to existing shelters that were supposedly full. This caused indignation on the social media since other —middle-class— victims from nearby buildings were not classified as "irregular population" and seemed to have no problems being admitted to the shelters. Some journalists like Gloria Ramírez, from the *Desinformémonos* website, even reported discriminatory language used against these families by some neighbors.

In the southern part of the city, in the Coapa area, damage was heavy. Although media attention focused on schools like the Rébsamen School, or the Mexico City campus of the Monterrey Technological Institute for Higher Learning (known as Monterrey Tech), many other buildings collapsed, became uninhabitable, or require important repairs and reinforcement.

Despite the fact that the city's official death toll was set at 369, many say that there may be victims who were not counted, like the immigrant women workers exploited because they did not have work permits. In the case of Coapa, the victims could be many more. Videos circulating on social media showed that more people than reported may have died, for example at the Coapa Walmart or in the Galerías Coapa mall, but until this is confirmed, they remain ghosts of urban legends disallowed by the authorities.[2]

Chiaroscuro: A Balance Sheet of Possibilities and Achievements

It would be impossible in this short article to attempt an exhaustive list of the damage done in the city and surrounding states like Morelos, in addition to that in the places hit by previous and later earthquakes, affecting mainly communities in Oaxaca and Chiapas. However, the common denominator seems to have been help from civil society, as well as the fact that information began to be controlled by the military in the first few hours after the disasters. Everywhere, the media amplified and hid certain dynamics and events.

As pointed out above, in addition to broadcasting news that was not always real and requests for support that a few minutes later were no longer useful, on social media, society seemed to project a narcissistic image of itself. It looks like not a few people took advantage of the situation to show and exaggerate their actions as good Samaritans. In addition, in what could be considered rather self-satisfied gestures, some companies, organizations, and not a few individuals disseminated the work being done by civil society in general, and by young people, in particular the so-called millennials, as though it were the determining factor in the crisis, even if that were not necessarily the case.

A more sober, detached analysis might make us recognize that society was not able to be as effective as it would have liked, and that, despite their good intentions, many people went from one place to another, but arrived everywhere late.

This short review of events has shown how both face-to-face and online social action was channeled, managed, and mediated by pro-governmental civilian and military actors. They clearly monopolized control of access, both physical and virtual, such as filtering or blocking aid. On the other hand, as I mentioned before, the information disseminated both verbally and on line was not always true, and at different moments, disinformation fed a kind of hope that on several occasions tied the hands of civil society, giving it back a distorted image of itself. VM

Notes

1 The case of the seamstresses in 1985 was paradigmatic for thinking about the priorities of those in power, both publically and privately. One account can be found in Perla Miranda, "Ellos querían sus cajas fuertes: las mujeres atrapadas en los escombros no importaban," *El Universal*, September 19, 2016, http://www.eluniversal.com.mx/entrada-de-opinion/colaboracion/mochilazo-en-el-tiempo/nacion/sociedad/2016/09/19/ellos-querian-sus. [Editor's Note.]
2 A video about the Coapa Walmart store is available at https://www.youtube.com/watch?v=rjH-VvL6bqA. [Editor's Note.]

Natalia Alvarado Vásquez*

The Legal Community's Reaction to the Earthquake

Appleseed Mexico Foundation

After an earthquake that caused as much damage as the one that happened in Mexico in September 2017, it is to be expected that many legal questions will arise in the minds of the victims and their families. What rights do I have if I'm affected? What will happen to the damaged property after all the chaos? What can I do if I have insurance but the company doesn't want to pay out? Do I qualify for receiving government funding to repair my damaged property or to rebuild? We probably would not usually think of lawyers contributing to disaster response, but the fact is that those of us who are legal professionals have a great deal to contribute to the post-earthquake efforts.

On September 19, 2017, after checking that our families were safe, the team of legal professionals who make up the Clearing Houses in Mexico immediately began to generate ideas on how to help those who had lost everything; and the answer came immediately to mind: *pro bono*! This Latin term refers to the old expression *Pro bono publico*, which means working for the greater good. In the case of Appleseed, this *pro bono* work consists on offering free legal advice/services to vulnerable people and communities as well as organizations that help them. It also includes free legal advisory services on issues of public interest.

In the legal as well as in other professions, lawyers have the responsibility to use their knowledge to pursue justice regardless of the capacity of the clients to pay our fees, since the greater good is, in the end, justice. Therefore we lawyers have the obligation to attend to and support those who need our services. Fortunately, nowadays the interest in the *pro bono* legal work has increased among law firms and legal professionals in Mexico and in the world. However, *pro bono* work is more common in large law firms, whereas small firms, universities, and companies still face many challenges to enhance their *pro bono* practice. In order to channel this increased interest in *pro bono* work, Appleseed aims to connect those in need with the law firms and professionals that are willing to give legal *pro bono* advice and representation so that we all can fulfill our ethical and social commitments.

The Appleseed México Foundation is a civil society organization that offers free legal services through its *Pro Bono* Network.[1] Its groups of lawyers and legal professionals are interested in giving legal support to civil society organizations about issues of collective interest.[2] This is why Appleseed México, the Mexican Bar Foundation, and the Mexican *Pro Bono* Center decided to join forces and call on the entire Mexican legal community to contribute their expertise with the sole objective of supporting the earthquake victims . The efforts focused on three main fronts:

1. *Guía Jurídica para Asesoría a damnificados por los terremotos de 2017* (Legal Advisory Guide for 2017 Earthquake Victims).[3] This document answers over 70 frequently-asked questions about legal issues related to the earthquake. These include what to do in case of death or disappearance of individuals; rights and obligations of landlords and tenants; damages to adjacent or public property; labor issues; economic support

* Legal projects coordinator of Appleseed México Foundation; nalvarado@appleseedmexico.org.

for victims; and how to apply to the Natural Disaster Fund (Fonden), among others. The guide was distributed on the web, radio, TV, and social networks and was promoted by different civil society organizations. The objective of this wide distribution was that everyone could have access to it. In addition, the guide became a reference source for legal experts, attorneys, students, and organizations supporting earthquake victims.

Unfortunately, natural disasters will continue happening, and we must have the knowledge, protocols, and advisory services available to provide the support required in these emergencies. Therefore, after preparing the guide, the team set the goal of making it a permanent effort to have it updated for future potential disasters.

To make the legal terms and processes more user-friendly, we developed seven infographics about the most common legal problems, which describe the steps to be taken to resolve them. These infographics circulated mainly on social networks.

To make this titanic job of researching, writing, reviewing, and editing possible, the three organizations coordinated the work of 29 lawyers, notaries, offices, and 9 independent attorneys.

2. *A hot line for legal advice to victims.*[4] Through a simple online form, the victims provided contact information, a brief description of a problem and a concrete question; a lawyer from our network would contact the person in order to further understand and answer the legal matters and/or explain the administrative procedures needed depending on the case. If, during the telephone conversation, the professional detected that the matter required long-term support, the case was evaluated and adopted by the law firm for further advice.

The phone consultations were fielded by 44 lawyers and 5 law students, who gave advice to 351 people using recommendations based on the aforementioned guide. Twelve people managed the process of assigning and reviewing cases.

3. *Legal clinics in the affected areas*. A couple of years ago, Appleseed launched a program of free advisory services that we call legal clinics in order to provide face-to-face, in-the-field legal advice to vulnerable and low-income communities. This project aims to improve the quality of life of these vulnerable communities by providing this legal advice and involving law students and *pro bono* legal work by attorneys.

The pre-existing program allowed us to immediately offer the legal clinic's know-how and Appleseed's experience, processes, materials, and human resources to the main affected areas.

Activities and Types of Advice Requested

We visited the Cuauhtémoc Municipality, specifically the Juárez, Condesa, Hipódromo, Hipódromo Condesa, Cuauhtémoc, and Roma Neighborhoods. The main problems we found involved condominium buildings with structural damage or complete collapse, issues related to mortgages from private banks and from the Institute of the National Fund for Workers' Housing (Infonavit), as well as questions linked to private insurance or the insurance that comes with a mortgage.

We also went to the Autonomous University of Mexico City (UACM), where we saw victims from the Iztapalapa and Tláhuac Municipalities, specifically from the Del Mar, Planta, Cananea, and Molino Neighborhoods, among others. There, the main problems involved homes built by their owners that had minor damage but had been built in areas where the sub-soil cracked. Another issue in these areas was that when the authorities did not find "considerable" damage in the constructions, they did not qualify the homeowners as potential beneficiaries of financial aid for housing, overlooking the huge risk represented by the cracks underneath these properties.

Then we went to the Xochimilco Municipality, where we visited the town of Nativitas, finding that the main damage consisted on cracks in the sub-soil, which had not been studied yet by geologists to assess their depth and impact on the constructions above them. Most of the people we saw came to us for matters involving violations in the damage assessment process and its consequences in terms of the assignation of financial support.

Questions from the Public

In our face-to-face visits, 63 legal professionals and several law students met with 418 victims. These teams dedicated approximately 424 *pro bono* hours to the task. Our conversations with the victims during these face-to-face sessions provided information that was the basis for the

I AM A RELATIVE OF A PERSON WHO DIED IN THE EARTHQUAKE

WHAT SHOULD I DO?

WHERE CAN I FIND MY RELATIVE'S BODY?

In Mexico City, the bodies of fatal earthquake victims were taken to the Instituto de Ciencias Forenses (Institute of Forensic Sciences [Incifo]), located at 130 Héroes, Doctores Borough, C.P. 06720, Mexico City.

HOW DO I KNOW MY RELATIVE HAS BEEN IDENTIFIED CORRECTLY?

The forensic authorities are obligated to give you all the information about the circumstances in which the body was found and how it was identified.

POSITIVE ID — Through facial recognition or that of specific identifying features such as moles, scars, tattoos, accessories, and/or clothing or other personal objects the deceased had with him/her that day.

COMPARISON — If the person is unrecognizable, other means of comparison must be used, such as X-rays, fingerprints, dental records, surgical interventions, etc.

DNA TESTING — Through genetic testing (usually a saliva sample). This process takes a little longer and is just as accurate as the other means described above.

WHAT DO I HAVE TO DO TO RETRIEVE THE BODY?

You must present the following documents:

a) Documents of the Person Doing the Paperwork: You must be a direct relative or someone authorized by direct relatives by a signed power of attorney with two witnesses. You have to present your official photo ID (voter registration card [INE], army discharge papers, passport, or professional license).

b) Documents of the Deceased

1) **Original death certificate:** The death certificate must be procured from the central Registry Office or at any of the Mexico City civil court offices.
You will need this death certificate. **Request several copies! They will be useful for future paperwork.**

2) **Recently issued birth certificate.**

THEN WHAT DO I DO?

It's important to put the deceased's legal affairs in order as soon as possible!

This means beginning an inheritance process (whether the person had a written will or not), and gathering additional information about his/her assets and legal obligations.
For example, find out about:

1) **If the person had a will or not.** At the Colegio de Notarios (College of Notaries, colegiodenotarios.org.mx), free advice is being offered for earthquake victims. Telephone: 5511-1819

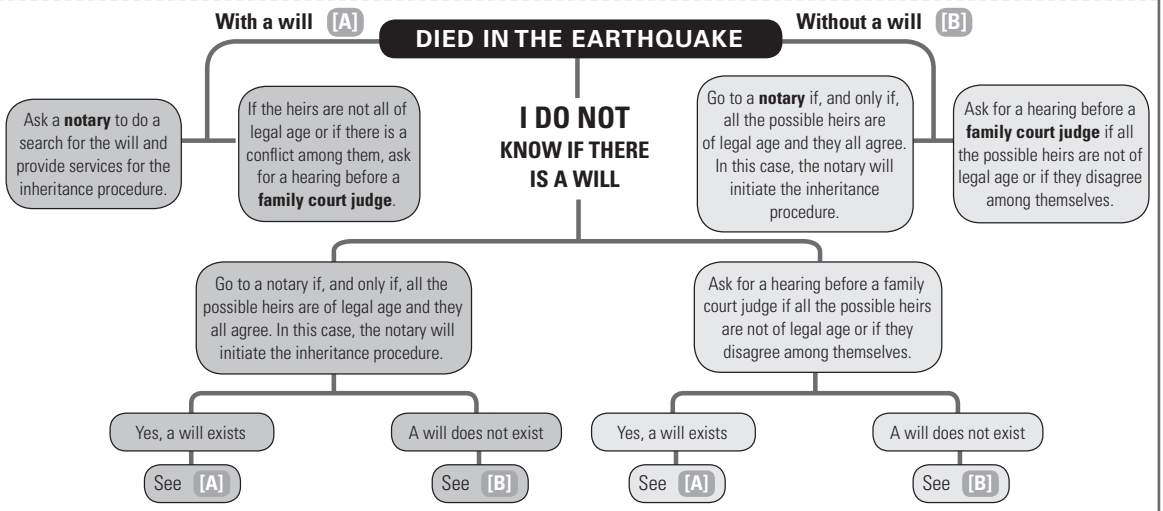
2) **Real estate and other property**, as well as any insurance covering them.

3) **Life Insurance policies.**

4) **Accounts with any of the social security systems** (IMSS, ISSSTE, ISSFAM, etc.)

5) **Loans or bank accounts.** The institutions involved must be notified of the death to begin to cancel loans and to be able to apply to receive anything due to the deceased or his/her heirs. Remember that debts are canceled upon a person's death!

6) **Minors or persons otherwise unable to take care of themselves who were in the care of the deceased.**



ANY QUESTIONS? CONTACT US! WE WANT TO HELP YOU

The death of a relative or loved one is a traumatic experience under any circumstances. Don't be afraid to ask for professional psychological help to deal with your mourning process.

Find out more at www.appleseedmexico.org/apoyojuridico-sismo/ info@appleseedmexico.org

legal guide and allowed us to begin research projects to resolve the legal loopholes discovered after the recent earthquakes. Using that information, plus what we found out during our follow-up telephone consultations, we were able to determine that the issues that required the most urgent legal support involved real estate, labor, successions, and insurance law (see Graph 1).

As expected, the most frequently touched-on issue due to the natural consequences of the earthquake was related to real estate. We found that a considerable number of the damaged buildings showed some degree of legal irregularity, due to incomplete or never-initiated succession processes, or because they only had informal sales contracts (not formal deeds). This irregularity complicated the procedures for issuing formal deeds, repairs, and reconstruction of the homes. This means that we must do an exhaustive review of the number of buildings in irregular circumstances and work to design public policies and legislative projects to overcome that.

Many people were unfamiliar with the procedures for collecting their insurance policies, most of which had been acquired as a prerequisite for having a mortgage. But we also dealt with cases of insurance on automobiles that had been trapped or damaged by the collapse of structures.

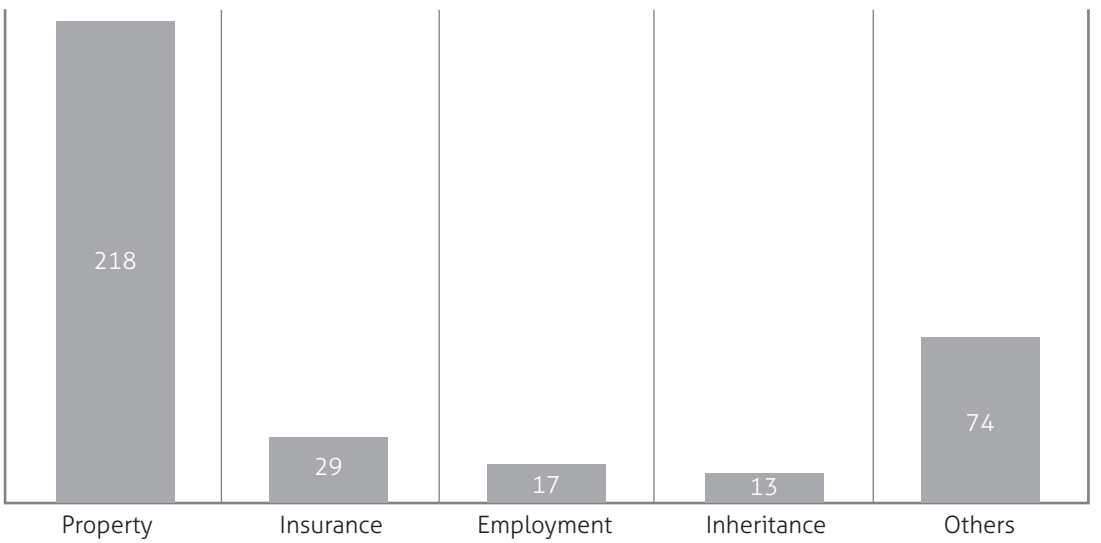
Among the many issues that can be found under the classification of "Other" in the guide, are a) how to apply for resources from the Natural Disaster Fund (Fonden); b) protocols involving how to react to the earthquake (civil protection); c) the location of government offices that deal with different aspects of these cases; d) procedures for having documents notarized; and e) the recovery of official documents.

> Appleseed's *pro bono* work consists of offering free legal services to vulnerable people and communities as well as organizations that help them.

Finally, we did deal with some labor issues, mainly in the days immediately after the earthquake. The most common complaint was that employees were being forced to go to work despite the bad physical conditions of the workplace. We even knew of cases in which they were asked for their own resignations due to "absence."

Graph 2 shows the number of requests for legal advice, classified according to the kind of difficulty. We can see that the main need involves buildings that had suffered structural damage. Among the most frequently recurring concerns found through the interaction with the victims

Graph 1
Matters that Required the Most Urgent Legal Assistance



Source: Data base of requests for legal advice from earthquake victims to Fundación Appleseed, Fundación Barra Mexicana, and Centro Mexicano *Pro Bono*.

DAMAGE TO BUILDINGS

Due to the September 7 or 19, 2017 earthquakes

WHAT ARE MY RIGHTS AND OBLIGATIONS IF **I'M THE OWNER** of the damaged building and I have tenants?

STEP 1 **CONTACT THE CIVIL PROTECTION AUTHORITIES**

so they can physically inspect the building and determine if the damage is

1. IRREPARABLE (a TOTAL loss)

THEY MUST GIVE THE TENANT A WRITTEN

order to IMMEDIATELY VACATE the premises and not return. The Civil Protection authorities must DEMOLISH IT IMMEDIATELY.

CANCELATION OF RENTAL AGREEMENT

The Civil Protection authority's document stating that the building is a total loss will serve as the official document to cancel the tenant's rental agreement.

*We recommend that you clearly document the damage to the building.

IF THE TENANT PAID AHEAD OF TIME OR LEFT A DEPOSIT

The landlord must REFUND the tenant in that amount. Also, if the tenant owes back rent, the landlord/landlady has the right to demand it.

2. REPARABLE (PARTIAL loss of the building)

THE OWNER MUST MAKE ALL THE REPAIRS

so that the rental contract can continue. Otherwise, the tenant can consider the rental agreement canceled.

IN BOTH CASES, THE PROPERTY OWNER MUST

REVIEW THE RENTAL AGREEMENT to ensure it is up to date, whether it includes clauses of how to proceed in the case of an event, and what the rules or steps are for ending it if necessary.

REVIEW THE INSURANCE POLICY ON THE PROPERTY (if one exists) to check coverage.

DAMAGE TO BUILDINGS

Due to the September 7 or 19, 2017 earthquakes

WHAT ARE MY RIGHTS AND OBLIGATIONS IF **I'M THE OCCUPANT** of a damaged building?

STEP 1 **CONTACT THE CIVIL PROTECTION AUTHORITIES**

so they can physically inspect the building and determine if the damage is

1. IRREPARABLE (a TOTAL loss)

NOTIFY
THE PROPERTY OWNER OF THE SITUATION
And request the rental agreement be canceled. AND VACATE THE PREMISES IMMEDIATELY!

DEMAND ANY MONIES YOU HAVE PAID AHEAD OF TIME,
such as RENT or deposits.

PAY ANYTHING OWED
to the owner

2. REPARABLE (PARTIAL loss of the building)

IF THE TENANT IS **COMPLETELY** PREVENTED FROM ACCESS TO THE BUILDING

The tenant will have the right to not pay rent during the period in which such access is prevented.

IF THE TOTAL PREVENTION OF ACCESS LASTS MORE THAN TWO MONTHS

The tenant may consider the rental agreement canceled, in which case, he/she must notify the property owner of this in writing.

IF **PARTIAL** ACCESS TO THE BUILDING IS POSSIBLE

The Civil Protection document will serve to calculate the percentage or specific area of the building that cannot be used. The tenant shall have the right to reduce the rent in that proportion.

were the obligations of co-owners in the payment of repairs, rental contracts, the obligations and rights of adjacent and nearby neighbors of damaged or collapsed buildings, and a large number of requests about how to apply for government benefits and support. The requests not detailed here include issues related to insurance, employment, government financial support, and administrative paperwork, among other things.

Graph 4 shows our findings regarding insurance: the vast majority of applicants had no insurance on their homes or, what was worse, knew nothing about insurance. This is a concern given the risk level in Mexico City.

According to information given us by insurance agents, interest in home insurance that covers earthquakes has increased considerably. However, a great deal of work remains to be done in creating awareness among homeowners.

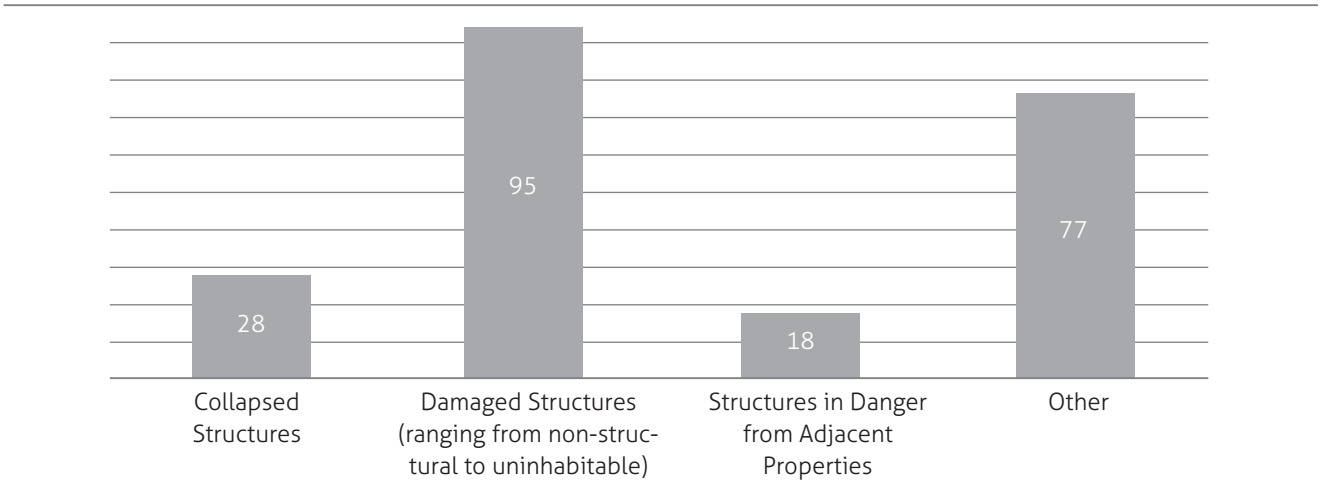
Conclusions: Assuming the Responsibility of Our Situation

We know that it will take years of work, advisory services, and legal representation to fully and successfully deal with the needs that have arisen from the recent earthquakes and to find favorable solutions for those who lost their homes. Seismic activity goes on and it is a reality that we will continue to experience earthquakes in Mexico. Reconstruction work after what happened in September 2017 has barely begun. This means that disaster preparedness is an ongoing task that will continue. The experience gained in our work will guide us to create better programs with up-to-date information and protocols to deal with people's needs after different kinds of natural disasters. While we cannot know when or where the next disaster will hit, we must be prepared and lower the risk of losing lives and assets.

Along those same lines, the work of lawyers is indispensable for responding to and alleviating the circumstances of those affected by these events, seeking to improve current administrative and legal procedures. Legal and legislative activities must remain on the agenda. At Appleseed, we have embraced the issue and continue to offer support through different projects, proposing bills, reforms, or the implementation of public policies to regulate, improve, and put in motion clear administrative processes.

We celebrate and thank the legal community for its response to the emergency. This is an invitation to continue the work to further the reach and increase the contents of the legal guide so that it can be used after other natural disasters, contribute with the creation of univer-

Graph 2
Main problems put forward by earthquake victims



Source: Data base of requests for legal advice from earthquake victims to Fundación Appleseed, Fundación Barra Mexicana, and Centro Mexicano *Pro Bono*.

DAMAGE TO BUILDINGS

Due to the September 7 or 19, 2017 earthquakes

WHAT AUTHORITIES DO I GO TO IF MY BUILDING IS DAMAGED?

TO DETERMINE THE DEGREE **OF DAMAGE TO THE BUILDING**, OR WHETHER IT IS SAFE TO OCCUPY IT

YOU SHOULD GO TO **CIVIL PROTECTION**
(Borough Office of Civil Protection)

You should also request support from the Construction Site Director (DRO) or someone who is co-responsible in structural safety (CSE)!

They are obligated until December 2017 to issue inspection reports free of charge. Contact SEDUVI or the professional associations to apply for their services.

You can consult a list of these service providers here: http://www.seduvi.cdmx.bog.mx/servicios/servicio/sistema-dro

MY BUILDING WAS DAMAGED

CAN I ENTER TO RECOVER MY PROPERTY UNDER MY OWN RISK

NO. Not if the Civil Protection authorities prevent you from doing so.

Civil Protection programs are **obligatory for everyone**. The authorities (police, firefighters, civil protection, soldiers, members of the Navy, etc.) not only can order such measures, but also oblige the citizenry to respect them. This includes preventing owners and residents from entering their buildings.

Private citizens who are volunteering are not authorities who can prevent individuals from entering buildings.

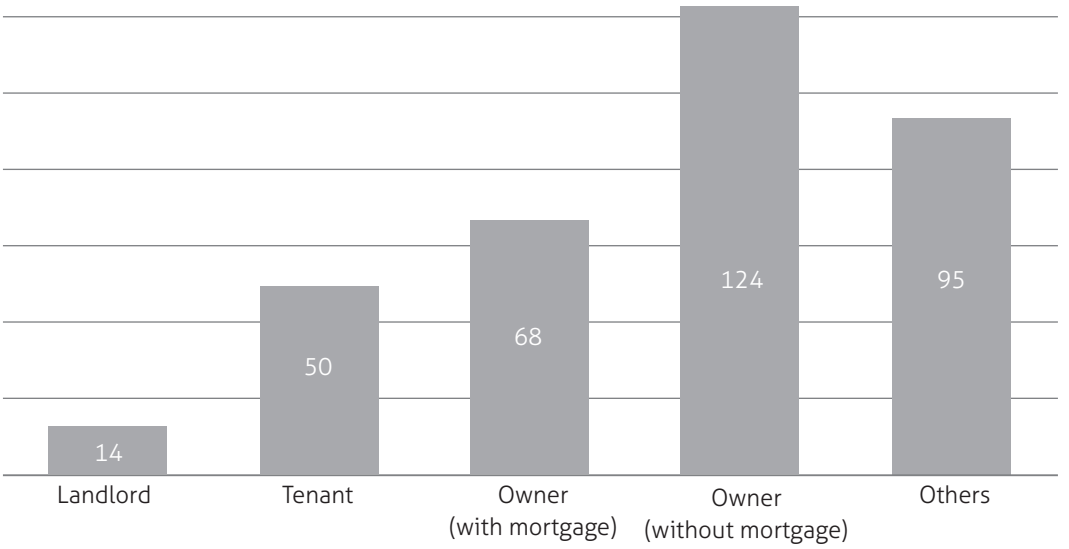
USE YOUR JUDGEMENT AND BE PRUDENT!

Remember that the most important thing is your life and health. If your building has suffered considerable damage, wait for the authorities to make a decision.

EVERYTHING CAN BE REPLACED EXCEPT YOUR LIFE AND THAT OF YOUR LOVED ONES

Find out more at www.appleseedmexico.org/apoyojuridico-sismo/ info@appleseedmexico.org

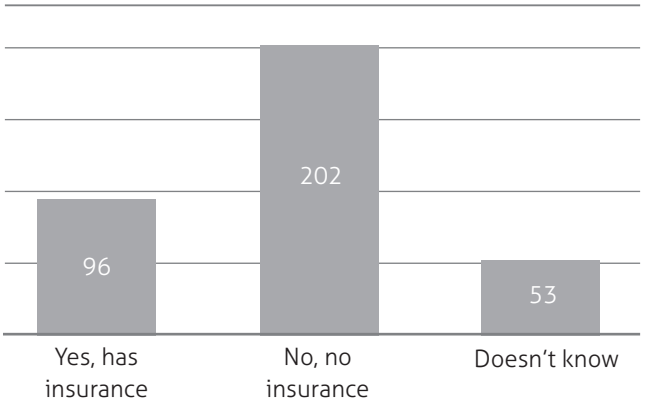
Graph 3
Applicant's Legal Situation



Source: Data base of requests for legal advice from earthquake victims to Fundación Appleseed, Fundación Barra Mexicana, and Centro Mexicano *Pro Bono*.

In our face-to-face visits, 63 legal professionals and several law students met with 418 victims. These teams dedicated approximately 424 *pro bono* hours to the task.

Graph 4
¿Do you have any form of insurance (home and/or auto)?



Source: Data base of requests for legal advice from earthquake victims to Fundación Appleseed, Fundación Barra Mexicana, and Centro Mexicano *Pro Bono*.

sity legal clinics where we can learn and activate emergency response programs, and participate in the on-going training of lawyers and law students in legal matters related to emergencies. All these advances will serve as reference points for developing better protocols and processes for the disaster response in Mexico. This experience is in itself a protocol on how the legal community can work efficiently after a disaster and have a huge positive impact in the affected communities by bringing the victims closer to the legal solutions that can make a difference in their lives. VM

Notes

1 http://www.appleseedmexico.org/probono/.
2 For more about this organization, see http://www.appleseedmexico.org/history-of-appleseed-mexico/. [Editor's Note.]
3 "Guía jurídica para asesoría a damnificados por los terremotos de 2017 (México)," http://www.appleseedmexico.org/wp-content/uploads/2017/11/Gu%C3%ADa_Jur%C3%ADdica_Consolidada_v4_01.11.2017.pdf.
4 "Brigadas jurídicas para afectados por sismo," https://docs.google.comforms/d/e/1FAIpQLSfrzoCadxEOK8Wgp4MHe5yxIFhUZkbf-Ijk33ieSNmQ3R862A/viewform, accessed February 28, 2018.

Claudia Campero Arena*
Alberto Serdán Rosales*

#Verificado19s A Citizens' Experience after the 2017 Mexico City Earthquake[1]

Zazilha Lotz Cruz García

On September 19, 1985, Mexico City experienced an 8.1- magnitude earthquake that lasted two minutes, with its epicenter on the border between the states of Michoacán and Guerrero, about 400 kilometers away. Remembering the devastation it wrought is still horrifying. The exact number of deaths is unknown, but estimates put it at about 10 000. The ledger of the authorities' mistakes and irresponsible actions is extensive, the reason the citizenry had to go to the rescue of people trapped under the rubble. After this terrible experience, building codes were changed, the seismic alert system was implemented, and public policy was changed to be better prepared for a next earthquake.

Exactly 32 years later, on September 19, 2017, the city experienced another quake, this time measuring 7.1, but with an epicenter that was closer: 120 kilometers away on the border between the states of Morelos and Puebla. This time the number of deaths in Mexico City was much smaller, 228. But the federal and local authorities' response capability once again left much to be desired, despite the fact that the capital has sufficient resources to plan an emergency response. So, the citizenry mobilized yet again.

When we felt the quake and saw on social media that damage was considerable, the first reaction of many of us was to want to help, to feel useful. The images from 1985 came back to us, reviving the horror, since for an entire generation the damage from that quake had no parallel. That was the impulse behind the birth of #Verificado19s, a citizens' experience that we felt was obligatory in the face of both urgent need and government ineptitude.

From the afternoon after the quake, enormous confusion reigned about the state of things. We knew about important building collapses with victims, about damage, about problems with services, and about the urgency of support. But what was being published on social and mainstream media was plagued with incomplete data and even errors and fake news. Many people wanted to help, but didn't know how. The government was absent. Disorganization was rampant in the city.

Volunteers or materials (shovels, pick-axes, helmets, buckets, food, etc.) were being requested for places that really did not need them. In other places, material arrived in such great quantity that it was simply piled up and no one redistributed it to other disaster sites where it was required. The lack of coordination was exasperating, since

* Volunteers at #Verificado19s; http://www.verificado19s.org/#.

It became clear that to help, to be able to channel the efforts of the thousands of people willing to lend support, trustworthy, verified information was urgently needed.

every minute that went by was vital for anyone trapped and trying to survive.

It became clear that to help, to be able to channel the efforts of the thousands of people willing to lend support, trustworthy, verified information was urgently needed. A group of citizens, women and men of all ages, met with the idea of supporting in the emergency by creating a map of collapses since official information was simply insufficient. At first, we thought that technological tools would make it possible to bring together the different government data bases that pointed to collapse sites and contrast them with what was published on the social media to identify needs and foster active participation by the citizenry using a cellular phone app to report what was missing, what there was in excess, and where.

To that end, we established a physical site for coordinating operations. Little by little, word got around through message groups of civic organizations or previously-existing mobilizations that made it possible to contact trustworthy individuals with organizational experience. "Meet you at Horizontal," was the key for people to go to a cultural center that loaned its facilities.[2] A tight-knit network of contacts attracted many other people who wanted to know how to help.

That is how the idea of #Verificado19s came into being. The commitment was simple: to disseminate only information verified by what people saw in the field. To do that, a group of urban cyclists was fundamental, since they could move around and report in real time what was needed for rescue efforts.

We soon realized that in the field, needs changed in a matter of minutes, and time was the enemy of finding people alive under the rubble. So, those of us involved in #Verificado19s took on the task of dealing with the needs to the best of our abilities, making a priority of turning over everything necessary to rescue workers so they could focus solely on saving lives. We conceived of the collapse sites like a body open on an operating table, where doctors —that is, the rescue workers— put out their hands, saying, "scalpel," "clamp," or "suction." That meant that it was our job to get those materials and put them in their hands so they could continue with the operation.

So, spontaneously, WhatsApp chats were created that gathered information about transport, donations, collapses. As the monitors on site told us about the needs, we moved to see where we could get them. Indeed, an organized work flow began to emerge:

1) *Needs were identified by several sources*: a) information from monitors who sent lists of what the rescue workers asked for at the collapse sites; b) on social media, volunteers identified requests by monitoring Twitter and Facebook; c) through group chats that did similar work to #Verificado19s's (which might have been just as useful, but unfortunately were not as visible); d) through Google forms filled in by the public. If necessary, people were asked to verify information in the field.
2) *Once needs were identified, the materials were sought, or volunteers were found to take them to collapse sites* through a) chats among field monitors who could get or even directly purchase what was needed; b) chats of monitors posted at different donation sites around the city, particularly the Pilares center located on the street of the same name, for everything tool-related; and the Mexico Park center for medicine, medical equipment, and food; and in the stores at other collapse sites where volunteers organized inventories and updated requirements; c) postcards designed by graphic designers requesting anything that had not been acquired; these postcards circulated on Twitter accounts of organizations participating in the #Verificado19s efforts so the general public could get what was necessary with support from the media, particularly radio, and "influencers" who made the information go viral. The postcards included the day and time of the request so people would know when the information had been posted.
3) *Transport was sought to deliver materials* through networks of cyclers, motorcyclists, and transport drivers who organized during the emergency and with whom we had direct contact; through #Verificado19s volunteers who put their private means at the ser-

vice of the cause; and by requesting support from the general public through Twitter postcards.

4) *Material delivery was verified* with the support of volunteers who coordinated the three previous points from their computers: detecting needs, localizing providers, and transport and delivery to the site.

The process of requesting, procuring, and delivering items could take seconds, minutes, or hours, depending on the complexity of the materials required, their cost, or their location. As time went on, the needs became much more specialized and specific. So, we received circular diamond saw blades, crowbars, radios, booties for the canine half of search-and-rescue dog teams (rescue dogs), lifelines, 100-ton cranes, thermographic cameras, and an endless list of specialized items that many of us had never heard of before and that the government could not provide effectively and efficiently.

Our list of phone contacts had never skyrocketed as rapidly as it did in those few days. Most were a first name and a word that would remind you how that person could help and/or where he/she was located. For example, it included Ana "Narvarte neighborhood," Jorge "tools," Jime "Parque México," Ricardo "Álvaro Obregón site," Frank "food," Josu "transport," "The Architect," "Street lights," Kim "motorcycles," etc.

Everyone contributed what he or she could. Many volunteers came to us thanks to publicity by organizations; to university professors who invited their students to work on the initiative; thanks to people who had access to the media and who helped enormously to make the efforts visible; and even public officials who, frustrated and desperate at government paralysis, preferred to lend their support through our platform. In the end, friends, family, acquaintances, people who wanted their work to be useful. The chats were active day and night. When we finally got a few hours to rest, the adrenaline kept us awake. We would see imaginary, unintelligible conversations on the screen that we felt the need to respond to.

We were invaded by frustration at the local government's incapacity. Days after the tragedy, it still had not established mechanisms to resolve the most urgent needs.

When we would wake up or just get back to work because we hadn't been able to fall asleep, the telephones could have up to 600 unread messages. There was nothing for it but to hurry to try to catch up.

Beyond Mexico City, #Verificado19sEstados

The emergency was not limited to Mexico City; the September 19 earthquake hit Morelos, the State of Mexico, and Puebla very hard, not to mention the consequences of the previous September 7, 8.2-magnitude quake and its hundreds of aftershocks in Chiapas and Oaxaca, which also demanded attention. That is how #Verificado19s-Estados (#VerifiedStates) was created, which took on the task of sending aid to remote areas through a committed citizenry, whose priority was not pulling people out from under rubble, but dealing with the urgent needs of thousands who had been left homeless.

Citizens in the Face Of Government Incapacity

Verifying information, working under pressure for hours and hours makes us susceptible to making mistakes. To minimize them, we had a kind of mantra that something is verified only if it fulfills one of the following two criteria: 1) You saw it yourself, or 2) You were told by at least two different people that they themselves had seen it. Anything else was not verified. With this constant reminder, we became more efficient in using our energy and that of everyone who used this platform to channel their aid. We saw how many people in other chats and networks began to make a habit of requesting confirmed information.

We were invaded by frustration at the local government's incapacity. Days after the tragedy, it still had not established mechanisms to resolve the most urgent needs in collapse sites, collection centers, and shelters. The famous city governmental C5 virtual monitoring and decision-making center issued reports that they spewed out on a computer (in Word) and printed with absolutely no systemization. In fact, the maps that appeared on government command center screens were those generated by #Verificado19s, and they used our postcards to channel

rescue efforts in the absence of an agile, swift system of their own. NASA itself used our maps to do their analysis, and not those of an official source.[3]

What is more, the international rescue teams had no local authority to coordinate with to do their job in a trustworthy way, and they used #Verificado19s as an information source and even to procure the equipment and material they needed. To cap it all off, our volunteers found food for police officers and members of the military, since the government did not provide it. This meant that a great deal of time and energy was lost that could have been used to deal with the emergency.

Among the #Verificado19s volunteers were a handful of public officials, who, desperate to be able to act and highly committed, found that our initiative was a useful way of helping. Thanks to them, it was possible to get permission to be in ground zero areas, get first-hand information, and even mobilize resources.

On October 1, #Verificado19s published a communiqué to the citizenry. After days of running to and fro to deal with the emergency, we took a breath to pose questions that we had been asking ourselves the whole time. To summarize all of them in one, we can ask, "Why, with so much money and resources at its disposal, is the government not organized to save lives, and, therefore, why did the citizenry have to replace it?"[4]

Lessons Learned

From the standpoint of the citizens' experience, clearly, each person's talents and possibilities offer many ways of helping during an emergency. Creating relationships of trust beforehand allows us to use them and organize more easily at moments of the greatest need. Civic organizations, networks that exist to work on other aspects of public life, were key for quickly coordinating efforts. This emergency has touched us profoundly and we have made dozens of dear, dear friends, many of them without ever even meeting in person.

It goes without saying that dozens of citizens' initiatives emerged during the emergency. Thousands worked tirelessly, not just us. Some people reached a wider public, but the important thing was each person's contribution, many of them anonymous, helping those who needed help at the time and still do today.

While, even without any preparation, the public went out into the street to organize to save lives, the government looks like an insensitive observer. For people, distance is no obstacle, and they show us that you don't only work on the streets, but can also lend support at a distance, in other cities and countries, thanks to the proximity made possible by communication, so that people on site have everything they need to carry out their important tasks.

All levels of government were and continue to be incapable of serving the population. In fact, they are organized to do business and win elections, not to save lives or to respond to the needs of reconstruction. That is why real accountability is necessary, as is truly establishing responsibilities and reconstruction in concert with different neighborhood, social, and civic organizations, from the standpoint that each of them is familiar with and from which they can best contribute.

The September 19 earthquake and the efforts in #Verificado19s have profoundly changed us simply because they have shown that many, many people are willing to put everything on hold to help others who perhaps we have never even seen before but who need us. However, that powerful impetus will dissolve if we don't know how to organize, if we do not manage to connect and listen to each other, and, above all, if we are not able to trust each other. In this emergency, we learned to trust each other and work together without being naïve, but knowing that we can do very little alone. At #Verificado19s, that trust was built by managing information responsibly and working with a great deal of love. VM

Notes

1 The authors are among the hundreds of volunteers who participated in #Verificado19s.

2 This refers to the Horizontal Cultural Center, in Mexico City's Roma Neighborhood, https://horizontal.mx/que-es/. With regard to collaboration with the #Verificado19s volunteers, see https://horizontal.mx/verificado19s/. [Editor's Note.]

3 Alan Buis, "NASA-Produced Damage Maps May Aid Mexico Quake Response," NASA, September 21, 2017, https://www.nasa.gov/feature/jpl/nasa-produced-damage-maps-may-aid-mexico-quake-response, accessed February 28, 2018.

4 See the communiqué at https://twitter.com/verificado19s/status/914626035865362432/photo/1?ref_src=twsrc%5Etfw&ref_url=https%3A%2F%2Fwww.buzzfeed.com%2Fjosehernandez%2Fverificado-19-ese. [Editor's Note].

Henry Romero/Reuters

Natividad Gutiérrez Chong*

September 19 Youth and National Unity

An earthquake on the same day that the country commemorates the devastation of another, 32 years prior, cannot help but cause panic and collective hysteria. Perhaps it was this repetition, hard to find at any other moment in history, and the collective memory of the first experience, that led many, many young people in the Valley of Mexico metropolitan area to act promptly, with dedication and solidarity, and, above all, with the leadership we witnessed.

I work on two projects at the UNAM Institute for Social Research (ISS) with five women and five men between the ages of 21 and 27. In our work meetings after the earthquake, we never stopped talking about the many experiences that come with living and suffering through an event like this. For these young people, what comes to mind first and foremost is undoubtedly its impact, just like for me in 1985, when I was as young as they are now. I'll never forget it. The big difference was that in their case, social media provided them with an enormous amount of information, making it a milestone.

Given that one of the projects we work on is a diagnostic analysis of the way the interaction of social strata, ethnic origin, gender, place of study or work, and place of residence, among other factors, influence people's attitudes and decisions, we decided that we had to make room in our research project to find out why young people acted so efficiently and with so much solidarity.[1]

So, we included new categories for analysis, which I will present here.[2] We observed that young people had an impact on society by 1) showing moral leadership; 2) acting as agents for change; and 3) breaking with stereo-

* Professor and researcher at the UNAM Institute for Social Research (ISS); nati.gutierrez.chong@gmail.com.

types. I should add that these categories were conceived based on conversations or comments heard and read in the different ways that oral and written memory are transmitted.

Moral Leadership

Given the many collapsed buildings, the mountains of rubble, the clouds of dust, the chaos, the desperation, and the frustration, there were many lives to save. But people perceived the official strategy as slow, insufficient, and even inappropriate. That is why many young people immediately took on the task of organizing themselves to move rocks, take away rubble, distribute aid, etc. With these actions, they seemed to have taken over the city and its environs on September 19 and the days that followed. That moment was key for exerting strong moral pressure so that the search for and rescue of those trapped did not stop, despite the government attitude of giving up in the face of the apparent impossibility of finding more people alive as time went on.

Soon, the federal and local governments began to redefine their organization and logistics; they increased and improved rescue efforts and allowed foreign teams to help, reporting to the media about those rescued.

This moral leadership by young people —but not only them— had two other strains: the great humanitarianism they displayed in gathering and distributing food, and the decision to act compassionately regarding pets.

Agents for Change

The events put to the test the density of social and digital media as well as of national and international users. Even though I left my cubicle in University City quickly when the seismic alarm sounded, I managed to take my cell phone with me. This meant that, when the shaking stopped, I realized that I already had five messages from friends and relatives abroad asking how we were. I don't know if there is any way to determine how national social media behaved to this same end, since the uncertainty and terror exacerbated our obsession with immediate communication, slowing it down.

I recognize that I re-sent an unverified piece of news; my 21-year-old son responded instantly telling me to not send that kind of information in order to control the overwhelming number of fake news stories that could create panic or conflicts. I also remembered that, in this context, unwise transmission of messages would cause the networks to collapse. This kind of communication between my son and me is by no means an isolated phenomenon: many, many people like him responded clearly to the critical situation. It seems to me —and this is a personal perception shared by some colleagues and friends— that many men and women over 40 behaved irresponsibly on social media. This means that, their understanding of how to behave in digital communications allowed these young people to ensure that the collapse of social media was not worse than it was. Proof of that was their efficiency in distributing aid and rescue and donation efforts.

> The heroic image of young people has also grown because they managed to expose acts of corruption linked, among other things, to bad practices by real estate and construction companies.

Breaking with Stereotypes

Many people think "ninis" (those who neither study nor work) and millennials are the prototype of urban youth. This is a stereotype, and, as we know, stereotypes are generalizations. So, many think that young people are apathetic, uninterested in society, and that they spend their time hunkered down in front of a screen, isolated and ill-tempered.

In my research team meetings, some members often commented that they knew young people like this, but that, contrary to the expectations we have about these kinds of stereotypes, these young people went out onto the street and looked for a way to help, developing forms of organization that turned out to be very effective for saving lives. They also constructed or made visible a nonverbal language, like raising their fists to ask for silence if they heard a murmur that might be a sign of life under the rubble; this was also a powerful use of silence itself. These were symbolic languages on the social media that

were undoubtedly moving due to the sensitive situation and the successful call they made for solidarity.

Of all the kinds of natural disasters, earthquakes prompt a massive social response difficult to achieve at other times: national unity, "Mexico is still standing," was repeated over and over on official radio broadcasts. From the earthquakes that plagued Ecuador in the colonial period to the recent quakes in Japan, China, Chile, and Papua New Guinea, clearly these events promote social cohesion because the tragedy and suffering they bring are intense given how unpredictable and uncontrollable nature is and the fact that they affect rich and poor alike, without regard for ethnic origin or age. Therefore, earthquakes cause fear and desperation, but they are also an irreplaceable opportunity for generating change or new phenomena.

In this kind of context, heroes emerge. This was the case of the nun Mariana of Jesús de Paredes, Ecuador's patron saint, who died in 1645 after doing penance several times to calm the bowels of the Earth and mitigate the devastation and distress in the face of the impossibility of stopping the effects of the plague and the natural phenomena among the population. Known as "The Lily of Quito," she is part of that people's historic memory, particularly in times that could affect the stability of that Andean city.

In Mexico, after last year's earthquake, the heroic image of young people has grown for the three reasons stated above, but also because they managed to expose acts of corruption linked, among other things, to bad practices by real estate and construction companies. In addition, the synergy among those young people made it possible to trace the distribution of the numerous donations for reconstruction.

So, the heroes and heroines multiplied everywhere all the time. Referring to young people in no way implies that we're talking about a fixed, homogeneous category. Precisely, the diagnostic analysis we will be carrying out in the research projects I head at the UNAM will explore more deeply the gaps separating young people in the metropolitan area by looking at the interaction among variables like social strata and ethnic origin. However, what I want to underline here is that, through their multiple actions, they called for national unity, relying on the collective feeling of solidarity, hope, and the desire to rebuild. While this was the case at the time, the possibility does exist of making that communion something that allows for future encounters among people despite our diversity and the existing inequality.

Many young people showed an enormous capacity for helping without thinking of recompense; they made the nation turn and look at itself amidst misfortune.

To conclude, I think that many young people showed an enormous capacity for helping without thinking of recompense; they showed their humanitarian, compassionate side; they made the nation turn and look at itself amidst misfortune. Undoubtedly, the social media helped in the middle of that catastrophe, which, in an unhappy coincidence, also occurred on September 19. It is worth exploring how the memory of the first September 19 was transmitted; if it was from parents, grandparents, family members, or friends, and if that unifying thread, that flow of memory, was an important reason for activating so much determination and dedication. A natural disaster changes our lives and makes us make unforeseen decisions.

For 32 years, our young people have been nourished by collective memory; they have become aware of their importance and why we must be alert in those moments when facing uncertainty. Nevertheless, their leadership and innovative capacity has seemingly retreated in recent months amidst the election campaigns. The nation's social and political environment is shot through with anger and uncertainty. People are fed up; phobias toward this or that candidate sharpen; hate speech and verbal attacks abound, while memes fly across the social media. In these elections, we will have another opportunity to look at ourselves as a nation and not forget the social fortitude forged by young people last September 19. VM

Notes

1 For more information about Dr. Gutiérrez Chong's work, see http://www.iis.unam.mx/indexcontent.php?_module=86. [Editor's Note.]
2 I also had the opportunity of sharing these categories at the meeting held at the IIS November 13 and 14, 2017, "Jóvenes e identidades: rescate y organización. Las ciencias sociales frente a los sismos de 2017: algunas reflexiones" (Young People and Identities: Rescue and Organization. The Social Sciences and the 2017 Earthquakes, Some Reflections).

Henry Romero/Reuters

Raúl Benítez Manaut*

The Military and the Earthquake

The Military's Mission: Protecting the Populace

Historically, in addition to preparing to defend the country, Mexico's Army has fulfilled many economic and social functions. Among them are collaborating with the government to build highways in rural areas, waging health campaigns, protecting the environment, and carrying out missions of civil protection. The Navy and Air Force have also trained to protect the populace in the case of many kinds of natural disasters. In rainy season, the armed forces are commonly deployed along the coasts, organized according to two plans: the Army's DN-III-E and the Navy Plan, both backed up by the local population and internationally.

The Army, Navy, and Air Force offer preventive or reactive support to natural disaster victims during hurricane season from June to December every year, or after earthquakes, such as the 1985 Mexico City quake. They have carried out special and rapid deployment operations on non-military, non-combat missions, what international military jargon dubs humanitarian missions. This is complemented with the concept of civil protection, organized as part of the National System of Civil Protection (SINAPROC), under the aegis of the Ministry of the Interior.

Humanitarian Military Diplomacy

Troop deployment in peacetime dates back to the 1970s when, after the 1972 earthquake in Managua, the Mexican government authorized the Navy to go to Nicaragua to help. It did the same for El Salvador in the face of the

* Researcher at CISAN, UNAM; manaut@unam.mx.

destruction from the 1986 quake. The Army sent 665 troops in an air-and-sea bridge to Honduras, Guatemala, Nicaragua, and El Salvador. One of its most noteworthy efforts was the aid sent after the destruction caused by Hurricane Mitch in October and November 1998.

There have also been humanitarian missions beyond Central America. Among the most widely recognized is the help the Navy offered after the tsunami in Indonesia, where it sent the ships *Papaloapan*, *Usumacinta*, and *Zapoteco* to deliver 1 480 tons of food and medical aid. Participating in these tasks were 826 Navy personnel, who also used helicopters and military transport, required because of the logistical difficulties involved.

In addition, the Army and Navy both sent support troops to the United States when Hurricane Katrina hit the Louisiana coast in early September 2005. On September 8, many nursing specialists, cooks, and doctors, for a total of 196 soldiers, entered the United States through Laredo, Texas, heading for Kelly U.S. Air Force Base. In addition, 45 unarmed military vehicles transported 250 tons of food for the New Orleans victims. Navy ship *Papaloapan* delivered 200 tons of aid, including water, medicine, and rescue equipment, to the port of Biloxi, Mississippi.

Another very important humanitarian mission was deployed to Haiti in 2010, when more than 300 000 people died in a huge earthquake that semi-destroyed the city of Port-au-Prince. Between January 13 and 30, three Mexican Air Force Hercules aircraft transported 70 tons of food to the country; in addition, four days later a loaded cargo plane went, as did two hospital ships, the *Huasteco* and the *Papaloapan*. The former took in 400 tons of aid, including eight water purification plants, drinking water, food, blankets, sleeping mats, and medical materiel. The military also transported the civilian Topos Tlatelolco (Tlatelolco Moles) rescue brigade and a huge amount of food donated by civil society through the Mexican Red Cross.

Mexico Is Earthquake Country

The September 19, 1985 quake caused many more deaths than the two September 2017 quakes (September 7 and 19). In 1985, approximately 10 000 people died in the rubble, while last year's death toll was no higher than 500. This was due to the fact that government, armed forces, and the civilian population learned a great deal about how to organize to protect themselves from these events. The 1986 creation of SINAPROC was also a great help for coordinating the activities of all federal, state, and municipal government agencies.[1] In addition, the huge number of citizens who spontaneously coordinated to join rescue efforts to get the injured out from under the rubble in 1985 was a great lesson; it turned the general population into a fundamental actor in these tasks. Another reason why there were fewer fatal victims in 2017 is that building regulations were updated after 1985. In the case of the armed forces, more than 30 years of training its members in rescue techniques for earthquakes contributed to their organizational capability and tactical effectiveness.

> The government not only did not obstruct the population, but it opened the doors much more rapidly to international solidarity; and although the military tried to create "order," it did not impose it.

The Government and the Military: Plan MX

After the September 7 and 19, 2017 earthquakes, the government declared 700 municipalities in the states of Oaxaca, Chiapas, Guerrero, and Morelos and the 16 boroughs of Mexico City to be in a state of emergency. The aim was to facilitate the coordination of several government agencies, the armed forces, international aid, and the efforts of the population, which once again participated in rescue efforts.

In the hours after the September 19 quake, after the population rapidly began to act on these tasks, the Army, Navy, and federal police, as well as the Mexico City police, implemented what was called Plan MX. This was the first government response, designed so the military and security forces could deploy and act as rapidly as possible, coordinating with civilian volunteers who spontaneously —and without any training— were already working.

These non-military missions are both preventive, such as in the case, for example, of dangerous volcanic activity, or to help during disasters, as in this case.

After the September 7, 2017 quake, the Navy sent its Mexican Republic Navy (ARM) logistical support ship *Mon-*

In a telephone survey, the civilians doing solidarity work received the highest approval rating (94 percent), followed by the Navy (86 percent) and the Army (85 percent).

tes Azules to the port of Salina Cruz, Oaxaca, with 539.37 tons of humanitarian aid to be transferred to the distribution center and handed out immediately to homeless families in the states of Chiapas and Oaxaca. The ship *Usumacinta* followed, delivering 536 tons of supplies. Later, on September 27, the *Usumacinta* sailed to Manzanillo, Colima, with a pneumatic shelter for 800 people, a mobile kitchen to feed 300, and a large amount of food, medicine, clothing, personal hygiene items, disinfectant, and cleaning articles. All these products had been donated by the public in Northern Mexico to the System for Comprehensive Family Development (DIF) and the Red Cross.

On September 19, 2017, the army implemented its DN-III-E Plan, deploying 3 428 troops (men and women), as well as 15 canine teams to search for people trapped in the rubble. In the first five days after the tragedy in Mexico City, the Navy rescued 115 people alive and recovered 114 bodies. They also helped build emergency shelters and food and medicine donation centers. One thousand three hundred ninety-eight Navy personnel participated through naval sanitation brigades, the Navy Infantry Corps, and Search and Rescue Teams for Collapsed Structures (BREC).

Government, the Military, And the Population

Mexico learned a great deal between 1985 and 2017. Thirty-two years ago, the population acted in a disorganized way, but with great moral fortitude and spirit of solidarity. The government did not have appropriate institutions to coordinate activities and was surprised at the public's activism. On that occasion, there was even a great deal of friction between the military and the population. The desire to impose order on rescue efforts sometimes seemed like "martial law" and was rejected by the populace.

In September 2017, things had changed. Many of the existing protocols functioned successfully. The government not only did not obstruct the population, but it opened the doors much more rapidly to international solidarity, and the military; although it tried to create "order," it did not impose it, since they understood the dynamic of solidarity of the citizenry that once again was participating decisively. The military could not intervene around some very sensitive issues. For example, a large number of schools were damaged, and they could not prevent the children's relatives from leading the rescue efforts.

A telephone survey on September 24, 2017 by the *Reforma* daily newspaper showed that 79 percent of respondents thought they were better prepared for the emergency than in 1985. However, only 56 percent thought that the government was also better prepared. The civilians doing solidarity work received the highest approval rating (94 percent), followed by the Navy (86 percent) and the Army (85 percent). However, governors, Mexico City's mayor, and the country's president did not rate high, an expression of the citizenry's complaints about their administrations.[2]

The military's public assistance efforts consisted of rescuing survivors from the rubble, distributing food, and emergency medical care. But, normally, they withdraw a month after these kinds of tragedies, just as the civilian population and international cooperation do.

The work that follows with the civilian population falls to government institutions. The "post-tragedy" efforts (reconstruction of damaged homes and buildings, and offering loans and support for those left homeless and living on the street) is not a function of the military, but of governments. So, the harsh criticism of the public in this stage of reconstruction does not extend to them. VM

Notes

1 For more information on this, see SEGOB, "¿Qué es el #Sinaproc y cómo se consolidó en nuestro país?" https://www.gob.mx/cenapred/articulos/que-es-el-sinaproc-y-como-se-consolido-en-nuetro-pais-enterate. [Editor's Note.]

2 Rubén Aguilar, "Una primera evaluación: gobernadores, Mancera y Peña Nieto no salen bien evaluados en su actuación ante los daños causados por los sismos," *Animal político*, September 26, 2017, www.animalpolitico.com/blogueros-lo-que-quiso-decir/2017/09/26/una-primera-evaluacion/.

The September 19, 2017 Quake In Numbers

Locations affected: Mexico City and Morelos, Puebla, State of Mexico, Guerrero, and Oaxaca.

Aftershocks: On September 19, the National Seismological Service reported 11 aftershocks, the last one at 8:30 p.m. The largest was a magnitude 4.[1]

Dead: Total dead, 369: Mexico City, 228; Morelos, 74; Puebla, 45; State of Mexico, 13; Guerrero, 6; and Oaxaca, 1. According to the Ministry of Foreign Relations, among the dead were nine foreigners: five from Taiwan, one from Panama, one from South Korea, one from Spain, and one from Argentina.[2]

Buildings in Mexico City with the largest number of dead:

286 Álvaro Obregón Ave: 49 dead
11 Rancho Tamboreo Street: 26 dead
168 Bolívar Street: 15 dead
282 Puebla Street: 14 dead
4 Edimburgo Street: 13 dead
4 Escocia Street and 26 Escocia Street: 10 dead
915 Prolongación Petén: 10 dead[3]

Buildings collapsed in Mexico City: 39[4]

Homes damaged: 5 765, of which 2 273 were a total loss and 3 492 suffered partial damage.[5]

Schools Damaged

State	Schools Damaged (total)	Minor Damage	Partial Damage	Complete Loss
State of Mexico	3645	1171	2396	78
Morelos	1540	906	606	28
Puebla	1216	1098	56	62
Mexico City	1208	822	378	8
Tlaxcala	1004	942	61	1
Michoacán	536	525	11	0
Hidalgo	415	370	36	9
Guerrero	254	82	111	61

Source: Developed by the author with information from the governmental document "Plan de Acción ante Sismos, 2017."[6]

Public Utilities: 4.5 million people were left without electricity: 1 817 000 in Mexico City; 1 779 000 in the State of Mexico; and 722 913 in Morelos. Damaged: 1972 utility poles; 754 transformers, and 19 high-tension power lines in 7 states.[7] A total of 6 million people were without water in Mexico City, the State of Mexico, Morelos, and Puebla, and 2 300 leaks in water mains were reported.[8]

Health Centers: 53, reported with major damage; 325, with minor damage.[9]

Shelters: Mexico City, 46; Morelos, 36; and the State of Mexico, 15[10]

Donation Centers: 14 in Mexico City[11]

Cash donations by companies and foundations: Coca Cola, US$1 million to the Red Cross and US$2 million for reconstruction; Apple, US$1 million; AT&T, US$1 million; Bancomer, Mex$10 million to the Mexican Red Cross; Ford, US$500 000; Home Depot, Mex$13.5 million to the Red Cross and US$250 000 through the Home Depot Foundation; Pujol, Mex$100 000; Altán Redes, US$1 million; Samsung, Mex$20 million; Uber, Mex$5 million; Facebook, US$1 million; Google, US$1 million; Fundación Carlos Slim, Mex$2.47 billion.[12]

Donations in Kind: Heineken, Grupo Martí, Purina, Nupec, Petco, Duracell, KIA, Kellogg's, and Huevos San Juan[13]

Offered Free Services: Aeroméxico, Gayosso, Telcel, Movistar, Unefon, Cabify, and Uber[14]

Donations from foreign celebrities: Katy Perry, US$500 000; Shawn Mendes, US$100 000; Lady Gaga, US$2 million; Cristiano Ronaldo, €700 000[15]

Donations from abroad: US$2.6 million; Can$550 000, and €10 000. Countries that donated: Andorra, Canada, China, South Korea, France, the United States, Taiwan, and Vatican City[16]

International Rescue Personnel came from

- Chile: 18
- Colombia: 30
- Ecuador: 30

- El Salvador: 25
- Spain: 54
- United States: 60
- Guatemala: 48
- Honduras: 36
- Israel: 70
- Japan: 72
- Panama: 35
- Venezuela: 20[17]

Foreign experts in structural assessment came from Switzerland, Costa Rica and Peru[18]

Mexican Government Support: The Ministry of National Defense implemented its DNIII-E plan, deploying 3 428 troops and 15 trained search dogs.[19]

The federal government has stated that it would distribute Mex$6 000 000 844 pesos through the Natural Disasters Fund (Fonden) Partial Immediate Support program to earthquake victims. These resources would be distributed in 9 states: Oaxaca and Chiapas will receive 59 percent; Morelos and Mexico City, 20 percent; Puebla and the State of Mexico, 8.3 and 5.6 percent, respectively; Guerrero, 4.5 percent; Tlaxcala, 1.03 percent; and Veracruz, 0.3 percent.[20] VM

Bertha Serrano Torre
Staff writer

Notes

1 "Todo sobre el sismo que sacudió el centro del país," *Expansión*, http//:expansion.mx/nacional/2017/09/19/sismo-en-mexico-deja-decenas-de-muertos.
2 "Lo que el #19S nos dejó: las víctimas, daños y damnificados en México," *Animal político*, http//:www.animalpolitico.com72017/10/ci fras-oficiales-sismo-19s/; "El sismo de magnitud 7.1 deja 369 muertos en CDMX, Morelos, Puebla, Edomex y Guerrero," *Animal político*, http//:www.animalpolitico.com/2017/10/sismo-muertos-cdmx-morelos-puebla-edomex-guerrero.
3 Ibid.
4 "Lo que el #19S nos dejó: las víctimas, daños y damnificados en México," op. cit.
5 Ibid.
6 Plan de Acción ante Sismos 2017, "Plan de acción ante sismos 7 y 19/sep," http//:es.scribd.com/document/361993553/Plan-de-Accion-Ante-Sismos-Sep-2017-171017.
7 "Lo que el #19S nos dejó: las víctimas, daños y damnificados en México," op. cit.
8 Ibid.
9 Ibid.
10 "Se abren albergues en zonas afectadas por el sismo," *Expansión*, http//:expansión.mx/nacional/2017/09/20/albergues-en-la-cdmx-donde-acudir.
11 "Ayuda a víctimas del sismo: éstos son los centros de acopio en el país," *Animal político*, http//:www.animalpolitico.com/2017/09/centro-acopio-mexico-sismo.
12 "¿Quiénes han donado y de a cuánto a los damnificados del sismo del #19S?" *Nación 321*, http//:www.nacion321.com/ciudadanos/quienes-han-donado-y-de-a-cuanto-los-damnificados-del-sismo-del-19s; "Las empresas que han ayudado tras el sismo," *Milenio*, http//:www.milenio.com/negocios/empresas-solidaridad-donaciones-sismo-19_septiembre-mexico-milenio-noticias_0_1034896645.html; "México unido sismos 2017," *Inicio 2*, Fundación Carlos Slim, http//:fundacioncarlosslim.org.
13 "Las empresas que han ayudado tras el sismo," *Milenio*, http//:www.milenio.com/negocios/empresas-solidaridad-donaciones-sismo-19_septiembre-mexico-milenio-noticias_0_1034896645.html.
14 Ibid.
15 *Nación 321*, op cit.; "Más que palabras: estos famosos donaron dinero a México y Puerto Rico," *El Tiempo*, http//:www.eltiempo.com/cultura/entretenimiento/famoso-que-han-donado-dinero-a-las-victimas-del-terremoto-en-mexico-y-del-huracan-maria-134344.
16 "Lo que el #19S nos dejó: las víctimas, daños y damnificados en México," *Animal político*, http//:www.animalpolitico.com72017/10/cifras-oficiales-sismo-19s.
17 "Todos estos países han mandado ayuda a México tras el sismo del 19S," *Televisa News*, http//:noticieros.televisa.com/historia/nacional/2017-09-24/estos-paises-han-apoyado-mexico-sismo-19s/; "Continúa la ayuda internacional a México tras el #19S," *Aristegui Noticias*, http//: aristeguinoticias.com/2509/mexico/continua-la-ayuda-internacional-a-mexico-tras-el-19-s/.
18 *Aristegui Noticias*, op cit.
19 "Todo sobre el sismo que sacudió el centro del país," *Expansión*, http//:expansion.mx/nacional/2017/09/19/sismo-en-mexico-deja-decenas-de-muertos.
20 "Lo que el #19S nos dejó: las víctimas, daños y damnificados en México," *Animal Político*, http//:www.animalpolitico.com72017/10/cifras-oficiales-sismo-19s.

Edgard Garrido/Reuters

Jojutla, Morelos.

Virginia García Acosta*
Gerardo Suárez**

The Pre-instrumental Seismic History of Morelos[1]

The state of Morelos, located in Central-Southern Mexico, only came into being in the second half of the nineteenth century. From the colonial period, the area had been known for its good climate, the production of sugar cane and top-quality rice, and its many rivers and lagoons. It had never been known as a seismic area, despite the fact that the Trans-Mexican Volcanic Belt crosses the northern part of the state, and the Popocatépetl Volcano is one of its highest points. However, the September 19, 2017 earthquake —the same day of the year that the emblematic 1985 earthquakes took place— had its epicenter there, although with very particular characteristics that we will review here.

Its impact was noteworthy, particularly in Morelos, although also in Mexico City and the states of Mexico and Puebla. The National Seismological Service (SSN) reported its magnitude as 7.1, at 1:14 p.m., with an epicenter 12 kilometers southeast of Axochiapan, Morelos (latitude,18.4°; longitude, 98.72°) and 57 kilometers deep.[2]

For those of us who were near the epicenter in Morelos, the experience was truly frightening. It reminded us of the title of one of graphic artist José Guadalupe Posada's works that we often use to illustrate our texts about earthquakes, *The End of the World*.[3] That's what it felt like. As always with potentially destructive natural threats, its impact was very different from region to region. Once again we saw that both damage and the population's

* Anthropologist, historian, professor and researcher at the Center for Research and Study in Social Anthropology (CIESAS); vgarcia@ciesas.edu.mx.
** Researcher at the UNAM Institute of Geophysics Department of Seismology; gerardo@ollin.geofisica.unam.mx.

ability to recover correlate directly to the level of vulnerability and exposition of the communities affected.

The Morelos state government has stated that the earthquake affected the municipalities of Axochiapan, Cuautla, Cuernavaca, Miacatlán, Jojutla, Tecamac, Tlayacapan, Xochitepec, Yautepec, Yecapixtla, and Zacatepec, damaging approximately 20 000 homes, while 185 schools —mainly primary schools— suffered considerable damage. It contrasted sharply with what happened in Mexico City, where the destruction concentrated in buildings of several stories, whereas in Morelos, low-income family homes, many of which had been built by the owners themselves, suffered the greatest effects.

As researchers of historic disasters in Mexico, Latin America, and other latitudes, we took on the task of examining the seismic history of Morelos using the interdisciplinary approach that is unavoidable for this kind of analysis. We encountered many surprises, since even though the area had not usually been identified as a land of earthquakes, reports of them exist from ancient times (see Table 1). Numerous social and geological studies and analyses have come out of this effort. One is the interactive Historic Earthquakes web site page (www.sismoshistoricos.org), published by the UNAM Geophysics Institute.

Morelos had never been known as a seismic area. However, the September 19, 2017 earthquake had its epicenter there.

As we can see in Table 1, the first earthquake registered in Morelos was in 1540, apparently linked to an eruption of the Popocatépetl Volcano. The second, in 1585, was reported in Jojutla.[4] The first detailed description of an earthquake in Morelos was one that happened on January 17, 1653. While the reports center on what happened in Mexico City, as usually happens with the oldest ones, damage was also recorded in the town of Amilpas, Morelos. Gregorio Marín de Guijo, one of the authors of *Diarios de sucesos notables* (Journals of Noteworthy Events), a series of writings from the mid-seventeenth to the late eighteenth centuries, gives his version of the most important events in his two volumes for 1648-1664, originally published in 1853.[5]

As usual with this kind of record, as we approach the present, the reports become more frequent and detailed, not because there were more earthquakes, but because the country's population was growing and communications were expanding. The following are a few examples.

One report about Tetela del Volcán and associated, as the name

Table 1. Earthquakes in Morelos in The Pre-Instrumental Period (1540-1912)

1540	1880, October27	1904, January 3
1585	1882, April 23	1904, April 12
1653, January 17	1882, April 24	1906, January 29
1784, January 16	1882, April 28	1906, March 7
1837, November 22	1882, June 5	1906, March 16
1842, October 18	1882, June 6	1907, April 14
1845, April 7	1882, July 17	1907, September 24
1845, April 8	1882, July 19	1909, July 30
1845, April 10	1884, May 10	1909, July 31
1852, December 4	1887, June 3	1909, September 5
1854, May 5	1888, September 6	1909, October 31
1857, August 19	1889, September 1	1910, May 31
1872, March 27	1889, September 6	1911, February 3
1873, February 8	1889, September 7	1911, March 10
1873, October 7	1890, December 2	1911, May 25
1874, March 16	1892, August 4	1911, June 7
1874, August	1892, August 29	1911, August 27
1874, October 7	1894, December 30	1911, Noviembre 18
1874, November 13	1896, March 20	1911, December 16
1880, March 19	1899, March 24	1912, November 19
1880, October 10	1902, April 18	
1880, October 11	1902, September 23	

Source: Virginia García Acosta and Gerardo Suárez Reynoso, *Los sismos en la historia de México* (Mexico City: Fondo de Cultura Económica/UNAM/CIESAS, 1996).

indicates, with the volcano, was published in the newspaper *El siglo diez y nueve* (Nineteenth Century) on November 6, 1842, regarding an earthquake on October 18 of that year:

> On the 18th, at 12:30 precisely, there was an earthquake here [in Tetela del Volcán] that was so strong as to alarm me. . . . It increased in strength so much that I had no alternative but to crouch in the doorway of the parlor, whose walls were more than a yard and a half thick, and it was necessary to stop the doors that were closed so they didn't bang. The strange noise that could be heard in this building caused me grave concern, and I merely began to recite the prayers of the litany and the Magnificat, which lasted throughout the earthquake. The volcano, which constitutes the barometer of this place, continues to belch red beauties [sic] so thick that, once dispersed, they made the rest of the day dark and melancholy. The atmosphere and the days have continued thus, despite having vented on the 20th at nine at night, with a storm of wind, lightening, torrents of water, and thunder that also intimidated me, and I had to light the candle of the Blessed Sacrament.[6]

In its August 24 and 28, 1857 editions, the same newspaper covered an earthquake felt in Yautepec on August 19 at 11:20 a.m., writing, "A shaking was felt first and then repeated a short time later, ending with a strong vibration that caused the dome of the church to collapse. . . . The rest of the building, the priory, and the schools are at risk of being ruins. . . It was also felt in Cuernavaca and other towns to the south."[7]

Two important sources of Mexico's seismic history, Mariano Bárcena and Manuel Martínez Gracida,[8] explain what happened in Xochitepec during the October 7, 1873 earthquake in their texts published in 1875 and 1890, respectively:

> Underground noises [could be heard], and several fountains of crystalline water with a strong, sulfurous smell appeared in the plaza. They continued to bubble on the 8th, 9th, 10th, and 11th, augmenting the amount of water in the old stream that existed on one of the town's streets, through a new mouth very near the main flow. These shaking movements ceased completely without leaving any sign at all that could indicate a volcanic eruption.[9]

In the specific case of Morelos, throughout the nineteenth century and up until 1913, the last year we will examine in this text, the period of what has been dubbed the pre-instrumental stage of Mexican seismology, we have identified 57 reported earthquakes. Abundant information exists about the ones in April 1845 and July 1882, even detailing consequences, the population's response, and measures taken by the authorities.

It is estimated that the April 7, 1845, 8.1-magnitude earthquake, which took place at 3:47 p.m., was similar in magnitude to the great earthquake of September 19, 1985. The first centered on the coast of the state of Guerrero and was one of those about which the most information was given at the time, beginning on the following day. This is a treasure-trove of information for understanding its characteristics, but also the responses from different quarters: government, private, and religious. The national and even the international press undoubtedly offered data and references with details that are extremely valuable for its study.

The movement and its effects were particularly severe in Mexico City. It is known as the Saint Teresa earthquake, not because it was Saint Teresa's day, following the tradition of baptizing an earthquake in honor of some Marian advocation or a saint, but because the most

Table 2. Morelos Locations Reporting Earthquakes between 1540 and 1912

• Alpuyeca	• Jojutla	• Tepetlapa
• Amilpas	• Jonacatepec	• Tepoxtla(n)/Tepoztlán
• Astillero	• Mazatepec	• Tetecala
• Coahuixtla	• Miacatlán	• Tetela del Volcán
• Coatlán del Río	• Nepantla	• Tlalquitenango
• Cuautla	• Oacalco	• Tlatenchi
• Cuernavaca	• Panchimalco	• Xochitepec
• Ixtla	• Puente de Ixtla	• Yautepec
• Jiutepec	• San Gabriel	

Source: Virginia García Acosta and Gerardo Suárez Reynoso, *op. cit.*, p. 93 (using information from Gregorio Martín de Guijo, *Diario 1648-1664*, 2 vols. (Mexico City: Porrúa, 1953), "Escritores mexicanos" Collection, nos. 64 and 65).

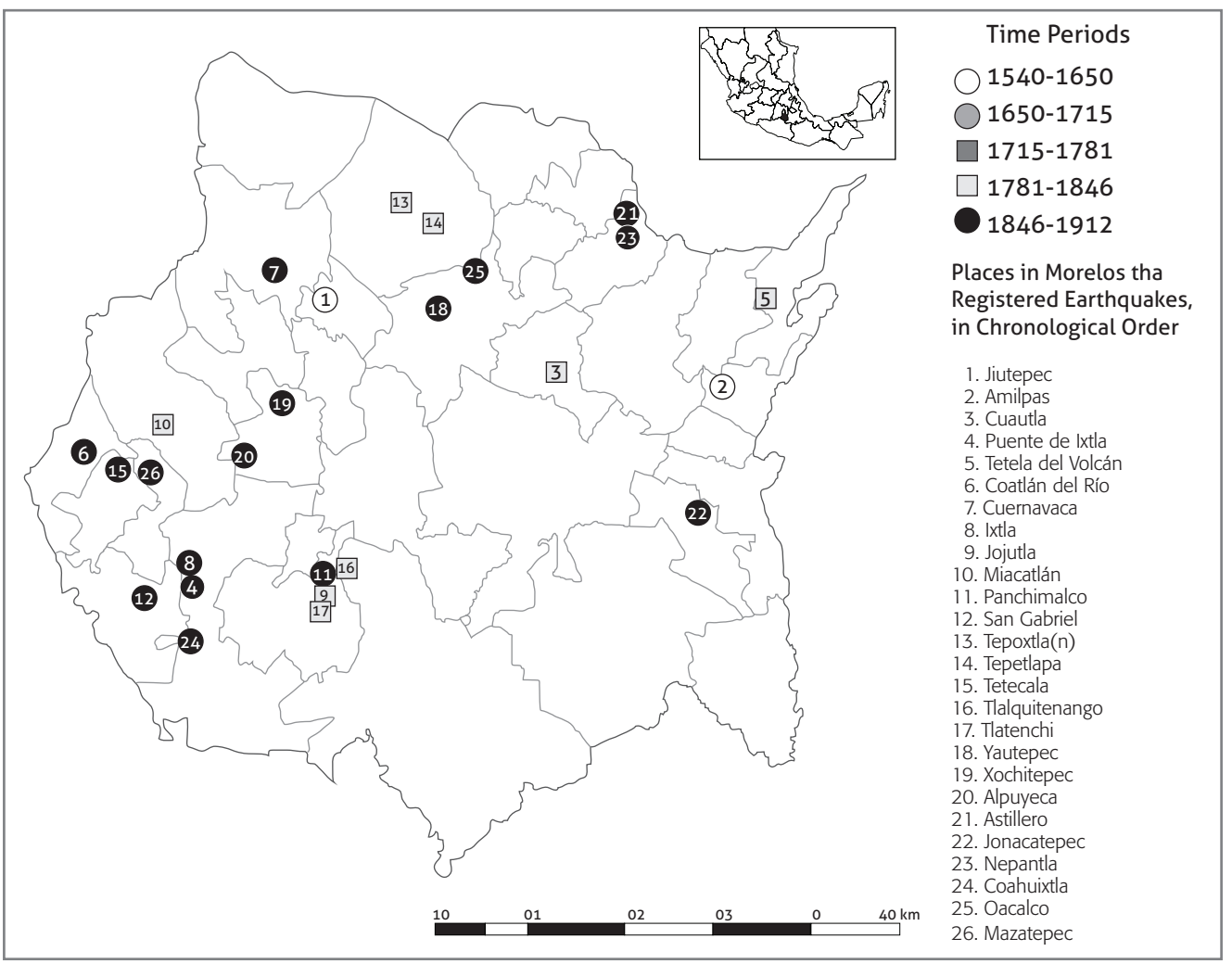
lamented damage was the collapse of the dome of Mexico City's Old Saint Teresa Parish Church. Damage of differing degrees was also recorded in the states of Aguascalientes, Colima, Mexico, Guanajuato, Guerrero, Hidalgo, Jalisco, Michoacán, Oaxaca, Puebla, Querétaro, San Luis Potosí, Tlaxcala, and Veracruz. In the specific case of Morelos, the earthquake was reported as particularly strong in Cuautla, Tetecala, Puente de Ixtla, and Jojutla. Reports from Cuernavaca said that an earthquake that strong had never been felt before, and that the walls of several houses cracked open.

It is noteworthy that of all the earthquakes registered in the pre-instrumental period, Axochiapan does not appear, despite the fact that the name has existed since

Both damage and the population's ability to recover correlate directly to the level of vulnerability and exposition of the communities affected.

pre-Hispanic times, while the epicenter of the September 19, 2017 quake was only 12 kilometers from there. This is a matter still to be investigated. The scientific explanations we have found since the nineteenth century refer to Morelos's geological conditions. In the case of the 1873 Xochitepec quake, the naturalist, geologist, and biologist Mariano Bárcena reported that his exploration found that the town was built on a limestone formation riddled with

Map 1. Morelos Locations that Registered Earthquakes between 1540 and 1912



Source: Map developed by Jorge Luis Galdamez Brindis and Diego Armando Vargas Zacarías.
Note: The locations appear in the order the earthquakes were registered in the pre-instrumental period.

different caverns and excavations of different sizes; no signs of recent volcanic eruption were found since the basaltic rock near the town are from the Tertiary Period, and the seismological phenomena experienced there began on October 7 of the previous year [1873] and concluded on the 11th of the same month.[10]

The 1882 earthquake was very similar to those of September 19, 1985 and 2017: it was a relatively deep movement located in northern Guerrero on the border with Morelos. While the epicenter was not as close to Morelos as in the 2017 quake, a larger number of Morelos sites were reported affected.[11] With this information, scientists of the time resurrected Baron Alexander von Humboldt's theory about the existence and orientation of "the underground galleries that the volcanic forces run through," which led him to take on board the unavoidable —although generally wrong— association between earthquakes and eruptions:

> What is the seismic focus of the earthquake? Given the strength with which the phenomenon has occurred in the capital, that focus could well be placed at the base of the Popocatépetl Volcano. Until today, we do not know what relationships may exist between the volcanic region of the West and that of the East, but someone has told us that the activity of the Colima Volcano has ceased completely for a long time. Do the forces that no longer find their release retreat through the respective galleries until they invade our area? Cannot the lava, the watery vapors, and the gases travel such a considerable distance?[12]

By the beginning of the twentieth century, experts were noting the damage and effects they observed, calculating the intensity in different locations. For example, the great quake on the coast on June 7, 1911 was explained thus:

> The oval that forms the limit of the seismic wave on the map of the earthquake can be divided into zones according to their greater or lesser intensity: first, the epicenter, whose maximum intensity was felt in the region where the towns of Tuxpana (Jalisco), Ciudad Guzmán (also in Jalisco), Tecatitlán, four leagues to the south of the second, and San Sebastián, even though the first suffered little. Secondly, the area of very strong intensity that ranges over part of the states of Guanajuato, Querétaro, Hidalgo, Mexico, and the Federal District, where the quake was felt with tremendous force. Third, the zone of medium intensity in the rest of the state of Guanajuato and part of Veracruz, Puebla, and Morelos; and the fourth area, of weak or almost imperceptible intensity, in the states around the others: in the extreme east, Veracruz; to the west, Manzanillo (in Colima); to the north, Jerez (in the state of Zacatecas), and to the south, Chilpancingo (in Guerrero).[13]

Today the damage caused by the earthquakes is used as semi-quantitative data to locate the epicenter and the characteristics of the event. What is well known —and Mexico City is the best and most dramatic example of this— is that the quality of the soil is one of the factors that determine the damage suffered. Low-quality, soft soil, like that in our capital city, which was the murky bottom of a lake, produces more damage than rocky soil. In Morelos, whether the damage suffered in certain towns was accentuated by the quality of the soil is still to be studied. What is clear is that the state is and has been a land of earthquakes, and its inhabitants must be prepared and build appropriately for this kind of event. VM

Notes

1 The authors wish to thank Diego Armando Vargas Zacarías for his support in writing this article.

2 Servicio Sismológico Nacional, http://www.ssn.unam.mx/sismicidad/reportes-especiales/2017/SSNMX_rep_esp_20170919_Puebla-Morelos_M71.pdf.

3 *Monografía: las obras de José Guadalupe Posada. Grabador mexicano* (Mexico City/Aguascalientes: INBA/Ediciones Toledo/Instituto Culturas de Aguascalientes [ICA], 1993), p. 89.

4 Virginia García Acosta and Gerardo Suárez Reynoso, *Los sismos en la historia de México* (Mexico City: FCE/UNAM/CIESAS, 1996) pp. 74 y 83.

5 Gregorio Martín de Guijo, *Diario 1648-1664,* 2 vols. (Mexico City: Porrúa, 1953), Escritores mexicanos Collection, nos. 64 and 65.

6 *El siglo diez y nueve,* November 6, 1842, p. 3.

7 *El siglo diez y nueve*, August 24, 1857, p. 3, and August 28, 1857, p. 3.

8 Mariano Bárcena, "Los terremotos de Jalisco," *Boletín de la Sociedad Mexicana de Geografía y Estadística,* 3ª. época, vol. II, pp. 240-248. Bárcena was the founder of the National Astronomical Observatory of Mexico; Manuel Martínez Gracida, "Catálogo de terremotos desde 1507 hasta 1885," *Cuadro sinóptico, geográfico y estadístico de Oaxaca,* unpublished manuscript, 1890. This magnificent work, consulted in the 1990s in the "Oaxacan Matters" section of the Oaxaca Public Library, constituted until then one of the most complete catalogues of Mexico's historic earthquakes, as well as those in other parts of the world. Juan Orozco y Berra based himself on it to write his chronology, *Efemérides seísmicas mexicanas*, published in 1887 by the Mexican government.

9 Virginia García Acosta and Gerardo Suárez Reynoso, op. cit., pp. 351-352.

10 Ibid., p. 352.

11 Alpuyeca, Astillero, Cuautla, Cuernavaca, Jonacatepec, Nepantla, Puente de Ixtla, Tetecala, and Yautepec.

12 Virginia García Acosta and Gerardo Suárez Reynoso, op. cit., p. 407.

13 Ibid., p. 633.

Zazilha Lotz, Jantetelco Brigade

Adolfo Sánchez Almanza*

The Earthquakes Hit Socio-Economically Vulnerable Populations the Hardest

Mexico's population faces different threats and vulnerabilities from man-made phenomena (chemical, sanitary, and socio-organizational disturbances, for example), as well as natural phenomena (geological and meteorological, among others). Among the latter are earthquakes, cyclones, floods, and droughts. They can all have a greater or lesser socio-economic impact, depending on society's organizational, preventive, and response capabilities.

The effects of these phenomena differ according to factors like the geographical location, the existing quality of life, and the response capability of civil society, the three levels of government, and private business or the market, among the most important.

Mexico has experienced several natural disasters throughout its history. Among those that have produced the greatest loss of life and property are Hurricane Paul; the 1982 eruption of the Chichonal Volcano; the 1985 Mexico City earthquakes, whose economic cost reached 2.1 percent of the national gross domestic product (GDP); Hurricane Gilbert in 1988; Hurricane Paulina in 1997; Hurricanes Stan, Wilma, and Emily that hit the south-southeastern part of the country in 2005; Hurricanes Barbara, Ingrid, and Manuel in 2013; and Hurricane Patricia in 2015.

Mexico is situated in a seismic zone exposed to the movements of five tectonic plates: North America, Pacific, Rivera, Cocos, and Caribbean. Of these, the last two are

* Researcher at the Institute for Economic Research (IIEc), UNAM; asag@unam.mx.

Historic exclusion combines with the impacts of natural phenomena, increasing socio-spatial inequality. A clear strategy is needed to reduce risks, prepare, and create conditions of resilience.

the most active and generate subduction forces toward the North American Plate, causing friction until breaks occur. For this reason, there are temblors every day, some of significant magnitude.

Between 1990 and 2017, 101 682 earthquakes took place, 0.04 percent of which could not be calculated; 1.86 percent registered between 0.1 and 2.9 on the Richter scale; 74.35 percent, between 3.0 and 3.9 points; 22.78 percent, between 4.0 and 4.9 points; 0.86 percent, between 5.0 and 5.9 points; 0.10 percent between 6.0 and 6.9 points; 0.01 percent (15 cases), between 7.0 and 7.9 points; and only two quakes larger than 8 points.[1]

On September 7, 2017, the town of Pijijiapan, Chiapas was the epicenter of an 8.2-point quake that mainly affected 553 municipalities in the states of Oaxaca, Chiapas, and Veracruz. The Ministry of the Interior declared them in both a state of disaster and of emergency.

Days later, on Tuesday, September 19, another event, this time magnitude 7.1, took place with its epicenter in Axochiapan, Morelos, affecting Chiapas, Oaxaca, Guerrero, Morelos, the State of Mexico, Puebla, Tlaxcala, and Mexico City. The maximum ground acceleration was experienced in places like Tlamacas, State of Mexico (12 gal) and Mexico City's Tlalpan Borough (90), Coyoacán Borough (60), and University City (54).*, [2]

The second quake, after which 306 municipalities or boroughs were declared disaster areas, and 242 more were declared to be in a state of emergency, had the highest intensity and occurred only 120 kilometers from Mexico City. It caused grave damage in the nation's capital, including the loss of 230 lives, plus direct and indirect economic and psychological damage, and injury to our cultural heritage. It also put the population's resiliency to the test, that is, its ability to recover and achieve better conditions than those that existed before the disaster.

In addition, on Friday, February 16, 2018, another earthquake hit, this time a magnitude 7.2, with an epicenter in Pinotepa Nacional, Oaxaca. This event affected above all the country's capital and four other states, although it caused less damage than the previous one, mainly because it originated 600 kilometers away from the capital.

It should be pointed out that the greatest impact of the September 7 and 19, 2017 earthquakes was felt in Central and South-southeastern Mexico. The state of Chiapas has registered 58 366 homes with partial or total damage, and Oaxaca, 63 335; that is, a total of 121 701. The data indicate that most of the municipalities with the greatest damage are highly marginalized, lagging behind in indicators like income, educational levels, and housing conditions (see Table 1).

In these areas, historic exclusion combines with the impacts of natural phenomena, increasing socio-spatial inequality. While different urgent programs have been implemented, they are insufficient due to the structural poverty in which local inhabitants live. Comprehensive, pro-active, territorial development is needed to strengthen these communities beyond the emergency, in addition to rehabilitation, recovery of livelihoods, and reconstruction. A clear strategy is needed to reduce risks, prepare, and create conditions of resilience in these regions, municipalities, cities, and locales.

Three hundred seventy people died in the September 19, 2017 earthquake, and aggregate estimates of direct economic costs due to damage to housing, infrastructure, and equipment are estimated at Mex$48 billion, which represents 0.23 percent of national GDP. After the 1985 earthquakes, more than 10 000 dead were reported, and losses came to 2.5 percent of GDP.

In the case of Mexico City, the biggest impact was from the September 19, 2017 quake, and its analysis requires seeing it as a complex system. Estimating the main damages involves different physical losses produced in a differentiated way. Two hundred thirty people died in the metropolitan area, but epidemiological risks also arose due to the injured and other affected individuals, although they were controlled. Among the direct damage to 38 collapsed buildings on 36 blocks of the corridor in the transition area between hard and soft soil, including neighborhoods like Lindavista, Roma, Condesa, Hipódromo, Del Valle, or Narvarte, mainly in the Gustavo A. Madero, Benito Juárez, Cuauhtémoc, Miguel Hidalgo, and Coyoacán Boroughs.

According to the Objective Quality of Life Index (ICVO),[3] 25 blocks enjoy a "very high" quality of life; another 11

Table 1. Chiapas and Oaxaca. Dwellings Damaged by Earthquakes and Marginalization Indicators (2015)

			Percent						
State	Degree of Marginalization	Number of municipalities with damaged housing	Employed population earning up to twice the minimum wage	Population in a location with fewer than 5 000 inhabitants	Dwellings with some degree of crowding	Population over the age of 15 who have not finished primary school	Occupants of dwellings with dirt floors	Population over the age of 15 who are illiterate	Occupants of dwellings without running water
Chiapas	Very high	19	79,58	88,83	57,55	46,87	20,33	30,20	18,97
	High	56	71,90	78,20	48,72	36,23	10,32	15,56	12,07
	Medium	9	59,30	52,81	40,88	25,82	6,18	10,42	8,26
	Low	2	53,34	29,97	35,44	20,63	5,69	6,67	9,87
	Very Low	1	35,65	1,47	28,11	12,94	2,22	4,32	8,45
	Total	87							
Oaxaca	Very high	4	71,11	72,45	54,85	43,62	35,25	21,17	31,53
	High	16	62,81	79,63	41,19	38,88	8,60	18,50	13,47
	Medium	12	54,73	74,57	34,68	29,04	5,87	10,76	5,09
	Low	7	40,02	42,69	29,08	24,34	2,41	10,36	3,02
	Very Low	2	28,98	6,44	28,72	17,10	1,37	6,05	5,60
	Total	41							
TOTAL		128							

Source: Developed by the author with information from Secretaría Secretaría de Desarrollo Agrícola, Territorial y Urbano (Sedatu), "Censo de viviendas dañadas por los sismos," Mexico City, 2017, http://transparencia.sedatu.gob.mx/#; and Consejo Nacional de Población (Conapo), "Índice de marginación por entidad federativa y municipio," Mexico City, 2016, https://www.gob.mx/conapo/documentos/indice-de-marginacion-por-entidad-federativa-y-municipio-2015.

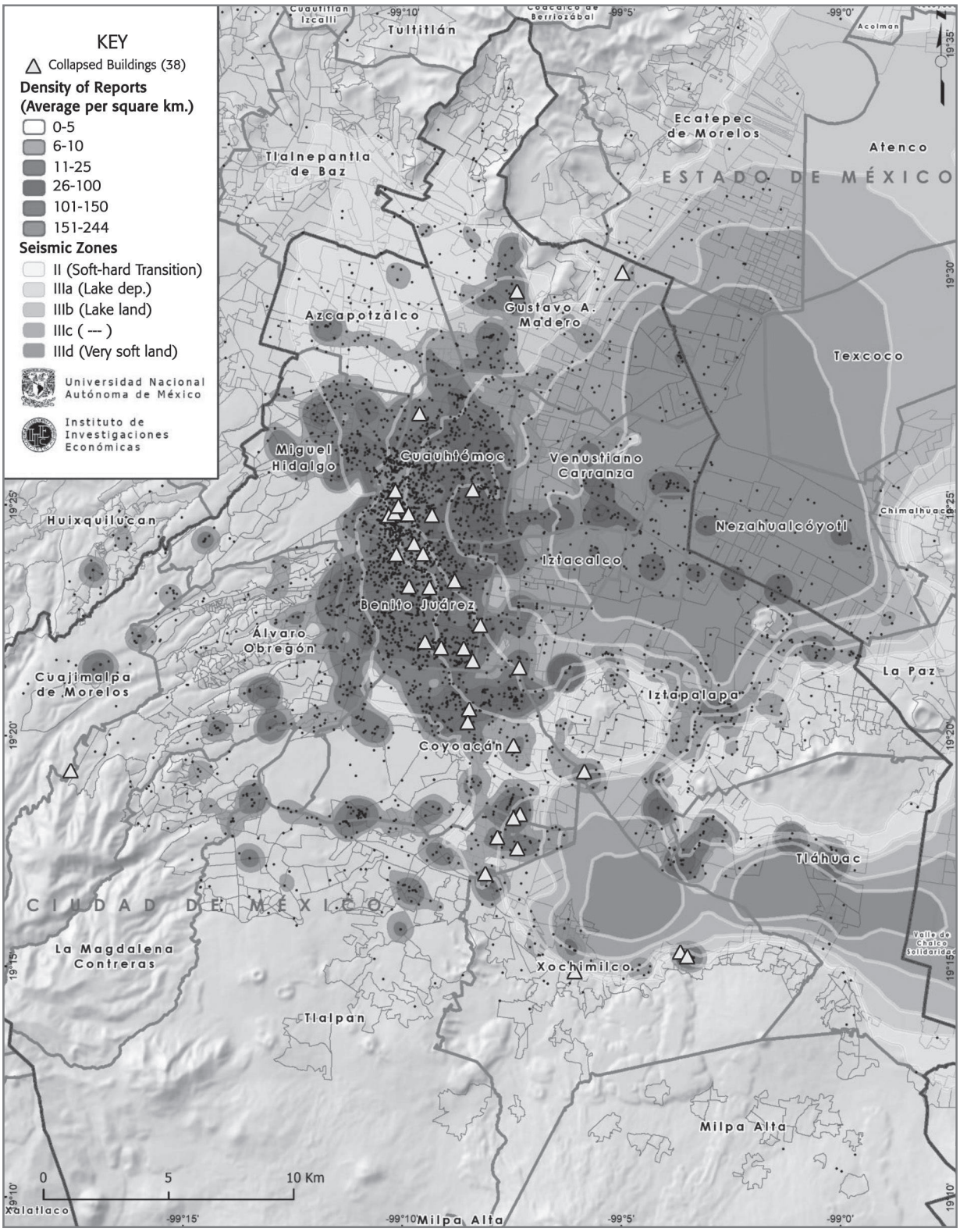
Multiple secondary and indirect effects were felt in outlying less-densely-populated areas of the metropolis and in municipalities in the State of Mexico.

are in the "high" level; and 2 more on the "medium" level. That is, their inhabitants have greater resilience capability compared to those who live in other spaces. Also, homes distributed throughout the entire metropolitan area were damaged, but those classified in the "low" and "very low" level require more attention because before the quakes, they already reported privations and they deteriorated even more, particularly in terms of domestic goods, information and communication technology, road infrastructure, furniture, and public services.

The Mexico City (CDMX) government preliminary estimate is that solely in the polygons where the 38 collapsed buildings were located, 930 businesses existed, employing 7 798 people, and in the first five days after the earthquakes, almost Mex$35 million were lost.[4] Also, in the city's eight hardest hit economic zones, 18 607 economic units exist, employing 357 000 workers, and generating Mex$462 billion (base year, 2013).[5]

Multiple secondary and indirect effects were also felt in outlying areas of the metropolis even though they were less densely populated, such as the boroughs of Xochimilco, Tláhuac, and Milpa Alta, where the quality of life is lower, and in the State of Mexico municipalities of Ecatepec, Texcoco, Nezahualcóyotl, and Tlalnepantla, where damage was concentrated in individual family homes. Most of the buildings that collapsed were located in neighborhoods with high or very high quality of life. However, the effects also were felt in neighborhoods with a medium-

Density of Reports of Buildings Damaged and Collapsed And Seismic Zones in the Mexico City Metropolitan Area



Source: Instituto de Investigaciones Economicas (IIEc), "La vivienda después de los sismos. Análisis preliminar," press release, October 4, 2017.

Although people with a higher standard of living are not exempt from experiencing limitations in recovery, people that suffer the greatest privations face the most adverse effects.

level quality of life, such as the town of Santa María Nativitas or San Gregorio in Xochimilco Borough, or Santa Rosa Xochiac in the borough of Álvaro Obregón, all in CDMX.

This territorial pattern of effects implies a differentiated response for recovering more rapidly with a focus of socio-spatial equality. The direct effects due to collapses and major damage and the indirect effects of the quakes on the scale of the block combine in a single transition strip, although other damage does exist dispersed throughout the metropolitan area. For that reason, when the diagnostic analysis of earthquake victims was updated, it was broadened out to include 12 of the city's 16 boroughs at Ground Zero for damages to be included in the Mexico City Permanent Plan for Emergencies, for which earthquake security protocols must be established (see map).[6]

Rebuilding these areas will be viable with government support and the participation of society and companies (for quicker results), both for social and political and economic reasons. Several factors should be taken into account to explain the conditions of greater vulnerability and risk to the population of Mexico City:

a) increased numbers of irregular settlements in reserved areas, ravines, and river beds;
b) densification of infrastructure, equipping urban and metropolitan areas with roads or highways, electricity lines, or oil or gas pipelines;
c) economic activities in unsafe areas, such as informal markets that restrict mobility;
d) insufficient public health, education, supply, or transportation services;
e) socio-economic inequality among population groups and in the territory;
f) building codes and norms that are not complied with, in many cases due to real estate corruption; and
g) lack of planning of metropolitan and regional development, above all, regarding the regulation of land use, housing quality, and transportation.

It should be pointed out that, although people with a higher standard of living are not exempt from experiencing limitations in recovery, the people who suffer the greatest privations face the most adverse effects. The more vulnerable the population, the slower the recovery; that is why it is necessary to put a priority on the distribution of aid and support to people with the most urgent need. Most of the homeless do not have home insurance or any financial backing to deal with risk and cannot pay a loan to rebuild their homes; in addition, they face the risk of unemployment and emotional instability, among other difficulties.

Recovery from the impact of the earthquakes requires the collaboration of civil society, families, governments, and private business throughout the country. In this context, collective, organized action by society is fundamental for prompting a response. After the earthquake, the population responded spontaneously with great solidarity and aid, particularly young people, who voluntarily formed rescue groups to aid victims in the collapsed buildings and houses. The social media contributed to directing aid to people who were trapped and for the removal of debris. After the emergency, messages of solidarity and aid were received; donations came from different national and international governments, companies, social and political actors, artists, and sports celebrities. The public sector contributed support from the Army and the Navy, as well as with brigades from the city government. However, in the following phase of recovery, a series of problems have arisen that require attention.

Some of the current challenges for moving ahead in prevention and creating resilience include:

a) focusing on recovery and reconstruction with an eye to social justice and fulfilling the rights already established in the federal, Mexico City, and state Constitutions;
b) taking into consideration the social-spatial inequality that existed before the earthquake; to do this, a diagnostic analysis must be done of the quality of life of the population in different locations;

Recovery from the earthquakes requires the collaboration of civil society, families, governments, and private business throughout the country. In this context, collective, organized action by society is fundamental.

Multidisciplinary Brigade of Support to the Communities of Mexico

c) strengthening the relationship between civil society and government management for organizing plans, programs, and actions to recover housing, businesses —above all small businesses—, employment, infrastructure, and public services;
d) facilitating reconstruction activities with a trustworthy registry of those affected, the damage to homes, public buildings, infrastructure, and equipment;
e) guaranteeing a decent home to people who lost theirs, using public funds and focusing on the worst cases;
f) earmarking sufficient inter-governmental budgets, taking into account extraordinary resources and the subsidies needed to alleviate the earthquakes' effects and arrange for private support to foster resiliency skills;
g) demanding transparency and accountability regarding public funds and donations;
h) supporting scientific research in this field, updating the Risk Atlas, and analyzing similar international experiences to develop a response;
i) reordering land use, taking into consideration the risk of disaster;
j) improving and applying building norms to reduce the population's vulnerability; and
k) strengthening the early alert systems for risks and natural phenomena, among others.

Mexico faces a variety of risks from natural phenomena, but it also has the capacity to organize society to reduce its vulnerability. VM

Notes

1 Sistema Sismológico Nacional, "Estadísticas de los sismos reportados por el SSN," http://www2.ssn.unam.mx:8080/estadisticas/.
***** Ground acceleration is the measure of earthquakes most used in engineering; it is the value that establishes seismic norms and risk areas. During an earthquake, damage to buildings and infrastructure is intimately linked to seismic velocity and acceleration and not as much to the amount of energy released. For moderate earthquakes, acceleration is a precise indicator of damage, and for very severe earthquakes, it is even more important. The unit of acceleration is the gal, a name that alludes to Galileo Galilei. [Editor's Note, using information from https://en.wikipedia.org/wiki/Peak_ground_acceleration, accessed April 15, 2018.]
2 Sistema Sismológico Nacional, "Reporte especial. Sismo del día 19 de septiembre de 2017, Puebla-Morelos (M7.1)," (Mexico City: UNAM, 2018), http://www.ssn.unam.mx/sismicidad/reportes-especiales/2018/ ssnmx_rep_esp_20180216_Oaxaca_M72.pdf.
3 The Objective Quality of Life Index makes estimates based on 33 indicators for people, housing, and urban surroundings taken from 2010 census micro-data for blocks, neighborhoods, and boroughs or municipalities in the Valley of Mexico Metropolitan Area. See Adolfo Sánchez Almanza, comp., *Calidad de vida en la Zona Metropolitana del Valle de México. Hacia la justicia socioespacial* (Mexico City: Instituto de Investigaciones Económicas/DGAPA/PUEC-UNAM, 2018).
4 Gobierno de la CDMX, "Primer informe de la afectación de la actividad económica después del sismo del 19 de septiembre de 2017," http://www.reconstruccion.cdmx.gob.mx/storage/app/uploads/public/59c/d22/7cd/59cd227cd9cc1206739581.pdf.
5 Gobierno de la CDMX, "Segundo informe de la afectación de la actividad económica después del sismo del 19 de septiembre de 2017," http://www.reconstruccion.cdmx.gob.mx/storage/app/uploads/public/59d/f8c/ea3/59df8cea3e63d777033815.pdf.
6 Salvador Corona, "Mancera anuncia cambios a plan de contingencia para sismos," *El Economista*, February 17, 2018, https://www.eleconomista.com.mx/politica/Mancera-anuncia-cambios-a-plan-de-contingencia-para-sismos-20180217-0029.html. [Editor's Note.]

Roberto Herrero Buhler*

The Costs Of The Disaster

The Reconstruction Funds

Gaceta UNAM / Erik Hubbard

Mexico is located in one of the world's areas most vulnerable to natural disasters like hurricanes, earthquakes, and even volcanic eruptions. And in recent years, the frequency and magnitude of these phenomena have increased. Despite this, we lag behind in policies for dealing with natural disasters, such as federal resources for meeting emergency situations.

In 2017, Mexico faced several of these. Two stand out that were especially serious: the two September earthquakes that shook the country physically, but also economically, politically, culturally, and, of course, socially. They brought to the fore certain irregularities that had been hidden and are now clearly evidenced in the many damaged buildings that had not complied with construction norms.

The Cost of the Earthquakes

Mexico is located on the Pacific Ocean's Ring of Fire and on five tectonic plates (Rivera, Pacific, Cocos, North American, and Caribbean), meaning it suffers from intense seismic and volcanic activity. In 2017, 26 100 earthquakes were registered. Of those, 110 were classified as big, according to the criteria of the National Seismological System (SSN), which defines and logs them that way when they rank higher than a magnitude 5 on the Richter scale.[1]

The September 7 and 19, 2017 earthquakes, with magnitudes of 8.2 and 7.1 on the Richter scale, respectively, affected Mexico City, Morelos, Puebla, the State of Mexico, Guerrero, Oaxaca, Chiapas, Tabasco, and Veracruz (the latter to a lesser degree). Taken all together, these locations constitute 39 percent of national gross domestic product (GDP), making it vital to deal with the damage as soon as possible, which, according to the federal government, came to approximately Mex$48 billion.

The following are some of the costs:

1. 471 human lives lost
2. 12 million people affected
3. 180 731 homes damaged (50 610 are a complete loss)
4. 16 136 schools damaged (276 are a complete loss)
5. 352 health centers affected (53 with major damage).[2]

A large number of the buildings damaged (housing, multipurpose buildings, offices, schools, and others) had irregularities in their foundations, were built with low-

* Economic analyst, political strategist, and columnist; rob_herrero@outlook.com.

quality materials, had billboards or antennas on roofs, and were more stories than the law allowed.

Cultural Heritage Affected

The Ministry of Culture has stated that approximately 1 452 cultural buildings were affected in some way. Those most affected were historic monuments (1 399 cases), plus 28 archeological sites, and 25 cultural centers and museums.

The damage was spread over eight territories: Chiapas, Mexico City, the State of Mexico, Guerrero, Morelos, Puebla, Tlaxcala, and Oaxaca. The latter has the most cultural buildings affected in some way (284), followed by the State of Mexico, with 266; and Morelos, with 259. However, the state that suffered the most intense damage was Morelos, since 48 percent of it was catalogued as very serious.[3] The price tag for restoring and rebuilding the damaged sites will be Mex$490.7 million for cultural spaces and Mex$225 million for historic monuments.

Strategies for Protection Against Natural Disasters

On average, the country declares more than 30 natural disasters a year, and World Bank information states that one-third of the population lives in areas exposed to them.[4] Therefore, the earthquake left behind more than material and monetary losses: a total of 471 lives were reported lost in the eight territories affected. The government has estimated that about Mex$48 billion will be needed to rebuild the affected areas; that amount began to be spent in 2017 and will continue until 2019.[5]

To deal with this, the country has different strategies to protect itself in the case of natural disasters. Among them are

1. The catastrophe bond against earthquakes, which the government increased from US$150 million in 2017 to US$260 million for 2018; this is activated for earthquakes over magnitude 7.9 (previously, only after an 8.0-magnitude quake);
2. Two catastrophe bonds against hurricanes, which total US$220 million and are activated only in case of winds that cause great damage;
3. The Natural Disaster Fund (Fonden), which will receive Mex$24.67 billion in 2018.

The resources from the three bonds can be transferred to Fonden when a natural disaster fulfills the location and severity criteria established in the terms and conditions of the bonds. The Law on Federal Public Administration and the General Law on National Property stipulate that every government institution must have insurance against natural disasters to protect its property and infrastructure. In addition, beginning in 2017, all 31 states and Mexico City must have their own reserves to protect their public finances in the case of this type of event.

The Reconstruction Funds: Fonden, Fonrec, and Fopreden

Fonden

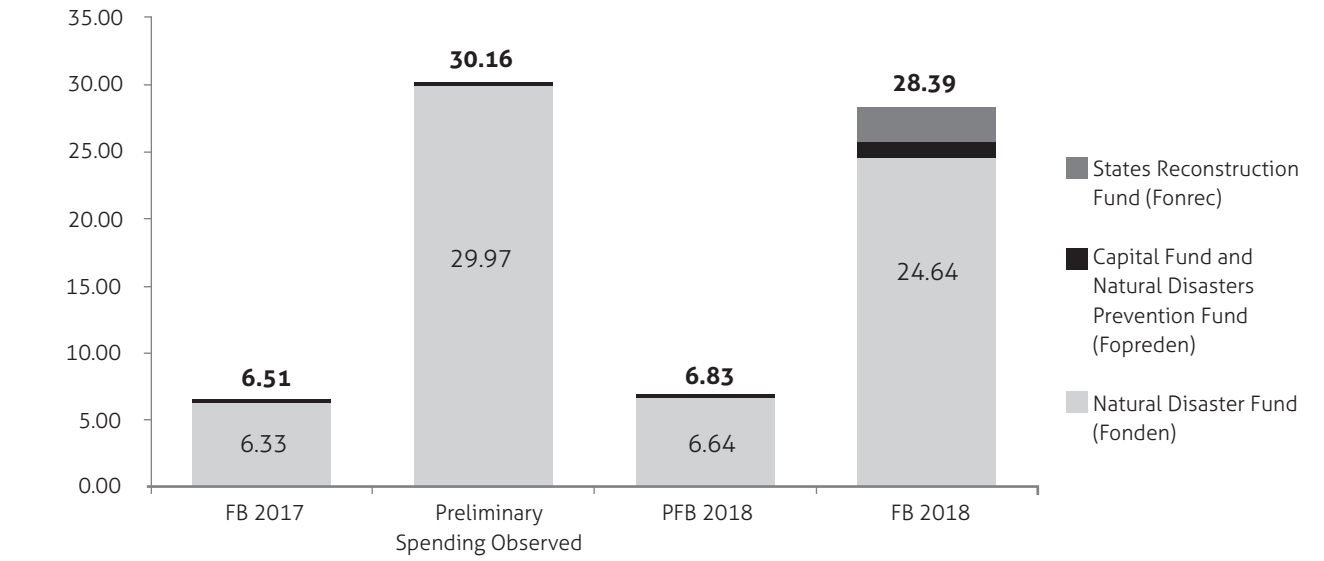
The Natural Disaster Fund (Fonden) was created to deal with the effects of unpredictable natural disasters whose magnitude surpasses the financial response capability of federal bodies, the states, and Mexico City. It is intended to complement the actions that must be carried out to deal with natural disasters. This is why, regardless of its existence and operations, it is indispensable that the federal bodies and the states strengthen their own security and prevention measures, as well as back up their public finances.

Uses of the Fonden's Resources

In the event of needing to offer aid to the population affected by disasters in 2017, Mex$29.97 billion were authorized for Fonden, that is, Mex$23.65 billion more than had been approved for the year.

Mexico's strategies to protect itself in the case of natural disasters include the catastrophe bond against earthquakes, two catastrophe bonds against hurricanes, and the Natural Disaster Fund (Fonden).

Graph 1
Budget Approved and Earmarked for Fonden, Fopreden, And Fonrec 2017-2018 (billions of pesos, 2018)



Key: Number above the columns, in bold, total expenditures approved for the four funds.
Number inside the columns, funds specifically assigned to Fonden.
FB - Federal budget
PFB - Proposed federal budget

Source: Developed by the author using data from the Ministry of Finance (SHCP) website, "Finanzas públicas y presupuesto," sub-section "Paquete económico y presupuesto," http://finanzaspublicas.hacienda.gob.mx/es/Finanzas_Publicas/Paquete_Economico_y_Presupuesto.

For the year 2018, the Chamber of Deputies added Mex$18 billion to the Mex$6.64 billion already approved in the budget for the fiscal year. This means that it will receive Mex$24.64 billion this year.

According to the Ministry of Finance (SHCP), the three states that received the most were Oaxaca (Mex$6.08 billion), Guerrero (Mex$3.54 billion), and Chiapas (Mex$3.36 billion). In all, these three states received 43.3 percent of the fund's entire resources for the year.

Mexico City received Mex$1.47 billion, used for the reconstruction of federal and state infrastructure damaged on September 19, earmarked for the areas of culture; sports education; forestry; hydraulics; the military; archeological, artistic, and historical monuments; the Navy; health; and housing.[6] Of the Mex$28.60 billion spent, Mex$24.88 billion went to rebuild public infrastructure, representing 87 percent of the total resources allocated. In addition, Mex$1.80 billion were used for the acquisition of rescue supplies; Mex$1.47 billion for the Fonden insurance policy; Mex$33.7 million for the implementation of comprehensive risk management; and Mex$61.1 million for specialized equipment.

It should be pointed out that the amount the SHCP cited in its preliminary report on Fonden spending in 2017 includes expenditures due to natural disasters occurred in preceding years. This is why the budget earmarked exclusively for the states affected by the September earthquakes is different, since it is included in the budgets for 2017, 2018, and even 2019.

In addition, the Ministry of the Interior (Segob) was in charge of reviewing the Fonden accounts, regardless of the budget year. Its report mentions the expenditures exclusively earmarked to deal with the damages from the September 7 and 19 earthquakes.[7] The report cites a total of Mex$27.63 billion, divided among the following items:

1. Partial immediate support: Mex$6.84 billion
2. Reconstruction: Mex$14.56 billion
3. Damage assessment: Mex$40 million
4. State contributions: Mex$6.18 billion.

More than 122 tons of food and beverages were donated; and 512 brigade members, doctors, and structural experts came from more than 25 countries.

Other outstanding items on the expenditures budget include the educational sector, which received Mex$10.89 billion; housing, with Mex$10.05 billion; and hydraulic works, with Mex$3.02 billion.

The states that reported the heaviest spending were

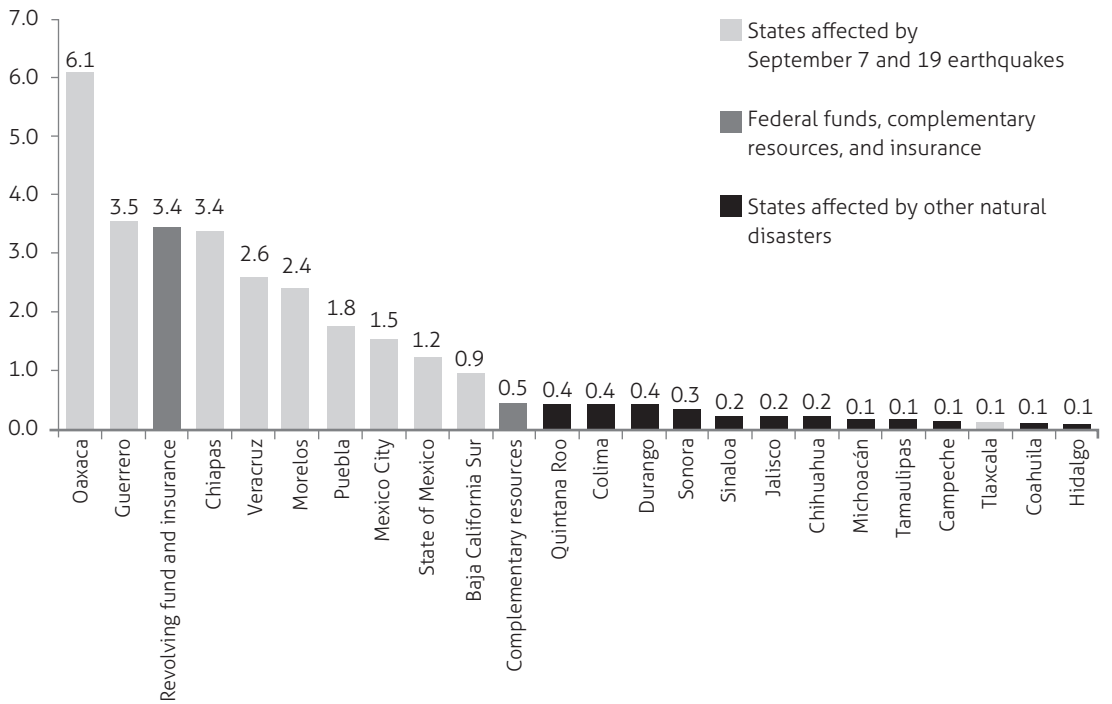
1. Oaxaca: Mex$5.86 billion (27.4 percent)
2. Morelos: Mex$4.40 billion (20.6 percent), and
3. Chiapas: Mex$3.31 billion (15.5 percent).

As a result, Fonden spending complements the efforts made through the National Civil Protection System, prevention and disaster-victim support institutions, and programs set up by federal institutions and states to deal with natural disasters.[8]

The Post-Earthquake Budget Beyond the Fonden

The need to send resources to the affected areas forced the government to increase spending not only through the Fonden, but also through the Natural Disasters Prevention Fund (Fopreden) for 2017 and 2018. To that end, it approved Mex$350.9 million in the 2018 budget, Mex$170 million more than originally agreed in the budget bill. The approved amount will go to support and provide an imme-

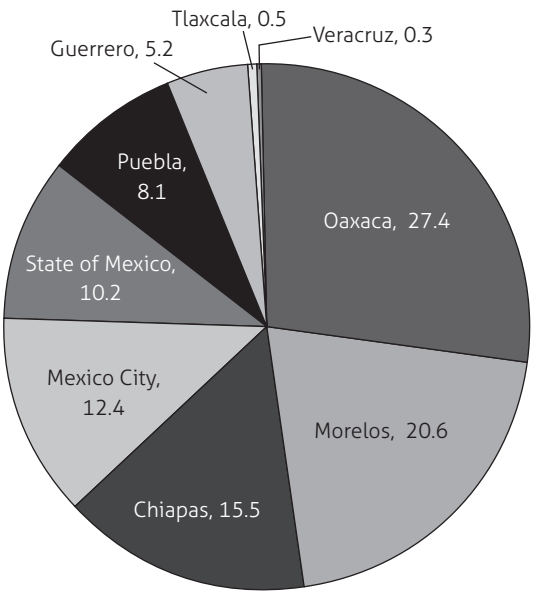
Graph 2
Spending Earmarked for Fonden by State and Fund, 2018
(billions of pesos)*



***Note:** Fonden spending per state and Mexico City from January to December 2017, including expenses for damage due to natural disasters of previous years.

Source: Developed by the author using data from the Ministry of Finance (SHCP) website, "Finanzas Públicas y Presupuesto," sub-section "Informes al Congreso de la Unión, Informes Trimestrales, Anexos de Finanzas Públicas, IX. Fondo de Desastres Naturales (Fonden)," http://finanzaspublicas.hacienda.gob.mx/es/Finanzas_Publicas/Informes_al_Congreso_de_la_Union.

Graph 3
Fonden Resources Distributed
To States Affected by Earthquakes (%)



Source: Developed by the author with information from the Transparencia Presupuestaria. Observatorio del Gasto website, "Fuerza México" page, http://www.transparenciapresupuestaria.gob.mx/es/PTP/fuerzamexico.

diate response for the states, Mexico City, and government institutions in the face of any natural phenomenon that causes damages surpassing their financial capabilities.

Congress also created the States Reconstruction Fund (Fonrec), which will receive Mex$2.5 billion so the states and municipal governments can issue 20-year zero-coupon (or accrual) bonds to finance the reparation of damages. It also approved Mex$1.25 billion for the Mexico City Capital Fund so the city can earmark resources to the reconstruction of damaged public infrastructure and homes. In short, the funds approved by Congress to support earthquake victims and mitigate the damages will receive Mex$28.39 billion in 2018.

The federal government also received Mex$3.41 billion in donations from private business and Mexican civil society, as well as from state governments, organizations, and foreign celebrities to support both emergency work and reconstruction. Of that amount, 69.5 percent came from the Carlos Slim Foundation, 7.6 percent from the Fuerza México Trust, and the remaining 22.9 percent from different companies and celebrities.

In addition, more than 122 tons of food and beverages were donated; and 512 brigade members, doctors, and structural experts came, as well as 21 rescue dogs. These contributions came from more than 25 countries, the European Union, and the United Nations.[9]

General Recommendations for Prevention

Given the country's vulnerability to natural disasters, it is indispensable for federal, state, and municipal governments to work together to educate the population in preventive measures, to improve and broaden out access to early alert systems for all types of natural disasters, to earmark greater resources to funds and natural disaster insurance, and to ensure compliance with building codes with no irregularities whatsoever. VM

Notes

1 Servicio Sismológico Nacional, "Estadísticas de los sismos reportados por el SSN," 2017, http://www2.ssn.unam.mx:8080/estadisticas/.
2 Gobierno Federal, "Plan de Acción Ante Sismos del 7 y 19 de septiembre 2017," October 17, 2017, https://es.scribd.com/document/361993553/Plan-de-Accion-Ante-Sismos-Sep-2017-171017, accessed February 10, 2018.
3 Dirección General de Información Legislativa, *Noticias legislativas*, January 22, 2018, http://sil.gobernacion.gob.mx/Archivos/Panorama/201801/noticiaslegislativas22enero2018.pdf, accessed February 9, 2018.
4 Secretaría de Gobernación (Segob) y Coordinación Nacional de Protección Civil and Centro Nacional de Prevención de Desastres (Cenapred), "Impacto socioeconómico de los desastres en México durante 2015," http://www.cenapred.gob.mx/es/Publicaciones/archivos/340-NO.17-resumenejecutivoimpacto2015.pdf, accessed February 10, 2018.
5 Luis Miguel González, "Se eleva a $48 000 millones el costo por los sismos," *El Economista*, October 17, 2017, https://www.eleconomista.com.mx/politica/Se-eleva-a-48000-millones-el-costo-por-los-sismos-20171017-0164.html.
6 Secretaría de Hacienda y Crédito Público (SHCP), "Informes sobre la situación económica, las finanzas públicas y la deuda pública. Preliminar del Fondo de Desastres Naturales (Fonden), Cuarto trimestre de 2017," http://finanzaspublicas.hacienda.gob.mx/es/Finanzas_Publicas/Informes_al_Congreso_de_la_Union, accessed February 9, 2018.
7 Secretaría de Gobernación (Segob), "Transparencia presupuestaria. Observatorio del gasto," Fuerza México, http://www.transparenciapresupuestaria.gob.mx/es/PTP/fuerzamexico, accessed February 8, 2018.
8 Segob, "Acuerdo que establece las reglas de operación del Fondo de Desastres Naturales (Fonden)," *Diario Oficial de la Federación*, http://dof.gob.mx/nota_detalle.php?codigo=4920763&fecha=31/12/1969.
9 Instituto Belisario Domínguez del Senado de la República, "Aportaciones del sector privado y la sociedad civil de México y donaciones internacionales en apoyo a las fases de emergencia y reconstrucción tras los sismos de 2017," December 2017, accessed February 11, 2018.

Gerardo A. Hernández Septién*

Gone with the Earthquake
Mexico's Wounded Built Heritage

© Thelmadatter / commons.wikimedia.org

▲ The interior of the Loreto Catholic Church in Mexico City's Historic Center had deteriorated and sunk over the years, but it had withstood many previous earthquakes.

▲ After the September earthquakes, sections of the Loreto Church interior had to be shored up.

The damage is immense, almost as if last September's earthquakes had targeted the country's cultural heritage. This time, Mexico, one of the places recognized worldwide for the wealth of its vast cultural and natural heritage, went through what it never had before: the modification of its historic face. In addition to the irreparable, painful loss of human life, these earthquakes will leave their mark on the history of our country.

Our heritage is a legacy that our ancestors left to us and that we will leave to future generations. In addition to being one of the countries with the greatest biodiversity on the planet, Mexico is a leader in terms of the dimension of our tangible and intangible cultural heritage. From its popular fiestas, festivals, and celebrations, frequently including dancing, singing, and traditional food, to the hundreds of sites with archaeological, historical, or artistic wealth, Mexico heads the list in the Americas with the most number of sites and activities listed by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) as World Heritage Treasures.

Being listed is both symbolic and prestigious since it also requires that the country take a position about these activities and sites' protection and preservation. Whether we like it or not, it also demands that we ask ourselves many questions about ourselves, our identity, our roots, and other more profound issues, such as our permanence as a species and our need to transcend through the most diverse cultural manifestations.

* Architect; gerardohernandez@yahoo.com.
Photos by the author, unless otherwise specified.

▲ The bell towers of the Santa Veracruz Church in Mexico City's Historic Center were structurally damaged.

▲ A few days after the earthquake, local residents organized moving solidarity in the affected areas. This is the Natividad Church in Mexico City's Benito Juárez Borough.

Mexico, one of the places recognized worldwide for the wealth of its vast cultural and natural heritage, went through what it never had before: the modification of its historic face.

The Mexican state makes enormous efforts and has achieved certain —albeit insufficient— results in the area of preservation, conservation, restoration, and maintenance of our cultural heritage linked to living cultural manifestations, beyond just inert stones. Around this, it creates spaces for memory and frequently symbols of power accompanied by artistic qualities of historic events with which they are inexorably linked. It is this heritage that was the most damaged by last September's earthquakes.

It is said that 1 822 buildings with historic and artistic cultural value were damaged by the September 7, 19, and 23 quakes. Other approximate figures are also mentioned that give an idea of the gravity of the damage. Some have estimated that restoration will take until 2020, a date I think is too optimistic, since we are also entering an electoral campaign, which slows things down and centers the attention on other issues thought to be more of a "priority." Federal funding for these activities have not been as available as they should be, despite the fact that they are working closely with state and municipal governments; civic and religious associations; foundations; and committed citizens. The magnitude of the undertaking surpasses everything, and our position and actions trembled —literally— in the face of a natural phenomenon.

The September 7 earthquake had an important impact in the states of Oaxaca and Chiapas; the stronger September 19 quake damaged mainly the states of Puebla, Tlaxcala, Veracruz, Morelos, Guerrero, and Mexico, and Mexico City. Everywhere domes, roof lanterns, vaults, and towers came down, practically mimicking the national anthem, one verse of which mentions similar situations, but as the devastating effects of war.

A few hours after the September 19 quake, I did not yet have any way of knowing if my house in the Roma Neighborhood, one of the areas with the most collapsed and damaged buildings, remained standing. Fortunately, everything came down to a few books falling off their shelves in the library. A few days later, my

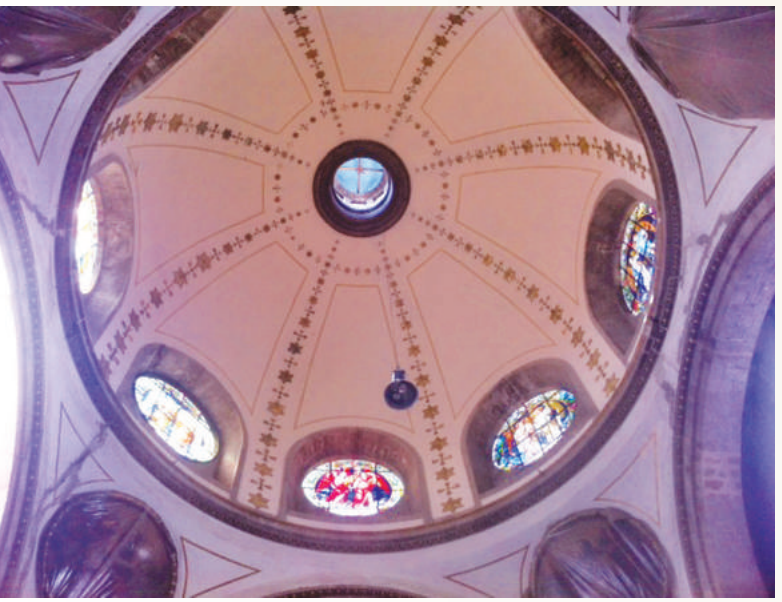
duties took me to the state of Morelos to observe the tragedy in Jojutla. In addition to the loss of life, assessing the damage to the government-owned monuments led me and a team of collaborators to reconsider our position *vis-à-vis* the tragedy. It is common to hear, "Everything can be restored," "We mustn't tear down anything," "This isn't rubble; these are the vestiges of a historic monument."

But there are limits. When you realize that "what is restorable," "what is recoverable," and "the vestiges of a monument" after a natural phenomenon are no longer integral parts of a building with historic and artistic characteristics, and are putting people's safety at risk, many things shift their meaning.

It was the first time that I found myself facing a predicament of this magnitude. In Jojutla, it looked like it had rained stones. Seeing a religious, public monument still in use in that state, with its roof caved in, full of cracks, and with its towers teetering over it clearly demonstrated just how vulnerable we are every day, and that somehow, ending its being a risk to the population could involve drastic decisions that had to be made right then. That is where the limit comes into play and we are plagued by doubt: What if we leave it as a "romantic" ruin? How many examples of this kind are there in the world and in Mexico that have taught us that that option is also okay? Some would say, "Look, we recreated the original site in a model, a rendering, and here was the wall that divided the cloister from the church, a very, very high stone wall that the earthquake toppled . . . that the fire destroyed . . . nothing is left except this column and this capitel…" "It's okay. Nobody invented a fake history or made the mistake of making a new one like it used to be because it wouldn't have been authentic, which is the value of architectural monuments," others would say. Some might say, "It should be restored just as it was. We have enough documents to make that possible; it should be documented and all the scattered pieces should be numbered; somebody should draft a project and create an anastylosis, and up it'll go! This is so there can again be a complete reading of the monument, that it can recover its original use and its symbolism, which is one value of architectural monuments. If whole cities have been rebuilt in Poland and Germany, and the Italians —who, if they have anything, it's heritage— have gone through innumerable earthquakes, and just look…"

▲ Several churches in Jojutla, Morelos experienced the partial loss of structural elements like walls, vaults, and towers.

▲ The Caballero Águila House, an important sixteenth-century civic monument located in San Pedro Cholula, Puebla's main plaza, suffered significant cracks and collapsed walls.



▲ This 2014 photograph shows the interior of the dome at the Our Lady of the Angels Church in Mexico City's Guerrero Neighborhood as seen from the church's transept.

Part of what continues to surprise us is that the churches, always bastions of psychological well-being and physical strength, have been so damaged, ripping away that halo of security and protection that they have had for centuries. A few days later, our work brought us to Mexico City, where damage was also major. Until today, federal and regional authorities are making super-human efforts to finish quantifying the damage where some sites continue to be of difficult access due to the intricate network of insufficient roads and pathways into rural areas, above all in the southern part of the city.

There is yet another "obstacle" or "facilitator" that radically changes the equation: money. Resources make it possible to make decisions and speed up processes. The lack of them creates obstacles, difficult situations in which you have to choose which limited technical and human resources to use to deal with the emergency, and even be creative and decide how to handle each case. In our country, little importance has been given to culture as something that fosters the potential for development and growth. Unfortunately, this is linked to the economic support it deserves and receives or does not receive. One of the main reasons the religious monuments were so greatly damaged is the lack of resources lent to their maintenance, which would have helped to better weather an earthquake. Naturally, the lack of preventive conservation by the users of these cultural goods —a majority are Mexican and obligated under the law to provide it— was the last straw.

All the boroughs in Mexico City, from Gustavo A. Madero to Tlalpan, from Cuajimalpa to Iztapalapa, saw damage done to their religious heritage buildings. Of all the damaged constructions, the most noteworthy is the Church of Our Lady of the Angels in the Guerrero Neighborhood. A symbol of the area, it has been there at least since the sixteenth century, as a Marian sanctuary, giving this centuries-old neighborhood its identity. Tradition has it that in the sixteenth century, the image of Our Lady of the Angels, whose worship is deeply rooted in Franciscan tradition, appeared float-

Churches, always bastions of psychological well-being and physical strength, have been heavily damaged, ripping away that halo of security and protection that they have had for centuries.

▲ On September 24, 2017, a large part of the dome of the Our Lady of the Angels Church collapsed, depositing several tons of material inside the building.

ing in the waters of the overflow of the lakes that flooded the city, causing great calamity. This painting, adopted by the population and a local indigenous strongman and seen as miraculous, was placed in a small adobe shrine that grew over the seventeenth, eighteenth, nineteenth, and twentieth centuries until it became the Guerrero Neighborhood's most important symbol.

Today, the building still hosts religious services in an improvised side chapel, looking sunken, with walls and columns that have crumbled and cracked, a broken floor, and almost half of its beautiful nineteenth-century dome almost completely turned to dust. It could not withstand the earthquake and, on Sunday, September 24, it collapsed, making a loud noise surprising local inhabitants. They also realized that it had endangered people's lives as well as the primary school next door, which fortunately had been empty at the time. But, the collapse sparked the on-going debate: What should be done? How do you deal with

▲ The interior arches of the Our Lady of the Angels Church next to the damaged area were protected: they are resting on a metal structure.

▲ Shot from the street of the Our Lady of the Angels Church dome after its partial collapse.

a "patient in intensive care"? Do we diagnose it as "brain dead" or do we revive it? Do we preserve what is left of the dome or not? Do we build another one just like it or do we use different materials? Do we keep the scaffolding that held up the arches of the transept or not? How much money is there? What is more important, the previous reading we had of it and collective memory, or its historicity, which would be dealt with through a contemporary intervention? There seems to be no end in sight to the debate, regardless of the technical aspects and the interpretation of different readings. The situation is urgent and pressure is mounting. Time passes and no resources are in sight. The monument will resist as far as it can. Whatever the result, whether due to decisions that are made or not made, time will put the puzzle pieces in their place and it will be the great master History that will judge and teach us. This is a challenge, but also a watershed for restoration in Mexico. A crisis is an opportunity, and, as the saying goes, "If you 'lose,' at least learn the lesson." VM


SANTO DOMINGO

Ricardo Claudio Pacheco Bribiesca*

Damage to the Cultural Heritage and Community Life of Hueyapan

▲ The Popocatépetl Volcano.

Indigenous communities in the state of Morelos suffered great loss of human life and family property in the most recent earthquakes. But in addition to that, they also suffered damage to their public buildings and monuments, many of which are catalogued as part of our nation's cultural heritage by the National Institute for Anthropology and History (INAH) or even as World Cultural Heritage Treasures by the United Nations Education, Science, and Cultural Organization (UNESCO).

Most of these buildings are of enormous historical and artistic value for the Mexican state, but, above all, they are invaluable to Morelos's traditional communities. From time immemorial, they have lived their lives in these buildings, the architectural landscape that accompanies them in their daily lives and are the venues for significant life events. These buildings, then, are the framework for the community lives of natives and visitors alike.

This seriously damaged cultural heritage includes churches and former monasteries, which from the standpoint of identity and symbolism play a fundamental role

* Guest professor-researcher at the Autonomous University of the State of Morelos Center for Research in Social Sciences and Regional Studies; riclaupacheco@yahoo.com.mx.
All photos are by the author.

◀ The former Santo Domingo de Guzmán Monastery in Hueyapan.

in local religious and community life. This is where many of people's life events take place in religious ceremonies like baptisms, confirmations, first communions, weddings, and funerals. Other kinds of activities no less important for local residents also take place there: community festivities like patron saints' day fiestas, Holy Week, celebrations for the Day of the Dead, and an endless number of collective events on the religious calendar throughout the year that bring the faithful together.

According to the INAH, in Morelos and other states like Oaxaca, Puebla, and the State of Mexico, as well as Mexico City itself, a large number of these kinds of buildings were gravely damaged. In Morelos, at least 300 of the existing 400 cultural heritage buildings, or 75 percent, were damaged.

▲ Saint Domingo, patron saint of Hueyapan.

The damage ranges from simple things, like plaster falling off walls, to complicated structural damage like the collapse of whole parts of buildings, like bell-towers, domes, and vaults. INAH specialists have stated that the colonial heritage, particularly from the sixteenth century, was fairly resistant, but that additions to the buildings made in later centuries could not withstand the sharp movement of the September 19 earthquake.

The catalogue of Morelos's historic monuments includes pre-Hispanic and colonial buildings, in addition to constructions from the period around the time of Independence and the Mexican Revolution. Most of the damage was to religious buildings, some from the colonial period. These venues are still used for worship today and, as mentioned above, are the center for social activities, with enormous significance for the population because they are symbols of unity, identity, pride, and festivity, where a large part of local traditions and beliefs are sheltered. They are home to images of virgins, Christ statues, and saints, effigies, and relics, which for community residents have a much more profound value than that recognized by anthropology, history, and culture: for them they take on the dimension of divinities that are venerated and respected, and to which they dedicate a large part of their lives.

For all these reasons and because they are the home to their deities, it was local residents themselves who rescued from beneath the rubble of the damaged buildings the images of "their" saints and all manner of religious furnishings. In some cases, the collapse affected altarpieces and niches, which in addition to affecting the material cultural heritage, injured one of the community's most heartfelt heritages, their popular religiosity.

Most of these buildings are of enormous historical and artistic value for the Mexican state, but, above all, they are invaluable to Morelos's traditional communities.

▲ Municipal office building after the quake.

In the days and weeks after the earthquake, I tried to contact people I knew and friends in the state's rural areas, particularly after what had happened began to go viral on social media.

One of the people I was able to speak to from the community of Coatetelco in the southern part of the state, after telling me that fortunately her family was well, asked, to my surprise, if I knew anyone who could help them rebuild their church. In the midst of such an unusual event, even for them, this shows the importance religious spaces have for these communities.

Among the religious buildings and architecture damaged in Morelos are the 11 sixteenth-century former monasteries declared Cultural Heritage Treasures by the UNESCO. They are icons of culture and bastions of tourism in the state. The most seriously damaged monasteries are Our Lady of the Nativity in Tepoztlán; Saint John the Baptist in Tlayacapan, and Santo Domingo in Hueyapan. All are located in the northern part of the state and are part of the monastery tourist route.

Hueyapan is especially important to me. It is a town of Nahua indigenous tradition located on the slopes of the Popocatépetl Volcano, where I did ethnographic research in 2012. This was one of the towns most affected by the earthquake due to its proximity to the epicenter, located in the southeastern part of the Axochiapan, Morelos, municipality, on the border with the state of Puebla. Many homes were damaged, as well as the monastery, founded in 1529.

Hueyapan and its people are accustomed to living with a certain degree of risk because of their proximity to the Popocatépetl Volcano and its constant activity, which increased toward the end of the last century —in fact, in 1994, the town was evacuated. But the day of the

▲ Homes that disappeared after the quake.

The destruction of the church or Santo Domingo Monastery has become a symbol and distillation of the harsh blow dealt the town by the earthquake.

earthquake, they experienced something new, which severely impacted most of the houses in the town and caused serious damage to the monastery:[1] its dome collapsed and the bell tower suffered severe damage.

The material damage to the religious building was shocking for the town; but, in addition, inside the church, a vigil was being held for a recently deceased person, which constituted that individual's "double death," seen as a bad omen by the townspeople. Although Hueyapan did not suffer any loss of life, the morning of that day, there was activity in the church, as one inhabitant describes:

> Nothing like that had ever happened before. Take, for example, the churches. Never in all my 60 years had I seen anything like it: the dome collapsed and so did the bell tower. That day there was a vigil for a dead person; it was a miracle because the church was full of people and only two or three of them got hit on the head, but not the rest. The funeral mass was scheduled and the body was under the dome, and when the earth started to shake, the dome came down on him; all those stones fell on him. They didn't even buy him a coffin after that; the Coroner's Service came and

they just put him in a bag. They're the ones who picked him up because they wouldn't let anyone back into the church. He died for a second time because he had died early in the morning that same day, like around 8 a.m. Two women did fall down, and everybody just went right over them running out of the church, but fortunately no one died. This is our second life; we've been reborn. Everybody's time comes, and that was today for all of us; that's how we react, everybody the same; nobody is bigger or less important than anybody else: we're all worth the same. Well, with regard to material things, maybe some have more than others; but those things are secondary. They get left behind, while we don't. If we work as a team, we're more.

Four months after the earthquake, the unofficial figures state that 90 percent of the houses in the town were damaged in some way. Many of the neighborhoods changed the way they look; they're unrecognizable because a large number of adobe constructions just disappeared and the rubble has been removed. The neighborhoods look a little desolate, if we add to that a landscape of tents and blue shelters donated by the Chinese government, where some families have fended off a harsh winter in an area 2 300 meters above sea level on the slopes of the Popocatépetl Volcano.

In addition to the material losses and the damage to homes, the destruction of the church or Santo Domingo Monastery has become a symbol and distillation of the harsh blow dealt the town by the earthquake. Even now, it remains closed, although, like in the majority of the towns, religious activities have been transferred to improvised spaces in their atria. This masks somewhat the generalized feeling of irreparable loss, despite government policies to safeguard, protect, and restore the cultural heritage that the earthquake hit so hard.

One of the INAH's first tasks has been to strengthen the structures that did not fall down, shoring up damaged towers, domes, or walls that are standing but still at risk of collapse. This is a huge undertaking, and later, reconstruction and restoration activities will be added, none of which will be easy and in the best of cases will take years, postponing the return to normal religious and community life, rituals, and fiestas in these towns.

It is difficult for the communities to understand or even accept that buildings as old as these have been gravely damaged since they are colossal structures with thick walls that down through the centuries have accompanied the lives of many generations, silent witnesses to history. In the face of these unfortunate events, the processes of resilience and adaptation have begun, like in Coatetelco, where, even with a church in ruins, the dances of the Tecuanes were carried out during the fiesta of Our Lady of Candelaria, and in several other towns where people say "the fiesta and Carnival will go on." VM

Notes

1 Declared a World Heritage Treasure in 1994, the Santo Domingo Monastery was one of the first built in sixteenth-century Mexico; its flat tile roof and austere lines make it stand out.

◂ Areas where part of the mural decoration on the vault of the lower cloister has detached in the former Totolapan Monastery.
Elsa Arroyo, IIE-UNAM

Elsa Arroyo Lemus*

Recovering Monastery Murals On the Slopes of the Popocatépetl Volcano

Yesterday the earth shook again. We haven't yet been able to comprehend or deal with the damage produced by last September's strong earthquakes, and we've already feared another disaster. According to National Seismological Service reports, this time the epicenter was 11 kilometers south of Pinotepa Nacional on the coast of Oaxaca.[1]

We have heard a great deal about the fact that our country is located in an area of high seismic activity because of the convergence of five tectonic plates: the North American, Pacific, Rivera, Cocos, and Caribbean Plates. This has marked our cities and the response of our society, particularly after the 1985 earthquake. In addition to the terrible loss of human life and the incalculable damage to buildings and homes in urban populations, particularly poor and marginalized towns, the violent quakes of September 7 and 19, 2017 have noticeably affected the country's historic heritage.

According to official figures, the September quakes considerably damaged 1 821 monuments in the states of Chiapas, Oaxaca, Mexico, Morelos, and Puebla, as well as Mexico City.[2] It is no exaggeration to say that we have never before seen such massive, widespread devastation. It is not only a matter of the number, but also of the geographical scope of the damage that makes mapping and dealing with the problem so complex. While by this time, the monuments have been shored up and the rubble cleared, the critical period of reconstruction, rehabilitation, or at least consolidation of the architectural structures is barely beginning.[3]

Arturo Chapa, UNAM Graduate Program in Rehabilitation of Architectural Heritage

▲ Mural fragments in the process of being pieced together.

What is needed is a detailed review of the criteria and norms in place for intervening in the cultural heritage, and, above all, comprehensive projects designed to deal with the delicate problem of protecting it case by case, taking into consideration the obvious limitations in human and economic resources to do so. The results cannot be swift, and the decisions cannot be unilateral; the actions must take place in stages based on consensus among the agents involved with conservation, valuing, and research about the elements of our cultural heritage, but, above all, taking into consideration their contemporary uses. The authorities have estimated that reconstruction of the monuments will take until the second half of 2020.[4] I think this is optimistic.

* Researcher at the UNAM institute of Aesthetic Research; elsa _arroyo@comunidad .unam.mx.

▲ Collapse of the dome over the high altar in the San Guillermo Totolapan Church.

Interior of the Santo Domingo de Guzmán Church, Hueyapan. ▶

Earthquake Damage along the Volcano Route

Of the 33 municipalities declared disaster areas in the state of Morelos after the September 19, 2017 quake, eight are located in what has been called the Volcano Route due to the fact that their geography, history, and culture are particularly defined by the active presence of the Popocatépetl Volcano. In 1994, the sixteenth-century monasteries that are part of this geographical-cultural landscape were included on the United Nations Education, Science, and Culture Organization (UNESCO) World Heritage Site list. The document that proclaimed this, *Earliest 16th-Century Monasteries on the Slopes of Popocatepetl*,[5] covers 14 monasteries, 11 in the state of Morelos and 3 in the state of Puebla.

At the time they were included, these federally-owned monasteries were part of a highly visible public policy: projects for the maintenance, media coverage, academic research, and above all, the interest in promoting the region as a *cultural landscape*. According the Convention Concerning the Protection of the World Cultural and Natural Heritage of 1972, cultural landscapes are "the combined works of nature and man."[6] The proposal jibed with the international organization's wave of renovation that sought to refresh and make more objective the way that sites of "outstanding universal value" were inscribed on the World Heritage Site list.[7]

For the Mexican government, it also represented an ideal, inspirational model that placed the country's culture in the avant-garde and at the same time promoted its different regions through art and local customs from the point of view of tourism and economic and social community development.

Yesterday the earth shook again. We haven't yet been able to comprehend or deal with the damage produced by last September's strong earthquakes.

Elsa Arroyo, IIE-UNAM

Arturo Chapa, UNAM Graduate Program in Rehabilitation of Architectural Heritage

▲ Student volunteers work on-site to salvage the mural.

One noteworthy aspect of Mexico's 1994 inclusion on the World Heritage List is the mention of the monuments' excellent state of preservation, plus a description of their typology and their most important stylistic characteristics. Seemingly, the historical criterion was the most important reason for including them on the final list since, while other complexes were considered the first foundations of the mendicant orders, they were excluded from the route. This is the case of San Martín Huaquechula, a monastery of historic and artistic note located in the shadow of the Popocatépetl Volcano.

The UNESCO text makes no mention of the religious use that most of these former monasteries are still put to. Actually, 60 percent of the space in these buildings is taken up by churches, and all of the monasteries along the Volcano Route are used for liturgical activities. The federal government only manages three of the complexes (Huejotzingo, Tepoztlán, and Oaxtepec), since they operate as local museums.

Until last September's earthquakes, 9 of the 14 monasteries were used to house clergy and 2 also operated as offices or all-purpose rooms for the Catholic community. It is important to underline that the most noteworthy damage to these monuments is located precisely in the areas used by the religious due to accumulated maintenance problems that have recently become more severe.

While some of these buildings were restored while their inclusion on the World Heritage List was being negotiated, the repairs were limited to the most visible places: the atrium, the main façade, and the cloister. The collapse of domes, walls, and plaster caused by the earthquakes has shown that the maintenance done years ago has not continued nor has it been as effective as needed. Mexico's conservation milieu does not enjoy a "culture of prevention" that would put a priority on a program of continuous activities to care for, repair, and restore heritage buildings.

The monasteries' murals were among the characteristics that made them unique and representative and worthy of selection for the 1994 declaration. At the time they were created in the sixteenth century, the decoration of the walls acted to define the use of the architectural space and point out its possible future uses. The walls tell the foundational stories of the mendicant or-

ders and the objectives of their utopian mission in the New World.[8]

As you walk through a monastery, its murals unfold, opening like the pages in a book, facilitating their understanding. With the plaster missing after the earthquake, we can no longer do that, nor can we reactivate "the power of the images." But we have to add that this is but a new addition to what was already missing and the scars from prior collapses. The sixteenth-century murals seem destined to disappear; discounting certain exceptions, the projects to restore them cease when the edifice itself has been stabilized.[9]

The authorities have estimated that reconstruction of the monuments will take until the second half of 2020. I think this is optimistic.

The Institute for Aesthetic Research Brigade

Since its foundation in 1935, the UNAM Institute for Aesthetic Research (IIE) has included among its substantive tasks the conservation and defense of Mexico's cultural heritage. As a public university, we assumed the responsibility of participating in the process of registering, understanding, and prioritizing the damage caused by the September 2017 earthquakes, and of proposing and carrying out concrete activities based on our research areas.

At first, we created a brigade of academics and university specialists to visit and make a photographic record of the monuments along the Volcano Route. It was not easy to select the area of study. The decision was motivated by factors like the historiography, the contemporary value place on the area, and the heritage status of the monasteries. We obtained images of the state of the build-

Eumelia Hernández, IIE-UNAM

▲ Cracks and debris in the vault of the San Juan Bautista Church in Tlayacapan.

Ricardo Alvarado, IIE-UNAM

▲ Plaster detached from the mural painting on the vault of the former Tetela del Volcán Monastery.

Elsa Arroyo, IIE-UNAM

ings, some in imminent danger of collapse after the earthquake —we should also remember that it rained heavily right after the September 19 quake. Today, these photographs are part of the IIE digital catalogue, documentary evidence added to the collection's historic images.

When our photographic brigade traveled through the monasteries on the slopes of the Popocatépetl Volcano, in addition to severe structural damage, we found important areas of the murals that had collapsed and broken up. It was then that we decided to formulate a project to recover these fragments, in danger of being swept up as rubble, now or in the future when no one remembers their origin. We did fieldwork with undergraduate history and visual arts students and graduate students in architectural restoration and art history in December 2017 and January 2018 to protect, catalogue, and research the collapsed, fragmented mural paintings in two of the monasteries along the Volcano Route: San Juan Bautista Tlayacapan and San Guillermo, Totolapan.[10]

Our work aims to make visible the enormous problem of raising and recovering these public goods reduced to fragments.

This initiative, developed with the authorization and monitoring of the National Institute of Anthropology and History's National Coordinating Body for Preservation of Cultural Heritage and its Morelos Center, has used a specific methodology for registering and cataloging collapsed mural paintings. Once restoration begins, this methodology will facilitate the identification of the formal composition and the place the fragments detached from.

Guided by the ideas of urgency, mobility, and solidarity, our work aims to make visible the enormous problem

Arturo Chapa, UNAM Graduate Program in Rehabilitation of Architectural Heritage

▲ The San Juan Bautista Tlayacapan Monastery after being propped up and cleaned.

◀ Student volunteers working to save the collapsed mural at the former Totolapan Monastery.

of raising and recovering these public goods reduced to fragments, which, in previous disasters were almost certainly thrown away as part of the rubble. As mentioned above, the damage to the heritage buildings goes far beyond the architectural structures themselves; and, it is precisely the conservation of all their pictorial goods and the buildings that hold them that gives meaning to the use and enjoyment of the monuments by society today.

Based on this experiment in recovery, research, and teaching, we have learned to dialogue with both institutions and communities. We have also opened a way forward for thinking about and discussing how we in academia

▲ Collapsed buttress on the south side of the former Tlayacapan Monastery's atrium.

Eumelia Hernández, IIE-UNAM

▲ On-site activities to recover the Tlayacapan mural.

It is time to creatively and responsibly imagine how to undertake the task of recovering, protecting, and preserving the heritage damaged by the earthquakes.

are going to meet the challenge of rebuilding our cultural heritage. Today, we must deal with this issue with the understanding that the monuments and their buildings are complex and require more attention than the government-paid insurance policy will provide. It is time to creatively and responsibly imagine how to undertake the task of recovering, protecting, and preserving the heritage damaged by the earthquakes. Not only as experts but also as civil society, we must demand that the guidelines, regulations, and criteria for intervention be updated. It will also be necessary to develop manuals for safeguarding and rescuing buildings in the case of catastrophes —whether natural or manmade— and promoting long-term programs to restore them, placing their contemporary use at the center of our discussion. VM

Eumelia Hernández, IIE-UNAM

Ricardo Alvarado, IIE-UNAM

▲ Debris from the collapse of the west gallery of the upper cloister in Totolapan.

Notes

1 Servicio Sismológico Nacional, UNAM, "Reporte especial. Sismo del 16 de febrero de 2018," http://www.ssn.unam.mx/sismicidad/reportes-especiales/2018/SSNMX_rep_esp_20180216_Oaxaca_M72.pdf, accessed February 17, 2018.

2 Diego Prieto, director of the National Institute of Anthropology and History, quoted in Abida Ventura, "El patrimonio que los sismos destruyeron," *El Universal*, December 27, 2017, http://www.eluniversal.com.mx/cultura/patrimonio/el-patrimonio-que-los-sismos-destruyeron.

3 The monuments have been attended to by government institutions through instruments like the Fund for Natural Disasters (Fonden), although the needs far surpass the estimated public resources earmarked for them.

4 Interview with Minister of Culture María Cristina García Cepeda, quoted in Alida Piñón, "Sumamos esfuerzos para atender sismos," *El Universal*, December 21, 2017, http://www.eluniversal.com.mx/cultura/patrimonio/sumamos-esfuerzos-para-atender-sismos.

5 *Earliest 16th Century Monasteries on the Slopes of Popocatepetl*, World Heritage Committee, UNESCO, 1994, http://whc.unesco.org/es/list/702, accessed February 10, 2018.

6 *Directrices prácticas para la aplicación de la Convención del Patrimonio Mundial* (Paris: Centro del Patrimonio Mundial de la UNESCO, 2005), p. 48, whc.unesco.org/archive/opguide05-es.pdf, accessed February 17, 2018.

7 About the vagueness of the concept of "outstanding universal value," see Henry Cleere, "The Concept of 'Outstanding Universal Value' in the World Heritage Convention," *Conservation and Management of Archaeological Sites* (1996), pp. 227-233. The current definition of cultural heritage can be found in the *Convention Concerning the Protection of the World Cultural and Natural Heritage*, UNESCO, 1972, whc.unesco.org/en/conventiontext/, accessed February 17, 2018.

8 Historiographical literature about the importance and meaning of murals in sixteenth-century architecture is plentiful. Some fundamental texts include George Kubler, *Mexican Architecture of the Sixteenth Century* (New Haven, Connecticut: Yale University Press, 1948); Manuel Toussaint, *Pintura colonial en México* (Mexico City: Universidad Nacional Autónoma de México-Instituto de Investigaciones Estéticas, 1965); Constantino Reyes-Valerio, *El pintor de conventos. Los murales del siglo xvi en la Nueva España* (Mexico City: Instituto Nacional de Antropología e Historia, 1989); Jeanette Favrot Peterson, *The Paradise Garden Murals of Malinalco: Utopia and Empire in Sixteenth-Century Mexico* (Austin: University of Texas Press, 1993); Elena Isabel Estrada de Gerlero, *Muros, sargas y papeles. Imagen de lo sagrado y lo profano en el arte novohispano del siglo XVI* (Mexico City: Universidad Nacional Autónoma de México-Instituto de Investigaciones Estéticas, 2011).

9 Only a few sixteenth-century monastery murals have been intervened in in Mexico, and some of these interventions have sparked polemics about the use of the ethical conservation principles, for example, in the cloisters in the former monasteries of Malinalco and Tetela del Volcán. See Jaime Cama Villafranca, *Tetela del Volcán. Un ejercicio de conservación* (Mexico City: Instituto Nacional de Antropología e Historia, 2006), and "Malinalco: la polémica restauración," *Proceso* (Mexico City), July 13, 2013, www.proceso.com.mx/189876/malinalco-la-polemica-restauracion.

10 This was the "Project to Recover the Mural Paintings in the Monasteries along the Volcano Route," directed by the author, with support fieldwork coordination from Tatiana Falcón and Mónica Zavala, and in research organization for the UNAM art history graduate seminar "Heritage and Earthquakes" from Clara Bargellini. This initiative has been possible thanks to institutional support and financing from the UNAM Institute for Aesthetic Research and the PAPIIT IN402117 project "History of Art Technique. Approximations to the Materiality of Art Objects in the Sixteenth to the Eighteenth Centuries." The institute's director, Renato González Mello also arranged for funds from the Harp-Helú Foundation through the UNAM Foundation. Work is planned to continue in 2018 in collaboration with other university institutions, the National School of Social Work and the Morelia Unit of the National School of Higher Studies.

Sergio Rodríguez Blanco*

MEXICO CITY, SEPTEMBER 19 FIST HELD HIGH, HAND IN HAND

These photographs take a chronological look at the September 19, 2017, Mexico City earthquake through the scenes captured by a group of photojournalists from the IberoAmerican University Press and Democracy (PRENDE) program. In contrast with what is broadcast on national television, the protagonists of these images are not the rubble, nor shots from far away, nor the authorities; they are people in action taken from up close, see through a journalist's eyes. There are people of all ages, all occupations, all layers of Mexican society, but also present is the legacy that great painting and cinema have left to the visual culture, and above all, the eye of a professional who seeks to create photographic thinking with his/her work. I made this selection from a file of more than 500 images published minute by minute in the perrocronico.com digital magazine during the earthquake and the days after it. More than offering answers, they prompt questions about the empowerment of civil society that spontaneously organized, but also about the ephemeral, localized nature of its strength.

* Researcher and critic specialized in photography; sergio.rodriguez@ibero.mx.

September 19, 2017, **1:32 p.m.**
Photo: Daniel Ojeda

Three civilians help a senior who had been inside the building at 122 San Antonio Abad, in the Tránsito Neighborhood, at the corner of Chavero Street. The shot was taken by Daniel Ojeda only 18 minutes after the 7.1-magnitude quake. The area had already been cordoned off and was quickly being evacuated because the building continued to creak, indicating its imminent collapse.

September 19, 2017, **2 p.m.**

Photo: Daniel Ojeda

This shot was taken a few moments after the previous photo; it shows what was happening behind the grey building at 122 San Antonio Abad at precisely the moment in which the fourth floor collapsed like a sandwich. A women who had been inside the building at the time of the earthquake is looking for her co-workers. Her colleague prevents her from advancing.

September 19, 2017, **3:26 p.m.**

Photo: Fernando Brito

After two hours of removing debris, members of the public and construction workers get a woman out of the rubble at the corner of Escocia and Edimburgo Streets in the Del Valle Centro Neighborhood. Fernando Brito's overhead shot, taken from the roof of a car, shows the moment when the rescued woman takes a deep breath. Her injured hands are reminiscent of the stigma that Christian iconography attributes to the Christ risen from the dead.

September 19, 2017, **3:50 p.m.**

Photo: Nora Hinojo

At 241 Enrique Rébsamen Street in the Narvarte Neighborhood, passersby stop to take snapshots of the green building whose ground floor had collapsed. Nora Hinojo's image shows a street open to anyone who happens by, with no barriers. No Civil Protection personal or people clearing away the rubble are in evidence. Days later it would be made public that a woman had been trapped in the ground floor rubble. The body of Laura Ramos would be recovered on the morning of September 24.

September 19, 2017, **4:10 p.m.**

Photo: Nora Hinojo

A human chain was formed on Torreón Street to carry off the rubble from the five-story building that had collapsed on the corner of the Alemán Viaduct. To the left side can be seen the frame of the billboard that had been on top of the building, while in the background, the vanishing point shows the silhouettes of Civil Protection personnel doing rescue work. There is no space available for placing debris or the garbage trucks needed to dispose of it. The chunks of concrete are deposited at the end of the street as more people arrive.

September 19, 2017, **4:26 p.m.**

Photo: Fernando Brito

At the corner of Escocia and Gabriel Mancera Streets, civil society and the authorities have organized the use of buckets for carrying debris and getting it away from the disaster site. The ruins look like a huge, toothless monster. There are not enough people there to take away the debris because another building has collapsed on Escocia Street. At the moment the photo was taken, it was known that there were five people trapped under the ruins. They were later all found dead.

September 20, 2017, **10:16 a.m.**

Photo: Fernando Brito

Navy personnel bring out the first of the bodies found in the building at 107 Amsterdam, at the corner of Laredo Street, in the Condesa Neighborhood. It is one of the relatives of 30-year-old, freelance photographer Sergio Ruiz, who was rescued alive a few minutes later. The position of his deceased relatives made a small recess that saved his life. The angle of the photograph evokes the Christian iconography of the descent from the cross, while the position of the body reminds us of Mantegna's *Dead Christ*.

September 20, 2017, **3:00 p.m.**

Photo: Alexis Nolasco

Half a block from the collapsed office building at 286 Álvaro Obregón Avenue, in the Roma Neighborhood, one day after the earthquake, civil society has organized to lend support. Not everyone can carry rubble, but food and fuel are needed, too. The right fist in the air, the signal for silence to facilitate the rescue, has become a daily sight that contrasts with the classical coldness of the sculpture in the background, and reminds us of *Freedom Guiding the People*, the allegorical canvas of the 1830 Paris uprising against the restriction of freedom of the press. This was where the highest number of dead were found: 49 people. Some bodies recovered by the authorities were taken away in secret without informing their relatives waiting in front of the building.

September 21, 2017, **5:30 a.m.**

Photo: José Luna

José Luna's photo captures a teenage girl cleaning debris from around the building at the corner of Bolívar and Chimalpopoca Streets in the Obrera Neighborhood. Several companies had installations there, including the New Fashion textile factory, the SEO Young Internacional costume jewelry firm, and Dashcam System, which installs automobile security cameras. The building collapsed completely, killing 21; only two people were rescued alive.

September 21, 2017, **5:50 a.m.**

Photo: José Luna

"Orizaba is here: you're not alone, Mexico City." Rescue workers from around the country spend the whole night supporting clean-up at 168 Bolívar Street. Dawn is approaching. In 2004, paradoxically, this building was the headquarters of the Agrarian Prosecutor's Offices. That year, the National Center for Disaster Prevention (Cenapred) did a study and determined that the building was at risk. Given the landlords' refusal to offer a document attesting to its structural safety, the government offices were moved. The building continued in use.

September 20, 2017, **1:30 p.m.**

Photo: Pablo Martínez Zárate

At the foot of an Our Lady of Guadalupe graffiti, volunteers, workers, and soldiers deployed by the DNIII Plan remove rubble from the collapsed building at 10 Coahuila Street, in the Roma Neighborhood. The building did not completely collapse, making it possible for the people trapped inside to escape on foot with minor injuries. There were no dead. A miracle?

September 21, 2017, **5:17 p.m.**

Photo: Axel Rosas

Like an impressionist painting, this image by Axel Rosas captures the moment in which a group of brigade members pull hard on piece of debris in the area around the collapsed building at Bolívar and Chimalpopoca Streets in the hope of finding survivors alive. From a distance, the photograph allows the viewer to see the spirit of cooperation that emerged spontaneously in civil society; that same spirit faded little by little once the emergency passed. Today, all the cases of corruption unearthed by the quake continue unresolved. Of all the damaged buildings, some have already been demolished, wiped off the face of the map. Others remain standing. VM

Isabel Morales Quezada*

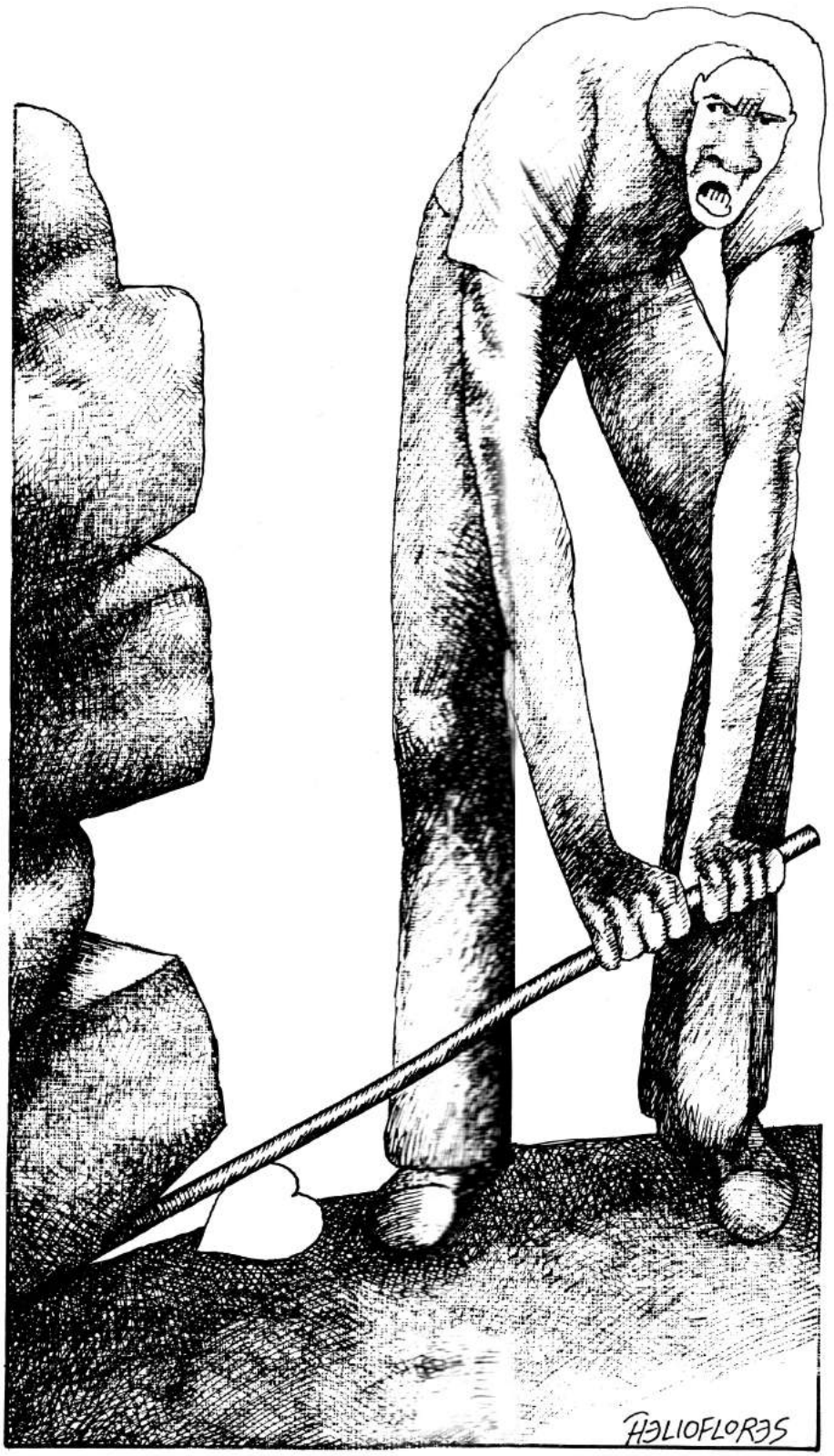
REBUILDING THROUGH ART

You belong to the place where
you gather garbage.
Where lightning strikes twice
on the same spot.
Because you saw the first,
you wait for the second.
And you stay on here.
Where the earth opens up
and the people come together.
You belong to the place where
you gather garbage.
Where lightening strikes twice
on the same spot.

"Fist Held High," Juan Villoro

* Staff writer, isamorales@gmail.com.

◂ **Rogelio Naranjo** (Michoacán, 1937), *Standing*. Published in *El Universal*, September 21, 1985 (caricature). Rogelio Naranjo Collection, Tlatelolco University Cultural Center.

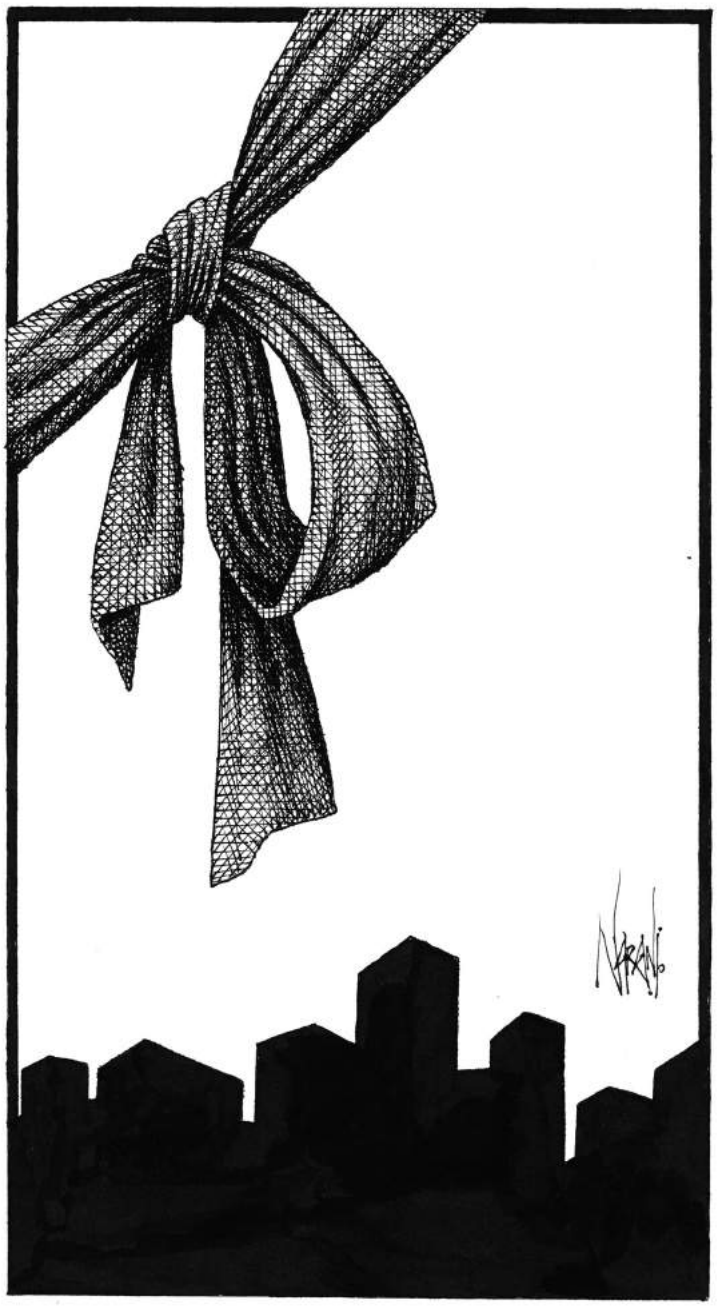


▲ **Helio Flores** (Veracruz, 1938), *September 19*. Published in *El Universal*, September 1985 (caricature). Author's collection.

Fissures in the walls, broken glass, huge cracks in the pavement, and the remains of what a few moments before had been homes, schools, or workplaces. When a natural catastrophe such as the September 17, 2017 earthquake occurs, what remains are the ravages it leaves in its wake. However, there is deeper damage that cannot be seen at a glance: fear, bewilderment, a feeling of helplessness. How can you rebuild and pick up from the rubble the spirits of those who have lost everything? How can you give moral support to a citizenry fearful in the face of catastrophe? The generalized disquiet among Mexico City inhabitants made it imperative to get those feelings out in some way and help alleviate them. In the face of tragedy, many responded with art.

The morning after the September 19, 1985 quake, the front pages of all the newspapers published photos of collapsed buildings and information about the number of dead. On the inside pages, the country's most important cartoonists (Rogelio Naranjo, Helio Flores, Rafael "El Fisgón [Busybody]" Barajas) also gave their version of the earthquake: a man peeks through a door leading to a devastated Mexico City; a flag at half-mast emerges from the rubble; a volunteer picks up some heavy concrete slabs under which a heart is seen.

Carlos Monsiváis's collection of artwork that came out of that earthquake was shown 30 years later in an exhibition, "The Days of the Earthquake," at the Museo del Estanquilllo (Corner Kiosk Museum). In addition to the caricatures, the photographs testifying to those days are also on display, as well as everything created later, when the wound was still open. Canvases of some artists like Rubén Ortiz stand out; in his *The End of Modernism*, he paints buildings among clouds of dust that seem to collapse on top of the viewer. Germán Venegas's *Yearning and Penitence* looks like a nightmare with human beings lying inert and a half human/half monster rising up carrying a victim. A lithograph by Francisco Castro Leñero, *Movement in the Night*, reminds us of the swaying construc-



▲ **Rogelio Naranjo** (Michoacán, 1937), *Poor Mexico* (caricature). Published in *El Universal*, September 20, 1985. Rogelio Naranjo Collection, Tlatelolco University Cultural Center.

Fissures in the walls, broken glass, huge cracks in the pavement, and the remains of what a few moments before had been homes, schools, or workplaces.

▲ **Helio Flores** (Veracruz, 1938), *Two Months After* (caricature). Published in *El Universal*, October 1985. Author's collection.

The creative impulse and the desire to help permeated the entire artistic community. Graphic designers and illustrators came up with designs to comfort all those who lost something.

tions during the quake that caused fissures and breaks in their structure.

In 2017, most of the newspaper cartoons underlined the solidarity of the residents of a city wounded once more. This time, the caricature artists decided to join together to exchange their sketches for food, calling on people through the social media to take water, toilet paper, and canned goods like tuna or sardines, plus beans and bags of rice, to the Zapata Subway Station. People responded to the call that made them feel useful and at the same time happy to be able to receive a sketch from professionals whom many of them had always admired. A month later, the caricaturists collected all their cartoons touching on the 2017 earthquake —and some from 1985— in the book *19 de septiembre. Moneros solidarios* (September 19. Cartoonists in Solidarity), also launching it at the Zapata Subway Station. The volume includes cartoons by different artists like Magú, Naranjo, Helio Flores, El Fisgón, Hernández, Calderón, Kemchs, Helguera, and Rapé.

The creative impulse and the desire to help permeated the entire artistic community. Graphic designers and illustrators came up with designs to comfort all those who lost something that day, even if they apparently came out unscathed. In contrast with 1985, when establishing communication among the city's inhabitants had been very difficult, this time the existence of social media, which little by little have begun replacing traditional media like radio and television, meant that what people expressed went out to a large number of people almost instantaneously.

The cartoons were seen by many, many people. It was enough to have access to a smartphone for the images to flow continuously. That was also how young artists and independent illustrators disseminated designs to help alleviate the sadness of the city's inhabitants and the homeless, as well as to thank people for their help and the physical efforts by so many volunteers. The illustrations were imbued with a combative spirit that, instead of showing ruins,

▲ **Rubén Ortiz** (Mexico City, 1954), *The End of Modernism*, 1985 (oil on canvas). Aguascalientes Cultural Institute/ Contemporary Art Museum Collection, no 8. Courtesy of the Corner Kiosk Museum (Museo del Estanquilo).

▲ **Lucie Torres**, "Minilibrito para colorear" (Mini-Coloring Book), 2017. Download the file and color in the story.

portrayed the unity of a society that had not forgotten how to express solidarity.

One image that went viral nation- and worldwide was of Frida the Rescue Dog, a Labrador from the Mexican Navy that helped rescue 12 people alive from the rubble. The protective goggles and little booties that she wore to inspect collapsed buildings in search of survivors caused a sensation. Her touching, serene, but at the same time valiant figure became a symbol of hope. Frida's image began to be reproduced and soon designers put her on T-shirts, sweatshirts, and stamps that were offered on the social media in exchange for a donation that would go entirely to the cause of the homeless and to the famous group of Mexico's Topos (moles) rescue team, who in 1985 risked their lives as volunteers by insinuating themselves into the narrowest fissures in the ruins and who, since then, have helped in other earthquakes not only in Mexico, but even internationally.

The most vulnerable people were those in shelters, and although a large part of the aid was aimed at them, such as food donations, some artists went beyond that and came up with ways of consoling and encouraging these people facing the greatest difficulties. This was the case of Mexican designer and UNAM graduate Lucie Torres, who, thinking about how to cheer up the children, designed a little coloring book with drawings of the Navy rescue dogs, flanked by a brief biography of each of them.

She and her friends distributed them in the shelters and also uploaded them to the Internet so they could be downloaded and printed and even more people could distribute them.

Some people even offered their work from far away. This was the case of Mariana Barrón, an artist from Ciudad Victoria, who works in yarn and wove a design of the rescue dog Frida. She never imagined how successful it would be, but she received requests from several parts of the country, so she decided to put them up for sale and donate the proceeds to the earthquake victims.

Creating something with your hands, weaving it both in your mind and in reality, reminds us of the case of the seamstresses whose place of work collapsed in the 1985 earthquake, exposing the exploitation they were prey to. After losing everything, to support themselves, they created a cooperative that made dolls for sale; it was supported by recognized artists like Vicente Rojo, Helen Escobedo, Arnold Belkin, Marta Chapa, Beatriz Zamora, Lourdes Almeida, and Rogelio Naranjo.

> But out of this tragedy also came a wave of human solidarity the like of which had seldom been seen before, and even those who had lost everything were able to gather the strength to start again.
>
> That was the case of the seamstresses of the September 19 Union, who, after the earthquakes had obliterated their places of work and taken the lives of many of their co-workers, took up their needles and thread once again to create dolls, which served at the same time to give them employment and heal their pain.[1]

One of the seamstresses said of the dolls, "The faces made out of cloth and buttons reflect 'the grimace of the pain we were experiencing,' but the need to create and 'know we were alive' was stronger."[2] It seems like a logical, though paradoxical, response: create something, emerge from the rubble, and rebuild a small part of the lives snatched away from us,

▲ *Still Standing*, design by Smithe for Tony Delfino.

▲ *We Can Be Heroes*, design by Pogo for Tony Delfino.
T-Shirts courtesy of Tony Delfino.

One image that went viral nation-and worldwide was of Frida the Rescue Dog, a labrador from the Mexican Navy that helped rescue 12 people alive from the rubble.

Ernesto Núñez, *Untitled*, mural honoring #19s rescue workers at 54 Ricardo Flores Magón Street, Guerrero Neighborhood, Mexico City, 2017.

stripping us naked, even if at the beginning maybe it's only dreams or wishes.

Creating on a pile of rubble was strictly speaking exactly what five Mexican cartoonists did in 2017. Members of the Sacatrapos (Rag Pickers) Collective recovered pieces of rubble to draw images on to protest the corruption in the construction of certain buildings that had collapsed. Later, the blocks of concrete were exhibited in the esplanade of the Benito Juárez Borough, one of the areas hardest hit by the most recent quake.

Walls on some streets also served as canvases to express messages of hope and thanks. Celeste Byers, a San Diego artist who had already done other work in Mexico, painted a great mural of Frida surrounded by colors and flowers in the Roma Neighborhood, another of the hardest hit areas.

Thus, Mexico City's public spaces, not only its virtual ones, acted as cathartic areas: through different artists' sketches and graffiti, they expressed the feelings of a population that had taken over the streets. These were streets and avenues that days before had been prisoners of an unexpected, violent movement, that had filled with dust and rubble, streets where it became difficult and dangerous to walk, but that we would once again appropriate for ourselves thanks to the expressions on their walls. Art is also a catharsis.

The September 19, 2017 earthquake prompted a wave of solidarity, of collective organization, of heroic individual acts, but also creativity

The work of artists, designers, musicians, architects, graffiti artists, sketch artists, and cartoonists were the shoulder on which many laid their heads and unburdened themselves.

Celeste Bryans, mural depicting Frida the Rescue Dog, on the walls of the neighborhood beer hall at the corner of Durango and Oaxaca Streets, Roma Neighborhood, Mexico City, 2017.

even in the most adverse of circumstances. The work of artists, designers, musicians, architects, graffiti artists, sketch artists, and cartoonists were the shoulder on which many laid their heads and unburdened themselves. It showed that art also nourishes and restores, that it is needed to be able to get up and continue, an encouragement inviting you to create even in the most difficult times.

No one may know the name of the authors of certain designs that circulate on social media, on the street murals, but deep down, we will know who to thank. The art generated in response to the earthquake is also testimony and memory, since when the city is completely rebuilt, as has happened over the years after the 1985 earthquake, the art will remain as witness to those days when the earth shook us to the core physically and emotionally. The Guerrero Neighborhood mural has a phrase that summarizes and exalts the actions of all those impassioned with art who believed in its ability to regenerate: "Actually, we're not in this world to adapt to it, but to transform it." VM

Notes

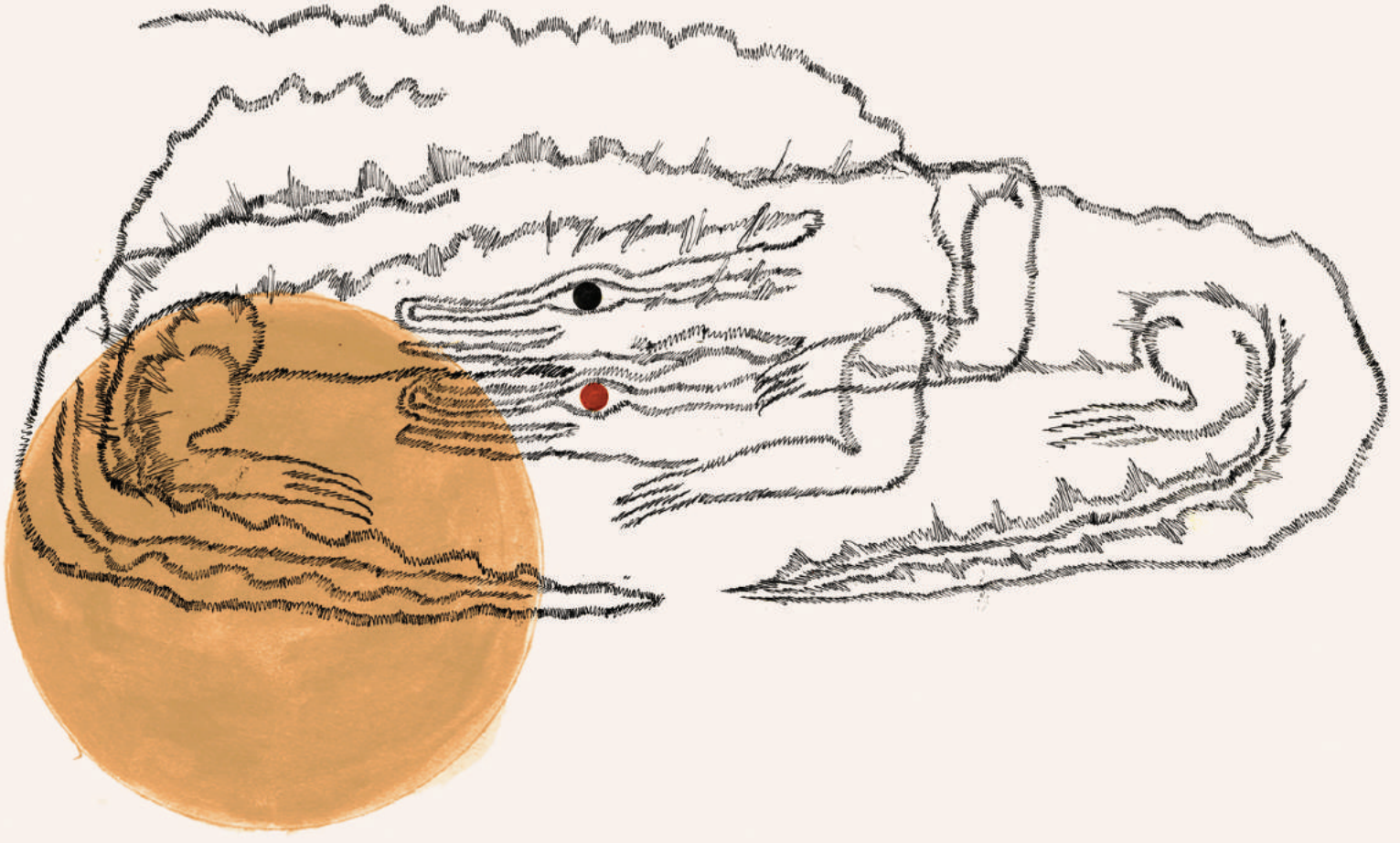
1 Fernando Camacho, "Exitosa muestra de las muñecas hechas para ayudar a las costureras en 1985," *La Jornada* (Mexico City), January 23, 2006, http://www.jornada.unam.mx/2006/01/23/index.php?section=cultura&article=a04n1cul.

2 Ibid.

EMOTIONS IN COLOR

ARMANDO FONSECA

The heart pumps (active). Blood is put into motion (passive). The lungs receive and transform, participating by purifying (intermediate). Blood returns to the heart (passive). The heart pumps again (active). Blood is once again put into motion, returning to the heart where the cycle began. The heart pumps (active), producing a certain tremor in the blood (passive). The blood moves through the veins toward the hand (intermediate). The blood becomes a pulse; the pulse, a crisis; the crisis, rhythm; rhythm becomes creation. All creation returns to the crisis where the cycle began. The line drawn is the mark of the pulse (passive), which is the tremor in the blood (active). The blood sketches in uncertainty.



HERNÁN GALLO

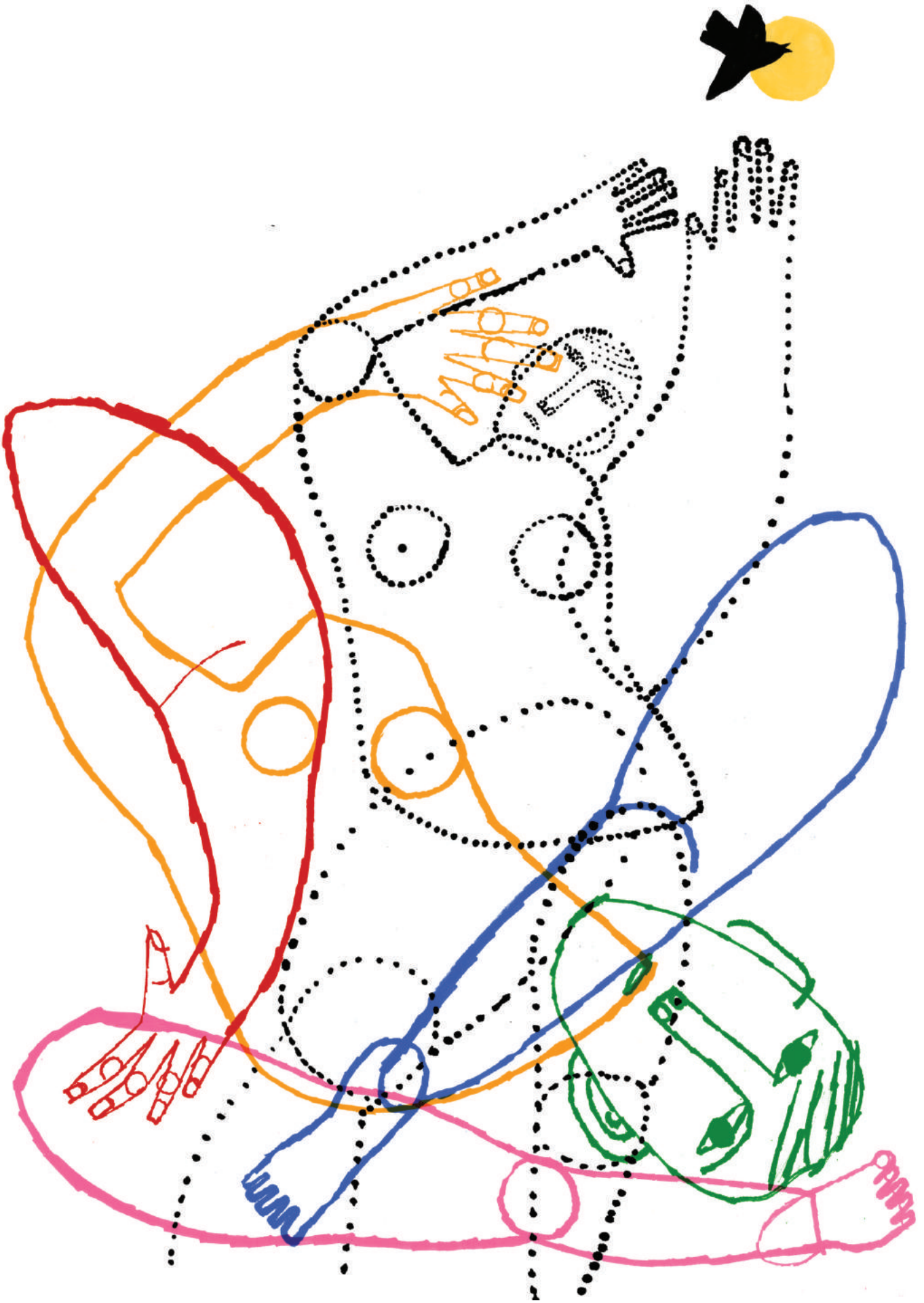
Cycles. Once I read about Nietzsche's idea of eternal recurrence, which says that every cycle returns to its point of origin to begin again in an infinite loop. There was a moment in my life, when I was about 20, when I never stopped thinking about loops. Thirty-two years later, at the same age that my father was in 1985, and precisely on a September 19, I got out of bed when I heard the earthquake siren. We were scared, but the second later we thought, "There's nothing to be alarmed about; it's just a drill." And we went back to sleep, never imagining that a couple of hours later there would be a real earthquake, as though a cycle were being completed.

Mexico is a country that has been battered thousands of times and in many different ways. I no longer believe in infinite cycles; I think variations always exist. That's the basis for evolving and moving ahead. We must never forget that when the earth trembles, we all tremble with her at the same time; it's a reminder that we must join together before and after the earthquake, but closer and closer together.

AMANDA MIJANGOS

I have that feeling that here we're always on the brink. On the brink of changing things, on the brink of changing ourselves, on the brink of achieving what we want to become as a city, as a society, as a country.

In a precarious equilibrium that is broken when one or three hundred thousand disappear; when we hear about scandalous looting and frauds; or every so often when the earth shakes, wakes us up, and brings us together as brothers and sisters. After that, little by little, as always, we forget each other and everything, and we get our balance back in that way that either resists or is on the brink of collapse. Who knows?



GALA NAVARRO

After the earthquake, like in all disasters, heroes came to the fore: useful, good, agile. The ones who seemed to know exactly what to do. There were also anti-heroes who stole, defrauded, and made a profit out of the tragedy, the government itself. The ones who made things worse.

I had so many questions. Is someone guilty or is there justice? Who is and who isn't? Who's lying, who's stealing, who just wants applause, who's telling the truth? What's being done; what's being said? Who is to be trusted, who's right?

Where were the rest of us? The ones who didn't cry; the ones who didn't run outside when the quake hit; the ones who took food and hot meals where they already had too much, wasting them; the ones who spread fake news; the ones who got in the way of the work in the disaster areas because there were too many of us; the ones who panicked or sank into paralyzing depression; the ones who weren't doctors, brigade members, or volunteers. Sometimes the aid you gave, if you weren't a hero, seemed so small that it was easy to feel impotent, insufficient, and broken, like the city itself.

There were no absolute answers, but it seemed like something, silent, brutal, and important was explained to all of us on that September 19. Hopefully we'll understand it someday and never forget.

JOHN MARCELINE

For someone like me, who had never been in an earthquake in the first 31 years of my life, quakes seemed to even have an aura of myth. Today, I understand the reality, and opening my eyes to it was cheap: no one near me was terribly affected. However, the pain and shock at what I saw has not ended; their remnants are everywhere. If I get anything out of this it is the certainty that once in my life I saw strangers doing everything they could for other strangers; we had to be together; we had to take care of each other. The moment passed, and today, as always, times are hard in many ways. But I'm thankful for having witnessed a real phenomenon: compassion and mass solidarity. VM

Astrid Velasco*

#FuerzaMéxico (#FortitudeMexico)

Carlos del Valle, Jantetelco Brigade

Every morning the city repeats a routine to launch the day: we leave home, we walk, we drive through the traffic; we look, feel, talk; something always reminds us that we're alive. Nobody thinks that they might die or be injured; nobody wants to see their loved ones or those close to them suffer. Terrible is the random occurrence that can suddenly hit and transform us. Those of us who lived through the earthquakes will never be the same. The 1985 quake brought us face to face with death and disaster, but also with the incredible version of Mexican society in all its solidarity and support. 2017 also filled us with sadness and, at the same time, hope.

In my memory, September 19, 1985 meant shock and optimism. At 7:19 a.m., horror took possession of our city and of us. In just a few minutes, the loss of life, of property, surprise, rage, and pain flooded us as forcefully as dust and the stench of death filled our lungs. Unofficial estimates put the damage at 30 000 homes destroyed 70 000 homes partially damaged, 45 000 dead, 4 100 people rescued, and more than 40 000 injured. However, we also witnessed an incredible version of Mexican society that became a milestone in community organization and the organization of society in general. That new Mexico managed to unite people, make them aware, provide them with a catharsis, and mobilize them to demand a government response to deal with the victims.

The new Mexico managed to unite people, make them aware, provide them with a catharsis, and mobilize them to demand a government response to help the victims.

In 2017, despite the fact that for some time the seismic alarm had been operational and we had been able to hear it through loudspeakers installed in at least four cities nationwide, the earthquakes took us by surprise. First, on September 7, at 11:49 p.m. Civil society support was immediate: donations, caravans, and brigades of architects and engineers who went out to the affected areas accompanied the always criticized response of the federal government and its institutions. Outstanding at that moment was the participation of the artists Francisco Toledo and his family, as well as Demian Flores and the Almadia publishing house; from the start they collected money, food, and other kinds of aid, and with their own money paid for trucks to transport what they collected to Oaxaca.

Twelve days later, on a date already charged with drama because of our memories, September 19, another devastating earthquake stunned us. Devastation and death

* Coordinator of Publications, CISAN, UNAM; astrid.velasco@gmail.com.

Zazilha Lotz, Jantetelco Brigade

flew around us and could be breathed in the air. News flew: collapsed buildings, a school where children and teachers lay under fallen walls. An enormous crack opened up in the eastern part of Mexico City. Thousands remained in the street, and in the city's marginalized areas or outside the city, tragedy mounted. Many did not have deeds to their homes or possessed nothing other than what they had lost, or, even worse, their existence had turned into mourning for those close to them.

On that September 19, 2017, we knew that an earthquake drill was scheduled; we were prepared by commercials and announcements everywhere. But no one warned us of the horror and devastation that followed the real earthquake.

This time, the death toll was lower, but not for that any less atrocious: 370 dead, taking into consideration the countrywide figures (Mexico City, Morelos, Puebla, the State of Mexico, Guerrero, and Oaxaca).[1] However, like in 1985, the response from society was swift, and perhaps even quicker thanks to the existence of cell phone communications and the social media: it was extraordinary. From the 19th on, people moved toward the flattened buildings to help with the rescue and care for the injured. Human chains removed rubble, concrete slabs, and iron to get out the people they thought were still alive underneath the debris. Others directed traffic. Still others passed on news and picked up or gave rides to people who couldn't get to the places their loved ones were or who had no form of transportation.

Like in 1985, society's response was swift, and perhaps even quicker thanks to the existence of cell phone communications and the social media: it was extraordinary.

Around the 20th, donation centers had already been established to collect clothing, food, blankets —later, some of them specialized in items for children, preparing food, collecting books and toys for the little ones, household goods and furnishings, etc.—; accounts had been opened for making donations in cash, as well as websites indicating where to take donations in kind; and locations were established for distributing what was needed to those removing rubble or who by that time had already painfully discovered the loss of their property and material goods. Individuals or brigades of architects, engineers, and people responsible for construction sites (DROS) ventured out to review buildings and evaluate damage; others purchased or loaned input to deal with the emergency: picks and shovels, circular saws to break up concrete, lamps, tents, crowbars, buckets. Some people were able to offer rescue workers cranes and machinery. Others went from place to place verifying information so that all the efforts could be efficient (one very significant example of this was #Verificado19s, plus individuals who contacted Mexico City's C5 center [Center for Emergency Attention and Public Protection]). Many people lent their vehicles (trucks, automobiles, and bicycles) to transport aid or classify it so it could be sent where required (a brigade of cyclists verified information and transported aid). Shelters were set up and many people even opened their homes or bathrooms so those affected could spend the night or bathe.

Hospitals and doctors also gave a lesson in solidarity; not only did they go out into the streets to offer support and services, but for the first time, both public and private hospitals opened their doors to receive the injured free of charge. Alberto Palacios describes it like this:

> Three decades later, the same nightmare. Buildings with cracks down the side, collapses, death again; children buried in schools, civil society in movement and coming to the rescue. . . . Perhaps this is the most outstanding and praiseworthy. Women and men who jettisoned their fear and ran to move rubble, to listen for heartbeats and sighs under the rocks, to save people they didn't know but who, from one

moment to the next, had turned into their own injured, their companions in tragedy.

The apocalypse cannot take us by surprise, they seem to repeat as they pick up debris and twisted iron rods. Perhaps food, water, and electricity are missing, but what there will be in abundance is fortitude, common effort, the ability to become what is most noble in the human spirit: goodness. That night and all the hours that follow, the rescue workers are fighting against time. They know that down there, amidst the earth that has been torn apart forever, someone is waiting with a breath of life, and they don't allow themselves rest. Every minute counts.

The hospitals and public services have opened their doors to all, an example of democracy that we never see in times of peace and tranquility. Once again the civilian population has surpassed the authorities, like in 1985, when that president and his cabinet hesitated, while the streets filled with citizens willing to give over their bodies and time to save others, the fallen, the crushed. Brothers all.[2]

As the website *MxCity Guía Insider* writes, laundries were set up to wash the donated clothing and the clothing the victims had with them:

That's why the Laundry Brigade came into being. It was an idea born when five friends got together to look for a simple, practical way to fulfill this need, so important in day-to-day living. The point of the project is that anyone who has a washing machine, dryer, detergent, or transportation can contribute.

The brigade's activity consists of picking up clothing at the shelters, distributing it among the network of volunteers, or laundries, that will launder the clothing at home and return it to its owners in perfect condition.[3]

Formal clothing was also offered for people who had to go to work in offices and needed suits, shirts, or special items. Other people babysat or took care of the injured; mental health professionals (psychologists, psychoanalysts) created their own brigades to listen to and help people with post-traumatic stress so they could overcome what we had been through.

Rescue dogs lent support to Army and Navy personnel, the "moles," and brigade members, and graphic designers and illustrators uploaded coloring books to Internet free of charge so that people could have a cathartic experience when coloring in their canine heroes.

Hospitals and doctors also gave a lesson in solidarity; for the first time, both public and private hospitals opened their doors to receive the injured free of charge.

Some people also wrote or translated manuals or adapted reading materials about security and earthquakes, or children's texts that explained and helped families overcome their fears and feel safe in their homes, schools, and workplaces.

With the passing days, and after dealing with the emergency of rescuing people who had been buried by the walls that previously had sheltered them, the brigades turned their efforts to offering all manner of aid: legal advice; architects, engineers, and officials responsible for construction sites (DROS) inspected buildings and supervised demolition and reconstruction; offering different workshops, like a collective that worked on textiles and embroidery in the shelters; or brigades of young people who went to hard-hit communities in Morelos and Puebla. VM

Zazilha Lotz, Jantetelco Brigade

Brigade Members Speak

Emilia Ruvalcaba de la Garza, a member of Infrarural

Infrarural is an organization that does community work, and right after the September 19 earthquake, we began activities to help people in the towns that had been hit hard. A day after the quake, we went to the communities in the state of Morelos to see what kind of help was needed. A truck driver sent us to a community where he said no one from outside had visited and where they urgently needed shovels and people to use them. So, two and a half hours later, we arrived in Alpanocan, Puebla.

Ninety percent of the homes had been destroyed and a huge cloud of dust surrounded the entire town. Fortunately, no one had died, but you could see how people's belongings had been destroyed, buried, flying through the streets; women were weeping as they saw how their homes had collapsed; people spent hours in long lines just to get a plate of food that had been cooked on fires lit in the middle of the street.

After a few days in the community, food supplies began to arrive and also to be in excess. What was needed was support for what would come after the exhaustion of the volunteers and the immediate necessities.

First, we worked in brigades to help with analyzing structural damage, with psychological support, and working with children, since all the schools had collapsed. Later, we decided

Multidisciplinary Brigade of Support to the Communities of Mexico

to launch a reconstruction campaign to build quality housing, to create a space that would allow residents to recover the stability and tranquility of the homes they had lost.

A month after the earthquake, people were still sleeping in tents, under tarps, or in livestock pens. Thanks to civil society support, we were able to raise enough money to begin to build homes. By January, together with volunteers and community members, we had built three homes; this allowed families to take up their normal activities again and recover the security and tranquility lost during the earthquake. VM

(Testimony of Emilia Ruvalcaba de la Garza, member of Infrarural, February 5, 2018)

Ana Barriga

On September 19 the earth shook and thrashed about, both inside and outside us. That's why we didn't hesitate to volunteer; there were things to pick up and other things to deliver to the people who needed them. And, above all, because we also distrusted most of our institutions. We spent the first four months amidst shovels, walls, and buckets in different parts of Morelos. Later we settled indefinitely in Jantetelco, where some days we passed out food or gave workshops, and other days we lugged rocks out of homes. We ended up with physical injuries, like most of the improvised, non-expert volunteers; we had bruises, cuts, and scrapes on arms and legs; back pain; lack of sleep, allergies, coughs, and burning eyes.

One of those mornings when we couldn't get out of bed because of how our bodies ached, we remembered that "when it hurts, we have to give even more," because we can assure you that we never saw prayers that propped up some old persons' house or good vibes that made food appear in the hands of brigade members and earthquake victims. We can assure you that it was people, taking risks, giving of their time and resources, who got things done.

We all heard stories of businesses that donated their merchandise without thinking of how they were going to get it back later. Those reactions were the ones that made us think that if they can do it, then we can also give everything without expecting to get it back tomorrow. And we'll

Different publishing houses and people in the cultural milieu made outstanding efforts; they went to the shelters and camps to read and offer books.

keep on like that, giving, despite the fact that it hurts, because that's the logic of the thing, that's what life is about. Being human means doing what has to be done, just because; because it's a duty, because we aren't rubble. VM

(Testimony of Ana Barriga, Jantetelco Brigade, February 2018)

Lucero Sandoval, Jantetelco Brigade

Mariana Velasco

According to Mariana Velasco, brigades were also formed to support the work in the shelters and offer families entertainment and catharsis.

That's how the cultural brigades came into being. The examples are innumerable; there's the work of the National Institute of Anthropology and History and the Institute for Aesthetic Research. Different publishing houses and people in the cultural milieu made outstanding efforts; they went to the shelters and camps to read and offer books; and the Topos-LIJ (Moles-LIJ) group (https://albertogarcia835.wixsite.com/topos-lij/nosotros) also created little libraries in those places.

The community working in the area of children's and young people's literature (authors, illustrators, editors, promoters, story-tellers, cultural managers, editorial designers, science disseminators, among others) also responded. They offered stories to the little boys and girls who, after an extraordinary event like last September 19's earthquake, were in dire straits; at times like that, books can be good company and a tool for chasing away fear and recovering tranquility.

Smiles Brigade, fotografía cortesía de Lavinia Negrete

In homage to the *Topo* [Mole] Rescue Brigade, so widely-known, beloved, and admired in our country, this collective took the name "Topos-LIJ," alluding to the much-needed rescue of our children when faced with events that make them feel vulnerable, and it's not their lives that are in danger, but the full enjoyment of their childhood and youth.

Other people took theater, music, and children's activities to shelters and camps.

The help concentrated to a large degree in Mexico City, Oaxaca, and Puebla; but some very hard-hit places were practically forgotten.

In Valle de Bravo, civil society also organized to participate in cultural brigades to support quake victims in communities in the State of Mexico. One example is the Smiles Brigade, created by artists and cultural promoters. This team has committed to following up with visits to the communities of Ocuilan, one of the municipalities hardest hit by the earthquake, until the homeless and displaced persons recover their homes. The Smiles Brigade brings with it good humor, stage activities, creativity workshops, and also books and toys donated by the people of Valle de Bravo, to make sure children's rights are respected. VM

(Testimony of Mariana Velasco, Smiles Brigade, February 2018)

Bioescénica

The world will end when no one fights anymore,
when love is not spread,
when no more smiles shine,
when hope is not revived.
We're in time.

ÍCARO, POET

After the damage done by the September 19, 2017 earthquake, a group of women got together to guide and foster solidarity in a coordinated, collaborative, emotionally supportive way with the children and young people of Xochimilco who needed it.

Educational psychologist Angélica Sánchez, manager and artist Ana Gómez, community psychologist Valery Hernández, and artist and curator Minerva Hernández are a working group with four years' experience fostering inter- and trans-disciplinary activities in Xochimilco to build the towns' autonomy and strengthen inhabitants' identity.

We work directly with the families affected and offer support from our own fields of knowledge (psychology, art, science, education, and childcare). We link up cultural activities with collecting donations, supporting the construction of temporary housing with materiel or our professional training, as well as legal follow-up and psychological care in the towns using the censuses taken by the residents of Santa Cruz Acalpixca, San Gregorio Atlapulco, San Luis Tlaxialtemalco, Santa María Nativitas, and some parts of downtown Xochimilco; these are people who know their community and can identify their own needs.

We created cultural caravans that used integration techniques with games and songs to recover the cultural wealth and tradition of the Xochimilco towns and townspeople; we also carried out emotional support activities, created a science laboratory, reading areas, and a game center, plus physical activity games.

Minerva Hernández, Bioescénica

Based on our experience in these towns, we decided to turn the cultural caravans into an on-going project to create spaces for living together, playing, and learning.

Based on our experience in these towns, we decided to turn the cultural caravans into an on-going project to create spaces for living together, playing, and learning. The plan is to carry out cultural activities every three months in the towns of Xochimilco to continue strengthening ourselves as a community.

These efforts involve different collectives and volunteers, like the Coordinación de Pueblos (Towns Coordinating Committee), Barrios Originarios y Colonias de Xochimilco (Xochimilco First People's Neighborhoods), Bioescénica, Xochiquitines, ¿Cri-Crées que pasa? (What Do You Think's Happening?), Unión Comunitaria por el Pueblo de Tepepan (Community Union for the Town of Tepepan), An Meztli, María Valeria, Ana González Pérez, Vaj Rei, Ix Chel, Ana, Brenda, Kissy, Paula, Andrea, María, and Vicky.... VM

Notes

1 Mexico City reported 228 deaths; Morelos, 74; Puebla, 45; the State of Mexico, 15; Guerrero, 6; and Oaxaca, 2, according to information from the Senate, "Recuento de los daños 7s y 19s: a un mes de la tragedia," *Notas estratégicas* no. 17, October 2017, http://bibliodigitalibd.senado.gob.mx/bitstream/handle/123456789/3721/2017_16_ne_recuento%20de%20da%c3%b1os_231017.pdf?sequence=1&isa llowed=y.

2 Alberto Palacios Boix, "Septiembre diecinueve," *Ocells. Reflexiones a vuelo de pájaro*, September 20, 2017, https://ocells .wordpress.com /2017/09/.

3 "Brigada lavandería y su propuesta para cuidar la ropa de los albergues," *MxCity Guía Insider*, September 2017, https:// mxcity.mx/ 2017/09/brigada-lavanderia-y-su-propuesta-para-cuidar-la-ropa-de-los-albergues/.

Enrique Chávez Poupard*

Two Earthquakes, One Rescue Worker Memories from Beneath the Rubble

September 19, 1985

On September 18, 1985 at almost midnight, Gerardo Rivera and I left the offices of Brigadas de Rescate del Socorro Alpino (Alpine Search and Rescue Brigades) at 80 San Juan de Letrán Avenue.[1] Probably, due to the late hour, we wouldn't find any way to get to the southern part of the city, so we decided to tell the building's porter, "Blondie," that if we couldn't find a collective taxi, we'd be back to spend the night. Fortunately, we found one nearby at Salto del Agua. The next morning we had an appointment with our friend Elsy. She was going to pick us up so we could talk about something on the way to work.

At 7 a.m. we met her and got in her car. We hadn't gone more than a few feet when we felt a strong swaying motion. Used to earthquakes in Mexico City, we paid little attention, but it got stronger and stronger. It wasn't the usual earthquake of only a few seconds. The frenetic movement of telephone poles, wires, cars, and people calmed down little by little. All around us there were frightened people and one or two who were hysterical, but nothing indicated to us the real dimension of what had happened.

We started off again, and, when we got to Taxqueña Boulevard, we found it blocked with cars and buses. When we were able to move ahead a little, we began hearing screams: "The school fell down! Please help!" A school at the corner of Tlalpan Avenue and Miguel Ángel de Quevedo Avenue had collapsed. Fear and anxiety began to take

* Head of brigade, Brigadas de Rescate del Socorro Alpino de México, A.C. (Alpine Search and Rescue Brigades of Mexico).
Photos courtesy of the author.

hold. We looked at each other with the same thought: our families! Elsy drove back as far as she could and told us to get out of the car; she would see what she could do to get back home. There was no public transportation, so we ran toward our homes.

When we got to Tlalpan, reality set in: not only the school had collapsed. With adrenaline speeding through our veins, expecting the worst, I thought about my mother, my sister, and my nephews who lived in an unsafe building because it was leaning sideways. But, when we got there, everything was fine. A jeep and a Safari owned by Socorro Alpino were parked there, so we decided to take the Safari to go see how the building on San Juan de Letrán had fared. We took Plutarco Elías Calles Avenue, and then Tlalpan; somehow, we got to Xola Avenue, which is when we could clearly see the effects of the earthquake. People were shouting, "We need help! People are trapped!" Gerardo told me to get out to see how we could help, so I did. I went as far as I could into a collapsed building that smelled strongly of gas. The fire department had arrived and I immediately coordinated with them to go in as far as we could go. The gas made it impossible to use tools, so we made our way as we could through the holes, slowly but surely.

We began to hear the first cries. It was someone who wasn't far away, but it was difficult to get to him because of the amount of debris in front of us that we would have to break apart little by little. Suddenly, we heard shouts form the street: "Come out! Come out! They're going to use heavy machinery." Although slightly injured (the fireman by a metal object, and myself by a piece of glass), we quickly exited the building along with all the others who were giving support in different parts of it. And, yes, outside there were people from the government with heavy machinery saying that they had been ordered to start work. We explained that there were people alive in there and that we weren't going to move. People got very angry, so the newcomers had no alternative but to leave.

We went back into the building by the same route where we had been tunneling to get to where we had heard voices. It was already late when we found them under a slab. A man's voice said, "I'm here with my son. He's alive. I think my wife and my daughter are dead; they're not answering me. I can't move; I'm trapped with something on my leg. Please help us." Underneath us other people were trying to get to them. Among them was a good friend whose last name was García-Moreno, an old mountaineer and rescue worker from Socorro Alpino, who lived just across the way, and who had provide the equipment for the rescue.

> Used to earthquakes in Mexico City, we paid little attention, but it got stronger and stronger. It wasn't the usual earthquake of only a few seconds.

The trapped man said, "Please, water. I need water for my son." There was still a little way to go before we got to them, but I had an idea. It was hard, but we did what we could and were able to push through a little tube that the father managed to take hold of. I had to take the water into my mouth and pass it through the tube; little by little, I could feel how the little boy drank it. After a little while, the people working from below were finally able to make contact. The father had a beam on his leg and the little boy was unhurt. Unfortunately, the mother and little girl had died. The doctors did a quick assessment and decided that the father's leg had to be amputated on site. I continued working until nightfall, getting bodies out with the rescue teams and volunteers, who were incredibly well organized.

Afterward, I walked down Xola Avenue to San Juan de Letrán Avenue. I was sure that the personnel would be concentrated at the building where Socorro Alpino offices were. I tried phoning, but the telephone lines weren't working. As I moved ahead, I found out what was going on through people's comments, and, boy, it was really serious. I didn't have enough money to take a taxi, but I stopped one anyway. As soon as I explained who I was and where I urgently needed to get, the driver said to forget about the cost. When we got to Salto del Agua, we could go no further, so I got out. It was very strange to see the street covered in dust, with yellow lights everywhere, the sound of sirens, people walking like automatons, the anguish on their faces. I still didn't fully understand the magnitude of the disaster.

I got to the door of the building where my colleagues were and found it all out: people were working at the Super Leche Café, at a nearby parking lot where one person was trapped, at the Regis Hotel, at the Medical Center, at the General Hospital, and at other points around the city. Right away, I offered my assistance so they would

tell me where to go. We were completely in the dark, literally. All the walls of the building had fallen down and one whole part of the building that faced Vizcaínas Street had collapsed. I felt a chill through my whole body; ten minutes were the difference in whether Gerardo and I were alive or dead: if we hadn't gotten the collective taxi the night before, we would have been under the rubble of our beloved, emblematic building.

That same night, our friend José Ponce asked for help because his nephews had been trapped in the Chapultepec University, at Xalapa and Chihuahua Streets. We got a group together and went. Machinery, rescue workers, and volunteers worked ceaselessly until we found them. Unfortunately, though, they had died, like most of the students. Right then, we heard another piece of news: the son of a friend and old Socorro Alpino patrolman was trapped in the Juárez Hospital. Even though we did an exhaustive search, we never found the little boy.

Dawn was approaching, and with it, a new reality. The authorities' desperation at the magnitude of the disaster was tangible. The country's impotence and lack of preparation for this kind of situation was grave; however, wherever there was a collapsed building, the populace was there supporting rescue squads. While some worked with tools on top of the piles of the fallen buildings to open a tunnel, others formed human chains to remove the materiel. Natural leaders were born immediately, taking command. At different points of the city, community members had organized to set up tents where they offered people food, water, clothing, shoes, personal hygiene products, etc.: the donation centers.

One night, three or four days later, we went to San Camilito, a building that had collapsed behind the Garibaldi Plaza. Several of us from Socorro Alpino, among them the brothers Jesús and Alejandro Torres Cid, went together. The structure was seriously dangerous: the cistern on the roof was leaning sideways and about to fall; therefore, you had to step very carefully. Suddenly, we heard a sound like a cat meowing and we all stopped to listen.

> With adrenaline speeding through our veins, expecting the worst, I thought about my mother, my sister, and my nephews who lived in an unsafe building.

We talked it over and decided that Jesús would go in. It was a little girl, who we were able to get out alive after hours of work, although unfortunately, the rest of her family had died.

I could tell many other stories of life, suffering, disappointments, and joy, but it would be impossible to tell them in just a few lines. After almost two months, each of us began to go back to his life, although many of us were dubbed "abandoned patrolmen."

The president of Socorro Alpino at that time, Miguel Cuevas Arechavala, called those of us who had participated in the rescue efforts to be honored in the National Palace. The invitation was from then-President Miguel de la Madrid Hurtado. A large number of people, rescue groups, and political and other public figures congregated in the building's central patio, where we received the September 19 Humanitarian Aid Award. When we went out onto the street again, we still felt pain and frustration, but also admiration for an entire people who, from September 19 and 20 on, had shown the world what solidarity, teamwork, and brotherhood meant.

The Alpine Search and Rescue Brigade Mexico
(Brigada de Rescate del Socorro Alpino de México, A.C. [Socorro Alpino])

Foundation: Socorro Alpino was founded by Alfredo Insunza Ortiz in 1946, to answer the need for an institution that would offer safety and surveillance for Mexican and international mountaineers visiting Mexico's highest peaks.

Structure: A non-profit organization, it has a board of directors, members, and active personnel organized in patrols. More than 100 of its volunteers live in Mexico City, and approximately 60 more members are organized in four sections in the states of Puebla and Veracruz.

Social Objective and Mission: To support society altruistically in matters of security and accident prevention through our members' specialized training in search, salvage, and rescue.

Vision: To be the nationally and internationally most widely recognized organization for its professionalism, guided by fraternalism and a vocation for service.

Field of Action: Year round, we carry out security work in the Iztaccíhuatl-Popocatépetl National Park and the Orizaba Peak National Park. If the authorities require it, we also offer occasional support in the Nevada de Toluca area or other mountainous regions.

Coordination with the Authorities: The Brigada de Rescate del Socorro Alpino de México is listed on the Registry of Volunteer Groups, part of the Ministry of the Interior and Mexico City's National Civil Protection System, and therefore lends support to federal, state, and municipal authorities.

Participation: After the September 19, 1985 earthquake, Socorro Alpino participated for more than two months in search, salvage, and rescue efforts to find victims trapped in collapsed structures. The work was done at different points throughout Mexico City: the Super Leche Café, the building where seamstresses were trapped, the Regis Hotel, the Tlatelolco Housing Project, the Medical Center, the General Hospital, the San Camilito Market, the Chapultepec University, the Downtown Juárez Hospital, as well as at many other buildings like schools, businesses, and hotels along Tlalpan Boulevard. After the September 2017 earthquakes, it participated in work at the Tlalpan Housing Project and the Enrique Rébsamen School, above all collecting donations, managing and transporting goods and tools to disaster sites by motorcycle and cyclist brigades. Its members also did rescue work in the boroughs of Xochimilco and Tlalpan. VM

September 19, 2017

At 10 a.m., several of us from Socorro Alpino were gathered in front of the Torre Mayor (Great Tower) on Reforma Avenue. We were waiting to participate with the Reforma Corridor and Historic Center September 19 Association in the huge earthquake drill scheduled to commemorate the 32 years since the first great quake, like we do every year. Our specific function in the event was to support the internal Civic Protection unit and monitor everyone who was slated to come out onto the street and move toward their designated meeting places.

As planned, at 11 a.m., the seismic alarm sounded and part of the building began to evacuate; only the people on the lower floors actually exited the buildings, and the others concentrated in pre-established security spaces. It all went off without a hitch. Socorro Alpino personnel were stationed at the exits to give directions, making sure there were no accidents, though we were prepared with two ambulances and an emergency vehicle. The police had already stopped traffic. So, little by little, that big avenue filled up with hundreds, if not thousands, of people.

The activity concluded around 12 noon, and everyone began to return to their workplaces, guests to hotels, etc. My colleagues and I said goodbye, and everyone went on his/her way. I got on my bicycle and pedaled toward the Chabacano area. When I arrived at San Antonio Abad Boulevard, I crossed through the tunnel. When I emerged, I had to hold onto the railing because I couldn't stard up. The earthquake had begun and the seismic alarm sounded a few seconds later. The force of the shaking was increasing. All there was left to do was to protect yourself and observe people who were already hysterical, even though around us there were no mishaps.

I got home and all my neighbors were out on the street. Suddenly someone came running to say that a building near the subway station had collapsed. Since I had my safety gear with me, I got back on my bicycle and headed there. Perhaps 30 minutes had gone by since the earthquake and the police had already surrounded the place. I identified myself so they would let me cross their barrier. I noticed that only one floor had collapsed. The firefighters were already there and someone —I imagine he was the boss— asked for support in entering the building to inspect it and make sure no one was trapped or injured inside. They made it to the last floor, taking special care with the floor that had collapsed. Once they had finished their inspection, the fire official declared an all-clear.

> We began to hear the first cries. It was someone who wasn't far away, but it was difficult to get to him because of the amount of debris in front of us.

In contrast with the 1985 earthquake, when the information came out in dribs and drabs, whether by word of mouth, on TV news, or by telephone once the service was operating again, the effects of the 2017 earthquake were more widely disseminated. On Facebook, WhatsApp, and other social media, we were alerted to what was going on in different parts of the city and about the help required.

Little by little, the sound of ambulance sirens increased and I realized that most of them headed for the southern part of the city. We Socorro Alpino members communicated with each other by WhatsApp, where we formed a chat. That's how we found out that a building had collapsed near the side-road of the Miguel Alemán Viaduct. I corroborated the information and went there.

Just like on San Antonio Abad Avenue, the police had already put up a barrier. Once again, like in 1985, I realized that local inhabitants had taken over and were in control. Hundreds of people had already gathered there and, even though it was very difficult, I managed to climb to the very top of the concrete and steel rod pile. Human chains were already organized taking materiel away in buckets or by hand. Some people had found tools and were breaking up the concrete blocks. Others installed a watering post. Unfortunately, there was a moment when the situation got out of control. I identified a person wearing a Civil Protection uniform and suggested that he apply the protocols that existed for exactly this kind of situation. His answer was clear: "They just pay no attention to me."

I went to Tlalpan and when I entered the area I could see that things were the same. There were too many people working or trying to work. I found other members of Socorro Alpino who had already transported some injured in their ambulances and were not supporting the manoeuvers, together with other rescue groups and members of civil society.

In contrast with the 1985 earthquake, when the information came out in dribs and drabs, the effects of the 2017 earthquake were more widely disseminated.

The Socorro Alpino operational chief gave instructions through a WhatsApp chat asking us to get our equipment and gather. They instructed us to go to the Tlalpan Housing Project, where we organized to participate in the rescue efforts together with people who were already there. Meanwhile, more colleagues and civilians continued arriving at the Socorro Alpino installations.

Later that night, we got to the housing project buildings and identified ourselves. We could hear how a military commander, without knowing who we were, was arguing with one of the firefighters, asking him to bring his personnel down from the pile of rubble. The firefighter said he couldn't because they were working, and the military man responded, "You bring them down or I will." He turned around and saw me and asked me how he could be of service. We identified ourselves and said that we had all the equipment necessary to get to work. He asked us to go to the tent a few feet away so that Civil Protection could put us on a list. Since we could see that there were already too many groups and volunteers, we opted to go to the Enrique Rébsamen School in Villa Coapa.

We arrived near dawn at a place that looked like a bunker. Soldiers, federal police, rescue groups, journalists, and volunteers made access almost impossible, but we managed to get to the command headquarters. We talked there with the person directing activities to offer our services, explaining what we had with us to help. He politely said that everything was under control. A person dressed in civilian clothing shouted at us, "The only thing you're going to do is get in the way!" The atmosphere was tense.

Adrián Alba, a paramedic with the Mexican Red Cross and member of Socorro Alpino, took it upon himself to organize a donation center in the Múzquiz Garden, located at the corner of Álvaro Obregón and Cuauhtémoc Avenues; this center was widely disseminated on social media. Large amounts of shovels, pick-axes, first-aid and personal hygiene materiel, tents, sleeping bags, clothing, etc., arrived there. A coordinator was appointed who organized everything correctly and set up a table to deal with requests

for materiel. To have a log of what was given out, they created a list with the item distributed, the name of the person who received it, and the place it was being sent.

Two days after the earthquake, that donation center was one of the largest, and it began to receive requests to send materiel to other places affected by the September 7 earthquake in Chiapas, Puebla, Oaxaca, and Morelos. Applicants were told they had to give the name of the driver, his/her driver's license number, the license plate number of the vehicle the aid would be transported in, destination, etc. They also created a WhatsApp group where people were asked to show that the materiel had been delivered. About 40 motorcyclists joined the donation center. If support was requested on social media for a certain area, a motorcyclist would go out to corroborate the information; once that was done, a larger group would immediately go out. They also lent support when a specific medication or materiel needed to be sent elsewhere. A group of bicyclists also joined in, doing almost exactly the same thing. Thanks to the Zello digital app, we were able to turn our cell phones into walkie-talkies, facilitating communication immensely. One *compañero* did nothing but take aid requests 24 hours a day. VM

Notes

1 For more about this institution, see its website, http://www.socorroalpinodemexico.org.mx/. San Juan de Letrán Avenue was the name of a segment of a long Mexico City boulevard known today as "Lázaro Cárdenas Avenue." [Editor's Note.]

Santiago Domínguez Zermeño*

Disaster Chronicle
Reflections of a Young Student, A So-Called "Millennial"

Gaceta UNAM / Víctor Hugo Sánchez

My house didn't collapse; it's still standing. Now there's an empty place on the wall where a picture used to hang. There's also a small crack in the living room. Nothing happened to us, but not everyone has the good fortune to be able to say that. The event of nature became a disaster, and it continues to shake us still. Many were affected physically in some tangible way, destroying their home and everything they called "theirs." But it struck all of us deeply, stirring up our guts and leaving echoes of pain that are still with us. And for some, it took away the only absolute, irreparable thing: their lives.

The earthquake touched all of us and we responded. I had only experienced that through the stories my parents told me about that other catastrophe in 1985. The earthquake became a tidal wave, and we flooded the streets astoundingly, in a way I would have though inconceivable if it hadn't exploded in my face, if I hadn't found myself there, stoking the phenomenon.

What was happening was as necessary and natural as it was surprising. The multitude, as I had never conceived of it, went out to give what it could in any way it could. The demiurge was cell-based, self-organized, autonomous, authentic, genuine. The multitude overflowed, unorganized, decentralized, horizontal . . . adjective after adjective in an attempt to tinge with reason what the heart experiences. There's adrenaline, the desire to be a part of everything, feel useful, help, save. Frenzy feeds our spirits like the most feverish falling-in-love, in a whirlwind that allows for no leisurely moments. You have to go out into the streets, take over the plazas, link up with each other. And we do it. The other, usually foreign and dangerous in this city of love and hate, is now our ally, compatriot, brother/sister, and soldier in the war against the tragedy.

Soon, we realize that we crowd in together, like earth in a funnel; we crush each other. Hours after the quake, we begin to believe we've gotten past the real catastrophe; we think there's too much help, too many hands. The living phenomenon, the Multitude, sparks fantasies in many about the approach of a dreamed-of revolution, the one that's coming from the bottom up and overwhelms like the tide. The social media, the glossary of life, make their comments: "Young people have taken over Mexico City. I hope they never let it go." This Tweet goes viral, together with the aid.[1] The social media are saturated, becoming communication that burns to the touch, we have to pass it on, throw it out there, somebody else must see this, it has to get out, fulfill its destiny. Volunteers spring up everywhere on the social media, whose main objective is to optimize them. Because, despite the fact that the Multitude is also showing up on them in

* Film student at the Cinematography Training Center (CCC).

any way it can, at the end of the day, everything must come down to a real act. A post that doesn't lead to a concrete act ends up being nothing, in a vacuum.

The motivations are authentic; we fight to optimize our efforts. Time is always against us. Food arrives in torrents on the streets; it clashes with people and with stockpiles. Entire boxes of sandwiches get soggy, in danger of going off completely. Strategists make a logistical call: don't send any more perishable food, no more volunteers, wait. And you feel so useless that you don't believe you deserve the third sandwich they offer you on the very same day.

Once again, I'm surprised. The individual packed lunches —the very ones that were in danger of going off— have been prepared with infinite love. They're full of details that make them special gestures, like a hug, somewhere, that someone wants to send to an anonymous ally. Written in felt-tip pen on the soft drink label or on the napkin that goes with the sandwich are tender words of encouragement and love.

Now, optimizing processes follows a curve that takes a while to achieve. There's trial and error; the engineers of aid and strategic brigade leaders continue discovering the best way of organizing the aid. Fabulous data bases are set up in real time, immersed in extremely complete maps, new channels of communication that are truly surprising. We have to learn to use them, get used to them. There is no lack of pessimists who complain about the confusion, but they just don't realize what's really happening. We're on the verge of history, learning to use quasi-telepathic, omniscient tools to deal with something as old as the world itself.

Suddenly, we're all engineers with a PhD in structures. Entering a building becomes an exercise of active observation of walls and rebar columns. We do it because it's fashionable, but also because we're afraid. A big concrete wall is now something fragile, and what before was shelter is now a threat. Everything moves us; we're apprehensive as seldom before. We become sensitive to others' pain. We look for stories that can explain what is happening, we embrace myths. We need symbols to be able to continue understanding this world that is getting away from us. And "Frida Sofía" is born,[2] for several hours more alive than any person who disappeared in the war against the drug kingpins. And we read Juan Villoro's "El puño en alto" (Fist Held High), and we weep in silence.[3]

Many were affected physically in some tangible way, destroying their home and everything they called "theirs." But it struck all of us deeply.

Not much time goes by before the Multitude clashes with what it always clashes: the government. Everyone active, throbbing, finally awake, we all demand resources to deal with what's coming. Because, even though sometimes we forget, public action is political. And, being as active as we are, we all become empowered, even those who are usually indifferent. And they, the professional politicians, filthy as they are, tell us "no," that money is earmarked by law, that what we're asking for would be misappropriating funds. Above all, they hide behind the question, "Where would all this take us?" Because the future will bring another hurricane, another earthquake, another flood. Where would the state of emergency end? And the question shines, spotlighting the problem.

We find ourselves in a state of emergency. We are experiencing a moment of collective trauma that, in my inexperience and ignorance, I cannot help but link up —perhaps naively— to coups d'état, dictatorships, civil wars, revolutions. The inspiring Multitude makes us believe that we are in the middle of a transforming whirlwind. Even though I don't know —I really don't know— the true dimension of the current moment. What can come out of all this? The level of social and political involvement is extraordinary, at least for Mexico. Will the national trauma be big enough to politicize us permanently, beyond just a couple of weeks? I think about 1985 and the repercussions of the 1986 student movement, the effervescent participation of civil society, the 1988 elections, that victory of the left turned into a defeat by fraud. I don't know if this political moment will manage to transcend the immediate crisis because it's not national in scope, and the enemy (the antagonist, the common obstacle that brings us together and that we all identify with) is first of all a natural phenomenon, a misfortune. An initial reading —in fact, the one that prompted us all to go out onto the streets to do what we could— tells us that we're all victims and there are no clear guilty parties. We are all vulnerable. With that outlook, we go out shoulder to shoulder with the police officer, the sol-

dier, the sailor, to remove rubble and fight to the end for any indication of life. This is no small thing.

However, with the street occupied, as time goes on, what has to happen, happens. Society's action is political, and what's at stake is power. The political parties know that when they refuse to release the money; the Navy also knows it when it sees that what has the upper hand in a collapse site is the need to rescue people, not military order. So, one by one, the emergency sites come under the control of law enforcement and the military. Everyone who was there, helping to remove debris, to take food, to distribute water, witnessed the small manifestations of this struggle for power. Orders that were given with the aim of maintaining a certain order, orders for orders' sake, at the cost of the real needs of the people trapped. We refused to concede what we had been able to build, the spaces won. We defended the donations from being used for self-interested political chicanery. We defended life, whether in the form of a miraculously living survivor or of the body that we want to give human burial to.

I could only be on the front lines of a collapsed building one day. It was my job to distribute water to the brigade members: *topos*, sailors, soldiers, and Japanese and Israeli rescue workers. There were about 500 of us trying to rescue those trapped in the Tlalpan Housing Project. In the nine hours I was there, I did not witness the rescue of any survivors.

We all worked hard, in the hope of being able to help with a miracle. Suddenly, fists are raised and the silence descends. Five hundred people stop in their tracks. Traffic comes to a halt on Tlalpan Boulevard. In the country where we lived before Tuesday the 19th, I would have had a hard time believing that we would attribute that value to one life. A hint of life. Now, immersed in the absolute silence, I have nothing more than a huge lump in my throat. From deep inside the rubble comes a shout: "If there's someone inside this building, answer! Make a noise! Now!" The silence continues, and no matter how moving it is, I cannot help but think that it's a terrible silence, a truly douchebag silence. A rescue worker asks twice again. Moments later, we hear the shout: "There's life!" We applaud. Some of us cry. Hope nourishes our mood and we get back to work.

> The living phenomenon, the Multitude, sparks fantasies in many about the approach of a dreamed-of revolution, the one that's coming from the bottom up and overwhelms like the tide.

A couple of hours later, we fall silent again. We stop. The soldiers and rescue workers form two human lines, creating a corridor. In the quiet, a soft breeze can be felt rocking the leaves, a draught that caresses our skin. We take off our helmets. The exhaustion and sadness shows on our faces. From the rubble, a litter is carried down, covered with a white sheet. The body goes by. Across from me is a soldier. With head bowed and eyes to the ground, his effort to hold back his tears is clear. I do the same. From the moment we're born, weeping means being alive, but when the body goes by, I don't allow myself to break down in tears; I know there's still work to be done.

I witnessed the rescue of two bodies. Both times, the same soldier was across from me. I see him clench his jaw and clutch his helmet to his chest. We share the pain the way I never thought I would with a soldier. Into my mind come the images of extra-legal executions and the other human rights violations committed in Mexico recently. The soldier, a representative of the forces of order, power, is that: a soldier. He personifies himself and all the others who have abused the people in the name of the government. Because the soldier is human, of course, and therefore carries his shadow. Because what the Army has done cannot be erased. Because Mexico is still Mexico.

The natural phenomenon lasted 70 seconds. But we made a disaster that has already lasted five days and will surely last many more. Like in *Oedipus Rex*, the tragedy was predestined, just waiting for the veil to drop and the truth to manifest itself. No building should have collapsed. Who is to blame? What are we going to do when we find out? What's next? VM

Notes

1 This tweet was published September 20, 2017, by leftist Mexican politician Fernando Belaunzarán, https://twitter.com/ferbelaunzaran /status/910561960420294656?lang=es. [Editor's Note.]

2 See the articles in this issue by Leonardo Curzio and Raúl Trejo Delarbre that deal more in depth with the "Frida Sofía" media phenomenon, which for many hours held the attention of the nation because it was about the supposed rescue of a little girl alive in the rubble, but which turned out to be untrue. [Editor's Note.]

3 See this poem in Spanish and English in this issue. [Editor's Note.]

Edgard Garrido/Reuters

Hugo José Suárez*

Aftershocks

The Night of September 7

It's almost midnight. I'm trying to sleep; I have class tomorrow and my little girls have to get up early. My wife tells me, sleepily, "There's an earthquake." I don't take it too seriously: I live in Mexico City where this is an everyday occurrence. I just pay attention, waiting to see what happens. But it doesn't stop; it gets stronger. I get up and go to my little girls' room where they're fast asleep. I wake them up, trying not to alarm them, and we start the evacuation.

As we go down the hallway, the hanging flower pots in the living room —one red and the other blue— swing and crash into each other; the pieces of the mobile near the front door that sometimes chimes in the breeze clang together. The shelves in the wooden furniture creak, threatening to eject the photographs. In a matter of seconds, as I walk toward the door, my very intimate space is threatened.

We get down to the parking lot, which is already full of neighbors. Once I get to the ground floor, I see that my daughters have come out without their shoes and I have left my cell phone on the night stand; I also forgot my ID and the keys to the house —and I remember now that we left the door open. In short, I didn't follow the security protocols.

The next Monday, the UNAM's official gazette publishes a frightening scientific statement on its front page: "On permanent alert. Mexico, highly seismic. Impossible to predict earthquakes. Recommendation: remain alert."[1]

* Researcher at the Institute for Social Research (IIS, UNAM) and professor at the UNAM School of Political and Social Sciences; hugojose@unam.mx.

Zazilha Lotz, Jantetelco Brigade.

Tuesday, September 19

This is a special day. The whole city is preparing for the earthquake drill slated for 11 a.m. My class is precisely from 11 a.m. to 1 p.m., so I meet the students a few minutes before class time in the esplanade of the UNAM School of Political and Social Sciences. Everything goes as planned: the brigades, the people in charge of security, the announcements, the siren.

As soon as my class is over, I go to my cubicle. I turn on the computer, take out my notes, and suddenly everything starts moving. It's not a gradually ascending movement; it's like a bolt of lightning, a whip that makes no concession. I take my cell phone and my wallet and I go out into the hallway with lots of other people. The building is moving and the beautiful bay window where you can enjoy the sunset creaks and shudders as we move toward the garden.

Once there, I get a call from my wife, who's terrified; she tells me she's all right and she'll go to my children's school. From that very moment, I start frantically calling my daughter and the telephone number of the place where she studies. No one answers. I keep trying, but to no avail; this only makes me worry even more. Up until now, without any news, I take refuge in the certainty —later dramatically refuted— that Coyoacán, where my apartment and the school are, is a safe place. That illusion will last only a few hours more, when I discover that the earthquake caused nearby buildings to collapse. As soon as I arrive at the apartment, my older daughter takes me through it, pointing out the evidence that the earthquake has been here. The paintings are crooked, the drawers open, ornaments are on the floor, books are spilled out

The days go by and day-to-day existence timidly peeks through the window. The enormous solidarity that reigned in the city is gradually replaced by the city's usual aggressiveness.

of the bookcases. The papier-mâché giraffe that watches my dreams in the shelves above the bed is lying on the floor. Later I realize that what happened at our house is insignificant compared to the losses suffered by others.

In the afternoon I go out with my family to look at the surrounding area and I look at Internet every time I get even a weak signal. Hundreds of dead, dozens of buildings damaged and collapsed. The stories are chilling; a friend was on a fifth floor in the Condesa neighborhood, one of the hardest hit, holding on to a column asking herself if the building would withstand the shaking. It's terror. We're all afraid; I don't want to separate from my loved ones, as though I would be able to do anything if there are aftershocks. I go into my room and I feel unsafe; I don't sleep well anymore; I constantly have the impression that it's shaking; I confuse any dizziness with an aftershock. As soon as I hear a siren, I mix it up with the seismic alarm system set up throughout the city.

The days go by and day-to-day existence timidly peeks through the window. The enormous solidarity that reigned in the city is gradually replaced by the city's usual aggressiveness. Wretchedness explodes in our faces: it comes to light that several of the collapsed buildings were new, that they hadn't complied with existing official building requirements, that there had been corruption, and that there will be civil suits and trials and, they say, guilty parties. The authorities announce that they will be offering a very small compensation and help to the victims. It's increasingly clear that, in addition to a natural disaster, what we have lived through is the result of human and political decline, lack of attention, cheating, and negligence.

I live I fear. This isn't over; the drama of living in Mexico City continues and will continue. VM

Notes

1 *Gaceta* UNAM no. 4902, September 11, 2017, http://www.gaceta.unam.mx/20170911/. [Editor's Note.]

The Other Reasons for The Disaster

Interview with A Builder

Ginnette Riquelme/Reuters

The many buildings that collapsed and were damaged to differing degrees by the September 19, 2017 earthquake make us think, among other things, about the huge lack of foresight and responsibility that persists in the city's building practices. Living in such a high-risk seismic area, with a history of devastating earthquakes, like the one that happened 32 years before on the same date, should have been reason enough to increase efforts, controls, and security measures in the regulations and effective supervision of construction in Mexico. These measures imply following up on building codes both for new construction sites and for modifying and adapting already existing buildings.

This earthquake brought to light the realities of negligence, lack of public control, administrative chaos, and even open corruption in Mexico City's construction industry. Various analyses showed just how much profitability has been the priority in the real estate industry in place of the needs for structural safety and anti-earthquake prevention measures, even despite the existence of quite modern legislation on the topic, very often not worth the paper it's written on.

To a certain extent, Mexico City has based recent policy on the agreements and synergies among officials and real estate developers. Unfortunately, this has sometimes gone as far as collusion. How much has this impacted some of the damage and consequences of the earthquake? If other paths had been taken, how much would that have averted some of the worst effects of such a strong earthquake. We talked with Igor del Moral Aguilar, the CEO and partner in Construcciones Panamericanas, an important construction company operating in Mexico City about this and other issues.

***Voices of Mexico* (VM)**: In general, do you think that the majority of the collapses in Mexico City on September 19 could have been avoided? Please explain very briefly why these buildings collapsed. Was it corruption; construction companies saving on materials to the detriment of quality and structural safety; changes made by building owners without the knowledge of the construction site directors (DROS) and without official permits, affecting the structures; or other factors?

Igor del Moral Aguilar (IMA): Every collapse in Mexico City merits a study of its own since the reasons are different in each case. However, the variables that could cause a building to collapse must be considered before building it. It's not only earthquakes that are important, but also the kind of foundations that must be used, the

number of stories to be built, the kind of soil in the area, the complementary technical norms, sticking to the building code, etc. Many of the collapses on September 19, 2017 were due to the fact that the buildings were not designed to withstand more weight, and some of the factors behind this are that they shouldn't have had as many stories as they had, the calculations were not done correctly, or the materials were faulty, among others.

A building can collapse because the foundations were built wrong or, once it was finished, the owners may have made structural changes, using the building for purposes for which it was not designed. People very often have no knowledge of these possibilities and they make changes without authorization.

VM: Should seismic safety be a priority for the Mexico City government? Was this priority actually given its place through public policies and sufficient resources?

IMA: Safety must always be the number one priority, and guaranteeing it is one of the obligations that the government must fulfill. No excuses. We live in a high-risk seismic area; that's why what is actually done in practice should be supervised even more closely, since the norms and steps to be followed are there. It's enough to follow them and carry out the procedures correctly; we have to make sure the laws and regulations aren't a dead letter. This is the area where the government should have the most control.

VM: Is the supervisory work done by the Mexico City Institute of Construction Safety (ISCCM) sufficient?

IMA: A good job could have prevented 100 percent of the collapses, but that responsibility is not only up to that institution. A good job is not only up to the one who authorizes it, but also to the person or institution that reviews and supervises it, and, of course, to those who carry it out. Having competent people both in the institutions and on the construction sites implies better results, better buildings.

VM: How useful is it to increase the number of monitoring institutions and how can efficient communication among them prevent tragedies?

IMA: In my experience, increasing the number of supervisory institutions would only make things more complicated for builders. There are already enough of them to regulate our activities. As people in the construction business, we have to take into account all the institutions and comply with all of them to build. More than creating new ones, I would think about making the existing ones more efficient and transparent.

> "It's not only earthquakes that are important, but also the kind of foundations that must be used, the number of stories to be built, the kind of soil in the area, the complementary technical norms, sticking to the building code, etc."

VM: Does the current Mexico City building code, designed by the Ministries of Works and Services and of Urban Development and Housing, have any article demanding ongoing evaluation and professional development of DROS? What are the requirements for becoming one?

IMA: The current building code mentions the requirements for being registered as a DRO, which is constantly updated, supposedly broadening out the legal and technical knowledge prerequisites. Some of these requirements are proving through your professional license that you have sufficient training in some of the areas involved in the sector; accrediting your knowledge and use of the many regulations, laws, programs, norms, etc., that regulate building; having a certain number of years' experience in the profession; and being an active member of the respective professional association.

VM: If that's the case, how is it possible that according to some sources, only about half of the DROS have college degrees and are licensed as engineers and/or architects?

IMA: To register as a DRO, you must comply with the prerequisites I mentioned. Anything else is outside the law.

VM: What do you think of the procedures for accrediting DROS? Is their work supervised appropriately? Why?

IMA: I think the accreditation procedures as I described them are correct, since the evaluators are drawn from a commission made up of members of professional associations. That's where you can find the most qualified people for that task. Where there might be more problems is in their actual supervisory work, since, unfortunately, it is common practice that the DROS just sign the legal documents required by the regulations and are held responsible, but they don't really verify the quality and compliance with the law at the construction sites they're endorsing.

VM: Beyond the probable cases of corruption implicit in handing over the certifications, what can a duly certified DRO do to stop these kinds of practices?

IMA: A DRO has obligations with regard to the site he or she is endorsing when signing the documents. If he/she fulfilled his/her obligations, no DRO should have any problems; that would be the best way of preventing any illicit acts.

VM: What is the origin of the problems of quality, design, and construction in Mexico City?

IMA: The problem is that to build something, you have to know a great deal about many different areas and, therefore, many different professionals and experts are involved: accountants, chemists, engineers, architects, bricklayers, suppliers, sales personnel, etc. Bringing all this knowledge together for a successful job requires a great deal of supervision and can be complicated in an atmosphere of over-regulation and non-transparent management and administrative practices.

VM: Are DROS really necessary?

IMA: Yes, they are, because the DRO is the person legally responsible for the building; he or she guarantees it with his/her signature; when they do that, there is someone who can be held responsible for anomalies and other events. Plus, a DRO can be revoked.

VM: How can you avoid the conflicts of interests that sometimes arise between a DRO and the construction company?

IMA: That's hard because the builder needs the DRO, and very often just thinks of his/her job as more red tape. This is above all the case because, when a builder has trained people like engineers and architects working at his sites, he very often doesn't place much value on the DRO's contribution more than for just getting that signature and fulfilling the licensing and authorization requirements. This job must be given greater authority, more prestige, and recognition, and even more pay. That might well ensure the existence of a mechanism that would have an impact on the quality of the buildings so that it's seen as more than just red tape.

VM: Thank you very much.

Diego Ignacio Bugeda Bernal
Editor-in-Chief of *Voices of Mexico*

Carlos Jasso/Reuters

Juan Villoro

El puño en alto*

Eres del lugar donde recoges
la basura.
Donde dos rayos caen
en el mismo sitio.

Porque viste el primero,
esperas el segundo.
Y aquí sigues.
Donde la tierra se abre
y la gente se junta.

Otra vez llegaste tarde:
estás vivo por impuntual,
por no asistir a la cita que
a las 13:14 te había
dado la muerte,
treinta y dos años después
de la otra cita, a la que

Fist Held High

You belong to the place where
you gather garbage.
Where lightning strike twice
on the same spot.
Because you saw the first,
you wait for the second.
And you stay on here.
Where the earth opens up
And the people come together.

Another time you arrived late:
you're alive because you're not punctual,
because you didn't show up for
the appointment that at 1:14 pm
would have killed you,
thirty-two years after
the other appointment, to which
you didn't arrive on time either.

tampoco llegaste
a tiempo.
Eres la víctima omitida.
El edificio se cimbró y no
viste pasar la vida ante
tus ojos, como sucede
en las películas.
Te dolió una parte del cuerpo
que no sabías que existía:
La piel de la memoria,
que no traía escenas
de tu vida, sino del
animal que oye crujir
a la materia.
También el agua recordó
lo que fue cuando
era dueña de este sitio.
Tembló en los ríos.
Tembló en las casas
que inventamos en los ríos.
Recogiste los libros de otro
tiempo, el que fuiste
hace mucho ante
esas páginas.

Llovió sobre mojado
después de las fiestas
de la patria,
Más cercanas al jolgorio
que a la grandeza.
¿Queda cupo para los héroes
en septiembre?

You are the victim who wasn't there.
The building swayed and you
didn't see your life pass
before your eyes, like
in the movies.
You had a pain in a part of the body
that you didn't know existed.
The skin of memory,
that didn't bring scenes
of your life, but of
the beast that can be heard
crunching up matter.
Also the water remembered
what it was when it
owned this place.
It shook in the rivers.
It shook in the houses
that we concoct in the rivers.
You gathered up the books of another
time, the one you were
long ago
before those pages.

The weather went from bad to worse
after the national holidays.
More of a party than a grand occasion.
Is there still room for heroes
in September?

Tienes miedo.
Tienes el valor de tener miedo.
No sabes qué hacer,
pero haces algo.
No fundaste la ciudad
ni la defendiste de invasores.

Eres, si acaso, un pordiosero
de la historia.
El que recoge desperdicios
después de la tragedia.
El que acomoda ladrillos,
junta piedras,
encuentra un peine,
dos zapatos que no hacen juego,
una cartera con fotografías.
El que ordena partes sueltas,
trozos de trozos,
restos, sólo restos.
Lo que cabe en las manos.

El que no tiene guantes.
El que reparte agua.
El que regala sus medicinas
porque ya se curó de espanto.
El que vio la luna y soñó
cosas raras, pero no
supo interpretarlas.
El que oyó maullar a su gato
media hora antes y sólo
lo entendió con la primera
sacudida, cuando el agua

You are afraid.
You have the courage to be afraid.
You don't know what to do,
but you do something,
You didn't found the city
nor defend it from invaders.

You are, if anything,
history's beggar.
Who picks through rubble
after the tragedy.
Who shifts bricks,
gathers stones,
finds a comb,
two shoes that don't match,
a wallet with photographs.
Who puts together loose parts,
bits of bits,
remains, only remains,
what fits in the hands.

Who doesn't wear gloves,
Who shares out water,
Who gives away their medicine
because they're cured of fright.
Who saw the moon and heard
strange things, but didn't know
how to interpret them.
Who heard the cat miaow
half an hour before and only
understood it with the first shudder,
when water burst from the toilet.

salía del excusado.
El que rezó en una lengua
extraña porque olvidó
cómo se reza.
El que recordó quién estaba
en qué lugar.
El que fue por sus hijos
a la escuela.
El que pensó en los que
tenían hijos en la escuela.
El que se quedó sin pila.
El que salió a la calle a ofrecer
su celular.
El que entró a robar a un
comercio abandonado
y se arrepintió en
un centro de acopio.
El que supo que salía sobrando.
El que estuvo despierto para
que los demás durmieran.

El que es de aquí.
El que acaba de llegar
y ya es de aquí.
El que dice "ciudad" por decir
tú y yo y Pedro y Marta
y Francisco y Guadalupe.
El que lleva dos días sin luz
ni agua.
El que todavía respira.
El que levantó un puño
para pedir silencio.
Los que le hicieron caso.
Los que levantaron el puño.
Los que levantaron el puño
para escuchar
si alguien vivía.
Los que levantaron el puño para
escuchar si alguien
vivía y oyeron
un murmullo.
Los que no dejan de escuchar.

Who prayed in a strange language
because they'd forgotten how to pray.
Who remembered who was where.
Who went to the school
for their children.
Whose battery ran out.
Who ran out onto the street to offer
their cell phone.
Who broke in to rob
an abandoned shop
and repented in
a food bank.
Who knew that they were
one too many
Who stayed awake so that
others could sleep.

Who is from here.
Who has just arrived
and is already from here.
Who says "city" so as
to say you and me and Pedro and Marta
and Francisco and Guadalupe.
Who goes two days without electricity or water.
Who still breathes.
Who held a fist high to ask for silence.
Those who paid attention.
Those who held up their fist.
Those who held up their fist.
To listen to see
if anyone was living.
Those who held up their fist
to hear if anyone was living and heard
a murmur.
Those who didn't stop listening.

Translated by Richard Gwyn

* This poem was originally published in the *Reforma* daily paper, September 22, 2017.

Illustration based on a photograph of the Multidisciplinary Brigade of Support to the Communities of Mexico.

Alberto Vital*

Proper Names in "The Day of the Collapse"

The short story "El día del derrumbe" (The Day of the Collapse) turns one of the natural disasters most common in entire swathes of Mexico into a theme, making good use of Juan Rulfo's tragicomic vein. The author always included hints of humor in his work, from black humor to irony, the paradoxical or unheard of situation with traces of sarcasm. Despite the painful undertone of a human tragedy caused by the battering dispensed by the earth, "El día del derrumbe" could be his lightest text, even lighter than the one that would be suggested to young readers as the doorway to the work of this author, born in Jalisco in 1917 and who died in 1986. This apparent paradox is achieved with the aid of several factors, among them, the names of both characters and places.

In principle, it should be said that "El día del derrumbe" could be a title for our writer's entire oeuvre, since, like the rest of Rulfo's corpus, it emphasizes one of the four specific situations or basic factors of any narration, whether oral or written, everyday or literary: who, to whom, where, and when. (In the end, this is a markedly situational text, in the sense that it deals with very specific moments in very concrete places, with rapidly identified characters easily distinguished and traced at all times.)[1] Then, it summarizes a story whose deeper structure coincides with almost all of Rulfo's other works because it features dispossession, abandonment, a misfortune that becomes a tragedy.[2] And lastly, it explicitly mentions the notion of collapse, which is decisive for his entire work.[3]

It has been said that "El dia del derrumbe" is the world upside down, typical of the carnival and carnivalization.[4] Do the proper names both of characters and places reflect this hypothesis? In his *Rhetoric*, Aristotle studies the

* Coordinator of Humanities, UNAM; albertovital04@yahoo.com.mx.

Rulfo always included hints of humor in his work, from black humor to irony, the paradoxical or unheard of situation with traces of sarcasm.

kinds of questions and the different effects of the relationship between questions and affirmations and even possible variations of either in literary, oratorical, or philosophical texts.[5] The beginning of "El día del derrumbe" reiterates the situational nature of the story and, characteristically, of Rulfo's entire narrative: "This happened in September. Not in September of this year, but last year. Or was it the year before last, Melitón?"[6]

The story is constructed based on questions from the unnamed narrator with an imperfect memory and thanks to Melitón with his sharper memory. These questions are not rhetorical, but rather requesting information. The initial question is related to the proper name. The story contributes one or two suggestive traits to the onomastics of literature. Meanwhile, the first mention of a proper name teaches us here a stark strategy: linking a question to a name in a few brief opening lines, which, precisely because they are brief, makes all the elements stand out.

Melitón's etymology may suggest that we are in an upside-down world: "Melitón" means "sweet like honey." An early father of the Church, Melito of Sardis, from the second century, was a bishop and prolific author. Rulfo's Melitón is not equally sweet, much less a theologian, although neither is he the antithesis of these: he is neither bitter nor acid nor satanic nor anything like these. Thus, in a first approach, we are not in the presence of a name that directly characterizes —like Pedro Páramo does— nor one that ironically characterizes —like that of the despised Juan Preciado).[7]

Now, all the names in Rulfo are characteristic even when they do not seem to characterize; in other words, they combine with the place, the era, the rural character, the Christian onomastic tradition that all served as the basis for the world narrated in each text, even when they do not all seem to have a more or less clear underlying meaning, whether direct or ironic. In other stories, names have been discovered with meanings that were not so clear, but after some analysis, are suggestive, like Macario and Felipa.

"El día del derrumbe" is almost identical to the story "Macario," in which there is only one proper name: Melitón in the first, Felipa in the second. The only other anthroponyms in "El día del derrumbe" are "Liborio, the Keeper of the Seal" (tax collector) and the national heroes Benito Juárez, Miguel Hidalgo, and Venustiano Carranza, in addition to Merencio, a mere function at the end of the story, as the newborn son of the unnamed narrator, a son who does nothing but be born, because that way, the abandonment of the wife seems more reprehensible to the reader.

"Macario" and "El día del derrumbe" contrast in that the former is a monologue and the second is a discourse constructed through a dialogue that tentatively and sometimes precariously reconstructs an event.

Also, the governor's speech gives rise to certain reflections: prediction is non-existent in the world of "El día del derrumbe," and the military man himself reveals that in his doubly revealing words: he does not imagine that an earthquake can be predicted; nor does he imagine that, while a specific earthquake cannot be predicted, it is possible to anticipate the fact that, sooner or later, there will be an earthquake.

In terms of onomastics, one difference with flesh-and-blood people consists of the fact that in the real world, the name of the governing person is often that person's identifier, while in the story, there are only two perspectives about that character and none of the two include a proper name: "the governor" and "my general." Here, we confirm a clear tendency in the Jalisco-born author: if the political office is important, the reader will not be told the character's proper name, since his function is more important.[8] A second tendency is that the first-person narrator can remain nameless, as happens in "Nos han dado la tierra" (They Gave Us the Land), "La cuesta de las comadres" (The Hill of the Comadres), and "Es que somos muy pobres" (We're Very Poor). In this case it is due, as we will see further along, not only to the fact that not mentioning the name emphasizes the nature of the story, which is a chat between acquaintances, but to the fact that the narrator behaves like the mass of people in the town, while Melitón is the only center that remains a center, without de-centering or eccentricity.

My general hypothesis is that Rulfo's characters have points in common with us, even if they are from another time and if they live in tiny little villages or hamlets.

"El día del derrumbe" speaks to us not only because earthquakes are common in our country, just like the floods in "Es que somos muy pobres," the droughts in "¡Diles que no me maten!" (Tell Them Not to Kill Me!), and the barren land in "Nos han dado la tierra." It speaks to us because events are reconstructed, like what happens to us in reality, gradually, tentatively, and sometimes precariously. And it speaks to us because earthquakes become narrative: they are the source of stories that, days and hours after each quake, become the single and even inevitable topic no matter what efforts are made to the contrary.

After the September 7 and 19, 2017 earthquakes, even in December holiday gatherings, stories abounded about what each person had done, where he or she had been, how he/she had reacted, and what his/her relatives and acquaintances had done. The government response was the central issue in these stories, just as it was, in effect, a decisive factor in the events. With his habitual sharp eye, Rulfo captured the core of the problem when facing an earthquake, and in general, when facing a misfortune that should not turn it into a tragedy as described above: the relationship between those in government and the governed. The governor's speech in "El día del derrumbe" mentions protection, but it is precisely protection that is nowhere to be found. What does appear are new kinds and examples of violence, separate from the natural violence of the earth; these kinds and examples are the fruit of the drunkenness portrayed in "La Cuesta de las Comadres" and that would reappear in a couple of passages from *Pedro Páramo*.

Naturally, the entire fiesta, the feast, breaks with the seriousness of the moment and leaves us with several lessons: how rituals hinder action during emergencies, how protocols are imposed on people. Up until this point, the reasoning is valid; however, it is routine. An observation by philosopher Emilio Uranga based on a sixteenth-century anecdote from Dominican historian Diego Durán allows us to enrich the link between earthquake and fiesta. José Manuel Cuéllar Moreno writes,

> [Durán] once questioned an indigenous man who threw away his money on drunkenness and fiestas for the whole town, but the indigenous not only rejected the religious's accusations, but made a very simple argument against them. . . : "Father, do not take fright . . ., we are still *nepantla*." *Nepantla* is a Nahua term that . . . means "center, in the center, in the middle." For example, in Tlanepantla ("place in the middle of the earth") or San Miguel Nepantla, where Sor Juana Inés de la Cruz was born. According to Emilio Uranga, this term also means, 1) being uprooted, alienated, or estranged, 2) being in the middle, 3) remaining in a neutral state, 4) abstaining from any law, [or] 5) participating in two opposing laws. This Nahua concept allows us to think about the incessant oscillation between one extreme and another.[9]

The names in Rulfo combine with the place, the era, the rural character, the Christian onomastic tradition all of which serve as the basis for the world narrated in each text.

The fiesta then, is the return to the center, shaken by the earthquake. The ritual not only gets in the way; it also restores the order that has broken down. The feast in "El día del derrumbe" fulfills Uranga's five points. Now, clearly, this uprooted, neutral center, superior to any law and contradictory, is unstable by definition and ends by creating more havoc than offering solutions. Alcohol and the other excesses of the flesh lead to a momentary, insecure center, incapable of establishing any kind of permanent order. The flow of life ends up recriminating the merrymakers for the neglect of the very person who had given life and who provides certainty and a more solid order than mere ritual: the wife of the unnamed narrator.

The other ritual remains, then; perhaps the true ritual, or at least the most constant, continual, or, rather, recurring ritual: the word, conversation, memory. The foregoing reflections illuminate two traits of the chat that makes up the story: the fact that Melitón does have a name and the fact that he has tired of telling the same story:

> "Well, finally that little dandy came to tell us that it was Don Benito Juárez. And the things he said! Isn't that right, Melitón? You, who have such a good memory, you must remember what that guy said."
>
> "I remember very well, but I've repeated it so many times that it's a drag."
>
> "Well, you don't have to. It's just that these *señores* are missing out on something good."

Rulfo's characters have points in common with us, even if they are from another time and if they live in tiny little villages or hamlets.

Melitón remains lucid during the whole feast and is the memory capable of creating the conditions so that the rite of conversation —conversation as ritual— can be consummated (and, in the long run, consume itself in reiteration, since, because it is not an institutional ritual, it does not have the elements needed to guarantee its permanence beyond the will of more or less isolated individuals).

We people of flesh and bones do nothing else when we try to restore order after being shaken up by a natural misfortune in danger of becoming a social tragedy: we converse, we repeat the same stories, we fill them out, and we polish them all together.

At the end of the day, the essentially positive name "Melitón" coincides with the role played by the man of memory. If honey is physical food, memory is the ritual food for those surrounding Melitón. By contrast, the unnamed narrator behaves like that mass of humanity that requires a ritual to reestablish itself and for that reason does not deserve a name, even though even his newborn son has one.

And this explains why Rulfo, among all the options open to him, picked the conversed evocation or evocative conversation as the form to narrate the events: because that way he could unite the two rituals, the collective, commemorative feast and the ritual of conversation. VM

Notes

1 Only "El hombre" (The Man) poses problems of identification of those responsible for the words and actions, respectively, as a strategy for producing the effect that the pursuer will be pursued and the pursued has been the pursuer. Starting with the title, proper names are scarce in "El hombre," and that creates the sensation that there is a loss of identity as the pursuit continues or as one is pursued.

2 Although the term "tragedy" has a normal usage covering all fatal misfortunes and accidents, literature and literary studies should distinguish between a simple misfortune and an authentic tragedy. The first is the result of natural events or because of carelessness with terrible consequences, while tragedy emerges from tension between people or within communities, as happens in the Greek genre that Aristotle studied in his *Poetics*. "El día del derrumbe" is the fruit of a typical natural misfortune (an earthquake, which, in effect, is unpredictable), which can turn into a tragedy because those in government, builders, and inhabitants lacked foresight. But it can also turn into a tragicomedy because instead of helping the victims of the "ecipenter," the characters organize a carnivalesque fiesta with fatal effects for some and ridiculous effects for others. Later, it will become clear that, even so, the fiesta is necessary as an attempt at a ritual that can restore order.

3 We now know, documents in hand, that Rulfo absorbed the poetry of Rilke. *Duino Elegies* is the most important book of the writer from Prague. Rulfo read this classic in more than one translation and version. The final verse of the tenth and last elegy had speaks precisely of a collapse, or in the translation Rulfo read, of a fall: "Und wir, die an steigendes Glück / denken, empfänden die Rührung, / die uns beinah bestürzt, / wenn ein Glückliches *fällt*" (And we, who have always thought of happiness climbing, would feel the emotion that almost startles when happiness falls.) (http://www.geocities.ws/SoHo/1826/duino.pdf, translation from the German by J. B. Leishman and Stephen Spender). Besides the coincidence, we should note the importance of the notion itself as a crosscutting theme in both authors' work: to Rilke it is enough to situate it in a place of such importance to throw it into relief; Rulfo uses it here explicitly, and elsewhere, implicitly. Apart from that, "El día del derrumbe" is the last story in the canonic work, since it was the last one written and published, together with "La herencia de Matilde Arcángel" (The Legacy of Matilde Arcángel).

4 See, for example Seo Eun Hee and Claudia Macías Rodríguez, "Lo carnavalesco en 'El día del derrumbe', de Juan Rulfo," http://www.biblioteca.org.ar/libros/151925.pdf, March 18, 2018. Irene Rojas also quotes Friedrich Schmidt in an unpublished text.

5 "In regard to interrogation, its employment is especially opportune, when the opponent has already stated the opposite, so that the addition of a question makes the result an absurdity; as, for instance, when Pericles interrogated Lampon about initiation into the sacred rites of the savior goddess. . . . If a conclusion is put in the form of a question, we should state the reason for our answer. For instance, Sophocles being asked by Pisander." Aristotle, *Rhetoric*, Book 3, Chapter 18, John H. Freese, trans., http://www.perseus.tufts.edu/hopper/text?doc=Perseus%3Atext%3A1999.01.0060%3Abook%3D3%3Achapter%3D18.

6 Juan Rulfo, *El llano en llamas* (Mexico City: RM/Fundación Juan Rulfo, 2017 [1953]), p. 135.

7 In Spanish, the name Pedro Páramo means "Peter Wasteland," while the name Juan Preciado, a despised character, means "Juan Appreciated." [Translator's Note.]

8 In the article mentioned above, Seo Eun Hee and Claudia Macías Rodríguez note that Melitón was the mayor, and therefore, that what we had was one person in authority facing another: the lesser of the two, the local authority, does have a name, precisely because he is closer. By contrast, it does not seem defensible to say that this Melitón is the same one that appears in "Nos han dado la tierra" (They Gave Us the Land): the name is, in effect, the same, but the Melitón in "Nos han dado la tierra" has been defeated by, precisely, those in authority; in any case, it is true that both Melitóns suffer under the weight of a higher authority.

9 José Manuel Cuéllar Moreno, *La revolución inconclusa. La filosofía de Emilio Uranga, artífice oculto del* PRI (Mexico City: Ariel, 2018), pp. 22-23. I became familiar with this book due to the perspicacity, the inexhaustible intellectual curiosity, and the friendship of José Enrique Ampudia.